



## Awareness and Practices Regarding Swine Flu among Individuals Attending Urban Health Centre in Medchal-Malkajgiri District, Telangana State

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### Abstract

**Background:** In April 2009, there were reports of sustained human-to-human infections with a new influenza A (H1N1) virus in Mexico and the United States. In less than nine weeks, the virus had spread to all six WHO regions<sup>1</sup> and India was no exception to it.

**Methodology:** A Cross-sectional study was conducted to know awareness and practices regarding swine flu in an urban area of Medchal- Malkajgiri District, among the urban population visiting the Urban Health Centre for OPD services in December 2016. A pre designed pre-tested questionnaire was used for data collection among 200 patients. Data was entered into MS excel sheet & analyzed by using Epi Info.7.1.3. Version

**Results:** Among the study population, 88% had previously heard of swine flu. More than half of the participants said mass media communication was found to be the major source of information. Around 76.2% of the participants said fever was the most common symptom and avoiding contact with the sick was the important mode of prevention by 72.7% participants. Hand washing, as a mode of prevention was known to 24.4% of the respondents.

**Conclusions:** Knowledge regarding swine flu was low among study participants. Most of the participants had low health seeking behavior. Majority of the respondents were not practicing hand washing. Strategies to create more awareness about pandemic through effective mass media are vital for arresting the transmission of the disease.

**Keywords:** Influenza A, H1N1, Swine Flu, KAP study.

### Introduction

Influenza, commonly known as the “flu”, is an acute infection of the respiratory tract caused by influenza viruses. The 2009 pandemic influenza A (H1N1) virus referred to as influenza A(H1N1) pdm09 which appeared for the first time in 2009

causing a global influenza pandemic, is now a seasonal influenza virus that co-circulates with other seasonal viruses influenza A(H3N2) and influenza B viruses. Influenza viruses are genetically dynamic and evolve in unpredictable ways.<sup>2</sup> Swine Influenza (swine flu) is a respiratory

disease of pigs caused by type A influenza virus that regularly causes outbreaks of influenza in pigs. Human infections with H1N1v, H3N2v and H1N2v viruses have been detected. This virus has two genes from flu viruses that normally circulate in pigs in Europe and Asia and bird (avian) genes and human genes hence this is called a "quadruple reassortant" virus.

H1N1 was first detected in the United States in April 2009.<sup>3</sup> More than 214 countries had reported laboratory confirmed cases of H1N1 2009, including at least 18,449 deaths.<sup>4</sup> Most impacted age groups were children, young adults, pregnant women, people with underlying chronic medical conditions.

In India, the first case of H1N1 was reported from Hyderabad in May, 2009. The infection spread at a very rapid phase across the whole country within the next 2 to 3 months. As of October 1, 2009 swine influenza has killed a total of 328 people in India. Most of them belonged to western and southern parts of the country. Diagnostic facilities were made available in almost all states across the nation. Press and media have created lot of public awareness regarding the disease and its severity.

Almost 1000 cases were reported in 2009 in the undivided states of Andhra Pradesh and Telangana. In the year 2017, there were 476 cases and 14 deaths reported from Andhra Pradesh. In Telangana state, there were 2165 cases and 21 deaths in 2017.<sup>5</sup>

Awareness and practices regarding swine flu are the cornerstone of disease transmission, prevention and occurrence of a pandemic.

The government of India and the media played a key role in educating people about the disease, its causes, remedies and preventive measures. Understanding the awareness level and practices followed to prevent the occurrence of the disease in the community can help in designing education, control and prevention programs. During the review of literature there were few studies on awareness and practices on swine flu was found from this part of the country. It was in

this context that the present study was conducted in urban population of Medchal- Malkajgiri District, Telangana.

### Methods

The present study was a hospital based cross-sectional study on patients who were attending an Urban Health Centre which is attached to the department of Community Medicine of a tertiary care teaching hospital at Medchal-Malkajgiri district, Telangana state.

**Sample size:** According to guidelines for conducting Knowledge, Attitude and Practice study, minimum sample size required is 200.<sup>6</sup> Therefore, a sample of 200 was included in the study.

**Study population:** The study subjects were selected from among the OPD attendants of an Urban Health Centre during the period of November 2016-December 2016.

### Inclusion criteria

The study subjects, both male and female needed to be of above 11 years of age, willing to participate and give informed verbal consent before being included in study. The study subjects were informed about the objectives and their confidentiality was maintained.

### Exclusion criteria

Those who were not willing to take part and below 11 years age group were excluded.

The study subjects were presented a pretested and pre-designed questionnaire consisting of 39 questions evaluating knowledge (15 questions), attitude (11 questions) and practices (13 questions) regarding swine flu. The socio-demographic characteristics were also recorded. Data was entered into MS Excel sheet and analyzed using Epi Info software version 7.1.

### Results

Among the 200 respondents, 176 members have previously heard about swine flu. Therefore 176 members' responses were analyzed and the following results were obtained. Respondents included 104 males and 72 females. Majority of

the participants were male with 59.1%. Most of them belonged to the age group of 31-40 years (31.9%), 38.6% lower middle socio-economic

class according to modified BG Prasad classification (Table 1).

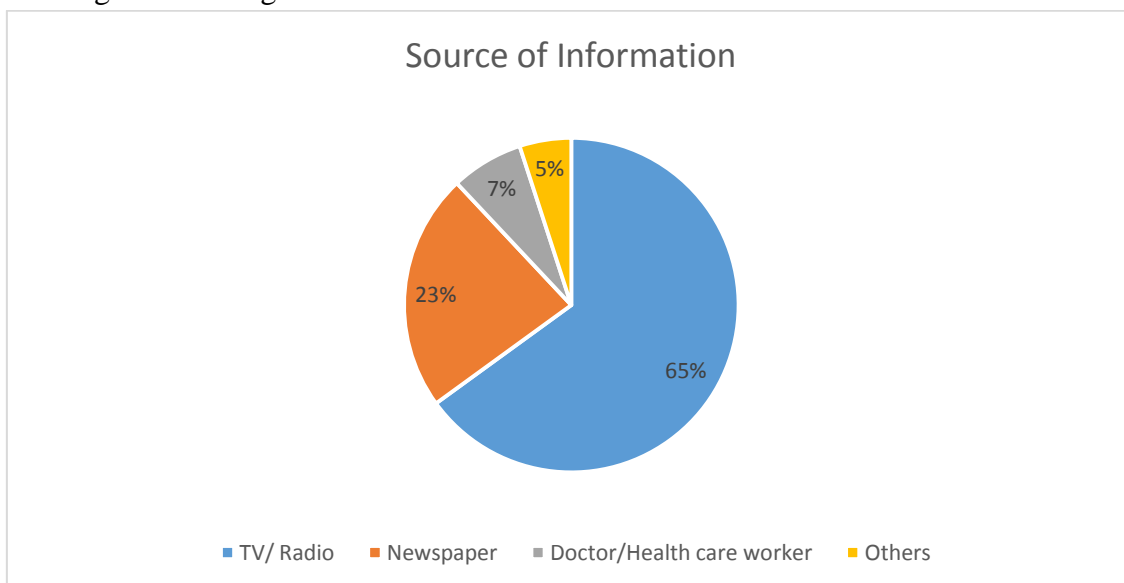
**Table 1:** Socio-demographic profile of study participants

Socio-demographic variable	Number	Percentage
<b>Age group</b>		
11-20	16	9
21-30	29	16.5
31-40	56	31.9
41-50	39	22.2
51-60	24	13.6
> 60	12	6.8
<b>Gender</b>		
Male	104	59.1
Female	72	40.9
<b>Educational status</b>		
Illiterate	49	27.9
Primary school	74	42.0
Secondary school	32	18.2
Intermediate	15	8.5
Graduate	6	3.4
<b>Socio-economic status</b>		
Upper	11	6.3
Upper middle	32	18.2
Middle	49	27.8
Lower middle	68	38.6
Lower	16	9.1

Source of information regarding swine flu is given in figure 1. Television and radio (65%) constituted the major source of information followed by newspaper that is 23%. On assessing knowledge towards the disease most of them knew it

originated from swine (54%). Others believed that it originated from birds and human beings. Some of the respondents had a myth that swine flu is an inheritable disease (27%).

**Figure 1:** Pie diagram showing source of information.



Common symptoms of swine flu such as fever was known to 76.2% while cold was known to 17.5%, cough to 3.1% and myalgia to 3.2% of the respondents.

On asking about the transmission of the disease majority that is 48.8% said that it is through touching infected persons hands and thereby touching one's own nose and mouth.(Table 2).

**Table 2:** Transmission of swine flu

Mode of transmission	Number	Percentage
Touching infected persons hands and thereby touching one's own nose/mouth	86	48.8
Exposure to infectious droplet	7	3.8
Sharing food and drink	49	28.2
Sharing objects used by infected person	11	6.2
Eating pork	23	13

Very few study participants knew that there is a vaccine for swine flu and were willing to take it (6.7%). Willingness to see a doctor in case a symptom of swine flu developed is observed in 91% of the respondents (Table 3). They are also willing to stay away from sick people, from public gathering, limit the usage of public transport. 6.7% of the respondents believed that the government can control the transmission of the disease.

**Table 3:** Attitude of participants towards the disease

Question	Number	Percentage
See a doctor if symptoms develop	158	89.7
Belief in government in controlling transmission	64	36.3
Stay away from visiting patients in hospital	86	48.8
Will accept swine flu vaccine	12	6.7

Different preventive measures followed by the participants are shown in Table 4. From the table below, avoiding close contact with the sick (72.7%) as a preventive measure was followed by majority of the study participants while hand washing was practiced only by 24.4% to protect themselves against the disease.

**Table 4:** Preventive measures followed by the participants

Preventive measures followed	Number	Percentage
Wear a face mask	102	57.9
Covering while sneezing/coughing	61	34.6
Avoid close contact with sick	128	72.7
Hand washing	43	24.4
Avoid public places	56	31.8
Limit usage of public transport	59	33.5

## Discussion

The results of the present study depict a range of knowledge, attitudes and self-reported behavioral patterns concerning H1N1 influenza among a sample of urban population of Medchal District, Telangana.

In our study,88% of the participants had previously heard about swine flu, which was similar to other studies,<sup>(7-10)</sup> and more when compared to a study by Shilpa et al<sup>11</sup> (73.6%) which may be due to lack of awareness and interest regarding health issues in our study population area.

Mass media was most common source of information to the study subjects that is 65% which is less when compared to a study done by Naik JD et al in Maharashtra (72.35%).<sup>12</sup> Results were also less compared to a study done by Singh S et al in which TV was found to be the most common source of knowledge regarding swine flu for 76 % of the respondents.<sup>7</sup>

In the present study majority of the study subjects responded that contact with an infected person is the most common route of transmission (48.8%) in contrast to a study done by Naik JD et al<sup>12</sup> where majority of study subjects had knowledge regarding inhalation as the most common route of transmission of infection (57.60%).

About 13% of the population in our study had a misconception that eating pork can spread swine flu, contradicting the observation made by Singh et al<sup>7</sup> and Naik et al<sup>12</sup> which was 40.6% and 2.7% respectively. Only 6.7% of the study subjects had the knowledge of the availability of swine flu vaccine and were willing to take it in contrast to 54.8% in the study by Naik et al very similar to

previous study by Singh S et al in which availability of medicine and vaccine against swine flu were known to 74% and 60.5%, respectively, Nagar S et al (44%)<sup>13</sup>. Joseph TF et al<sup>14</sup> found that 63% were not aware, regarding vaccine availability.

Fever was the most common symptom known to majority of the participants in our study (76.2%), as was observed in other studies.<sup>7,11,10</sup> Avoiding close contact with sick as preventive measure for swine flu was practiced among 72.7% of study subjects [Table 4]. Hand washing as preventive measure was practiced by 24.4% which is very less compared to a study by Naik et al (70%), Rubin GJ et al<sup>15</sup> (87.8%) while it was low in Singh et al<sup>7</sup> (36.0%), Lin Y et al<sup>16</sup> (56.9%), and Nath et al<sup>17</sup> (30.0%) similar to the results in our study. Use of face mask as a preventive measure was practiced in 57.9% of the study population similar to studies done by Singh et al<sup>7</sup> (56%) and which is high compared to studies done by Naik et al (38.2%) and Farahat et al<sup>10</sup> (14.3%)

### Conclusion

Knowledge regarding swine flu was low among study participants. Most of the participants had low health seeking behavior, as many of them did not practice hand washing as a preventive measure. Creating awareness about swine flu through effective mass media is vital for containing the pandemic.

This study was done to assess the levels of knowledge, attitudes and practices regarding swine influenza. This help to provide scientific support to assist health sector authorities in developing strategies and health education campaigns to arrest the transmission and control of the disease and its co-morbidities. Early diagnosis and intervention, preventive and control measures requires an effective system for outbreak detection, rapid data collection, analysis, assessment and timely reporting especially in high risk areas.

Lack of laboratory facilities, pooling of cases, lack of manpower, vaccine and investigation and a

poor health information management system are the important areas, which need immediate attention. Government should focus on providing scientific and effective information through the mass media. Health education by health care personnel on preventive measures especially hand washing which is a very effective measure in the control of the disease should be more focused.

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