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# Knowledge, Attitude and Practices Regarding Swine Flu among OPD Attendees of Tertiary Care Hospital, Surat

Dr. Rahul Damor[1], Dr. Hitesh Bhabhor[2], Dr J. K. Kosambiya[3,]
Dr. Alpesh Gohil[4], Dr. Guria Rani[5], Dr. Piyush Parmar[6]
[1]*Assistant Professor, Community Medicine Department, Government Medical College, Surat, India*
[2]*Tutor, Community Medicine Department, Government Medical College, Surat, India*
[3] *Professor and Head, Community Medicine Department, Government Medical College, Surat, India*
[4,5,6,] *Resident Doctor, Community Medicine Department, Government Medical College, Surat, India*
*Corresponding author* : *Dr Hitesh Bhabhor*

***Abstract:*** *During an infectious disease outbreak, it is critical to learn as much as possible about the concerns, knowledge, attitudes and behaviour of the public. Such information can be crucial to the improvement of communication efforts by public health officials and clinicians. The aim of this study was to assess the knowledge, attitudes and practices related to influenza A (H1N1) among the OPD patients of Tertiary Care Hospital, Surat.*

***Methods:*** *A hospital based cross sectional study was carried out in the tertiary Care Hospital; 507 participants were selected by convenient sampling method from different OPDs.*

***Results:*** *Majority of participants (71.0 %) have heard about swine flu. Major source of information was friends and relatives (37.3 %) followed by Mass Media. About half of the participants have knowledge of symptoms like cough (55.4 %) and fever (53.1 %); knowledge regarding modes of transmission is average to poor, few participants have misconception that sharing meal (1.2 %) and sexual contact (0.6 %) can transmit swine flu. Knowledge regarding availability of treatment (41 %) and vaccination (12.4 %) is also poor. Use of face mask (46.7 %), avoiding the visit of crowded place (31.8 %), frequent hand washing (18.5 %) during the epidemic were the most known preventive measure among participants. Precautionary measures taken by participants to prevent spread of infection were the use of napkins or handkerchief (51.3 %), use of face mask (29.6 %) and avoiding visit of the crowded place and avoidance of hand shaking (15 %).*

***Keywords:*** *Influenza A (H1N1), KAP, Swine flu, Mass media.*

## I. Introduction

During an infectious disease outbreak, it is critical to learn as much as possible about the concerns, knowledge, attitudes and behaviour of the public. Such information can be crucial to the improvement of communication efforts by public health officials and clinicians.[1]

The deadly disease swine flu is, without a speck of doubt, causing a massive havoc among the common people of India and has created fear across various strata of the society.[2] In April 2009, a new strain of influenza virus, A H1N1, commonly known as "swine flu", begun to spread in several countries and World Health Organization quickly raised its pandemic alert to phase 6, indicating that Global pandemic was underway. The 2009 influenza pandemic has affected most countries of the world within a short span of time.[3] In Gujarat, the first case of H1N1 influenza was confirmed in July 2009 and within short time frame several suspected cases of disease were reported.[4]

The number of cases in various countries in subsequent three years is a reason good enough for it to be considered as a major emerging disease as far as a global scenario is concerned. With context to India, the highest number of cases was reported in 2009 (27,236), followed by 2010 (20,604) and 2012 (5054). The highest number of death due to swine flu took place in 2011 (1763), followed by 2009 (981) and 2012 (405). Sheer volume of cases could easily overstretch already fragile and overburdened health services, especially in the developing countries, and cause considerable suffering in human populations around the world. Swine flu has killed 261 people in India in the first 3 months of 2013, with most deaths reported from Rajasthan and Gujarat.[5] In the beginning of 2015, once again, like 2009, few cases has been started reporting and in the month of February and March, the cases and death has been raised substantially all over India. The best we citizens can do is to keep ourselves informed about the happening and the steps we can take to prevent the spread of swine flu. Prevention is the most appropriate measure to control H1N1 flu pandemic and creating awareness regarding H1N1 flu is ranked very high among preventive measures. The distribution of proper information to the public on the status of the H1N1 virus pandemic will be important to achieve awareness of the potential risks

and the optimum code of behaviour during the pandemic.[5] The aim of this study was to assess the knowledge, attitudes and practices related to influenza A (H1N1) among the OPD patients of Tertiary Care Hospital, Surat.

## II. Materials And Methods

**2.1 Study design:** Hospital based cross sectional study

**2.2 Study setting and study population**: Patients attending the Medicine, Paediatric, Pulmonary medicine and ENT OPDs in a Tertiary Care Hospital with the symptoms suggestive of fever and/or upper respiratory infection like cough and cold, sore throat etc.

**2.3 Study duration:** February and March month, 2015

**2.4 Sample size:** A total 507 OPD attendees have been selected.

**2.5 Sampling method:** Consecutive Convenient sampling

**2.6 Inclusion criteria:**Patients with symptoms like fever, cough and cold, sore throat and difficulty in breathing. Patients attending Paediatrics, Medicine, Pulmonary Medicine and ENT OPDs

**2.7 Exclusion criteria:**Known case of chronic respiratory disease and known case of diseases like Malaria, TB, Typhoid etc.

## III. Data Collection

Pre-designed semi-structured questionnaire was used to collect socio demographic information and information related to their knowledge about various aspects of swine flu; their attitude toward the swine flu and its prevention and their practices to prevent occurrence of swine flu.

## IV. Data Entry And Analysis

Data entry was carried out in Microsoft Office Excel and analysis was done in SPSS version 17.0.

## V. Results

**5.1 Socio-demographic characteristics of study participants:**

Total 507 study participants comprising 287 (56.6 %) male and 220 (43.4%) female were enrolled in our study. About half (47 %) of the participants were in the age group of 21 to 40 years. Majority of them (77.3 %) were following Hindu religion. About 41 % of the study participants have achieved at least primary education while about 25 % study participants were illiterate. (Table 1, Figure 1, 2)

**5.2 Knowledge regarding swine flu among study participants:**

Majority of study participants (71 %) have heard about swine flu; major source of information regarding swine flu was friends and relatives (37.3 %), television (36.7 %) and news paper (31.2 %) followed by radio (20. 1 %), posters and banners (17 %) and health staff (10.1 %). About 6.7 % of the participants had received information regarding swine flu from Teacher, principal, children, husband and AWW. (Table 2)

Cough (55. 4 %) and fever (53.1 %) are the most known symptoms among the participants. Other known symptoms are running nose (38.9 %), throat pain (22.5 %), vomiting (10.4 %), and breathing difficulty (8.9 %). About 1.2 % of the participants mentioned headache, weakness and joint pain as symptoms of swine flu. Regarding modes of transmission, participants opined that common modes of transmission were coughing and sneezing (46.4 %), mass gathering (34.1 %), Hand shaking (19.1 %), close personal contact (18.3 %); only few participants had mentioned sharing meal (1.2 %) and sexual contact (0.6 %) as a mode of transmission of swine flu. Correct answer regarding the route of transmission of swine flu was mentioned by about 34 % of the participants. (Table 3) About 41 % of the participants affirmed availability of treatment whereas about 12.4 % of the participants stated that vaccine for swine flu was available. Regarding name of drug used to treat swine flu majority of participants don't know the name of drug but few participants has mentioned Tamiflu (4.7 %), Anti viral (2.6 %) and Oseltamivir (1.0 %) as a drug used to treat swine flu. (Table 4)Use of face mask (46.7 %), avoiding the visit of crowded place (31.8 %), frequent hand washing (18.5 %) and staying at home (14.6 %) during the epidemic were the most known preventive measure among participants. (Table 5)

**5.3 Attitude and Practice of the participants towards swine flu:**

**5.3.1 Precautionary measures:**

When asked about the precautionary measures taken by participants, 51.3 % of the participants replied that they were taking precaution to prevent occurrence of swine flu while 48.7 % participants mentioned that they were not taking any precautions. Among those who were taking precautionary measures, about 50.7 % of

them mentioned that they were using napkin or handkerchief, about 29.6 % mentioned that they were using face mask when visiting crowded places; 38.5 % mentioned that they have avoided the visit of the crowded places, 15 % of the participants practiced avoidance of shaking hand and 6.9 % of the participants preferred to stay at home during the outbreak of swine flu. (Table 6)

## VI. Discussion

In this study, 71 % of the participants have heard about the swine flu, which was lesser than that found in the other studies carried out in Kerala[5] (85.2 %), Punjab[6] (88 %), Vadodara[7] (94 %) and in Barielly[8] (97 %).

Major source of information regarding swine flu was friends and relatives (37.3 %) followed by mass media (television, news paper and radio), posters and banners (17 %) and health staff (10.1 %). In contrast to our study, in a Kerala[5] study and in a Melbourne study conducted by Namrata Devi et al[6], the major source of information is Mass media(television, news paper and radio) mentioned by 74 % and 55 % of the participants, respectively.

Overall, knowledge regarding symptoms of swine flu was poor as compared to other studies. In our study, most commonly known symptom of swine flu to the participants was cough (55.4 %) followed by fever (53.1 %), running nose (38.9 %), and throat pain (22.5 %) etc. In contrast to our study, in Kerala[5] and Punjab[6] study, most commonly known symptom among participants was fever in 71.4 % and 68.1 % of the participants, respectively followed by cough and cold among 68.1 % and 51.5 % of the participants, respectively.

Regarding mode of transmission, participants opined that common modes of transmission were coughing and sneezing (46.4 %), mass gathering (34.1 %), hand shaking (19.1 %), close personal contact (18.3 %); few participants had wrongly mentioned sharing meal (1.2 %) and sexual contact (0.6 %) as a mode of transmission of swine flu. Correct answer regarding the route of transmission (Respiratory route) of swine flu was mentioned by about 34 % of the participants. In other studies it was higher, in Kerala[5] study, 56.33 %, 77.2 % in Barielly[8], 82 % in Vadodara[7] and 54 % in Punjab[6].

Knowledge of availability of treatment (41 %) and vaccines (12.4 %) was poor in comparison to other studies. In a study conducted in Kerala[5], knowledge of treatment availability was found in 56.8% of the participants and knowledge of vaccine availability was found in 55.86% of the participants.

In our study, 46.7 % participants mentioned use of face mask as a way of prevention of swine flu while some participants stated avoiding visit of the crowded place (31.8 %) and hand washing as a way of prevention of swine flu. In Kerala[5] study, 70.42 % participants mentioned use of face mask and 31.90 % participants stated hand washing as an effective way to prevent swine flu. In contrast to our study, Rubin et al [9], in their study reported high percentage (87.8 %) of the interviewer believing that hand washing played an important role in reducing swine flu transmission and fewer respondents (24.3 %) in favour of use of face mask in preventing swine flu spread. Also a study conducted in Punjab[6] 60.5 % participants believed that swine flu can be prevented by wearing face mask and 36.5 % reported that swine flu can be prevented by hand washing and maintaining personal hygiene.

## VII. Conclusion

In spite of occurrence of large number of cases of swine flu in a recent time, awareness regarding various aspects of swine flu was found average to poor among study participants. The role of the mass media is very important to create the awareness about swine flu in the community as most of the participants got knowledge of swine flu through mass media. Awareness generated by health staff is not considerable. Training of the health worker in swine flu should be done. Health education sessions, seminars, workshops and symposia for creating awareness in all areas of urban as well as rural masses can be made more effective by involving Public Health Professionals to target the information needs of the public.

## VIII. Figures And Tables

**Table 1: Gender and religion wise distribution of study Participants**

| Characteristics | Total (%) n=507 |
|---|---|
| **Gender** | |
| Male | 287 ( 56.6 ) |
| Female | 220 ( 43.4 ) |
| **Religion** | |
| Hindu | 392 ( 77.3 ) |
| Muslim | 115 ( 22.7 ) |

**Figure 1:** Age wise distribution of study participants

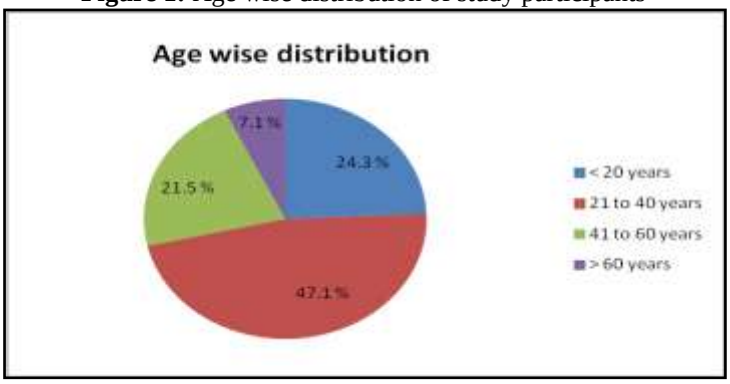


**Figure 2:** Education wise distribution of study participants

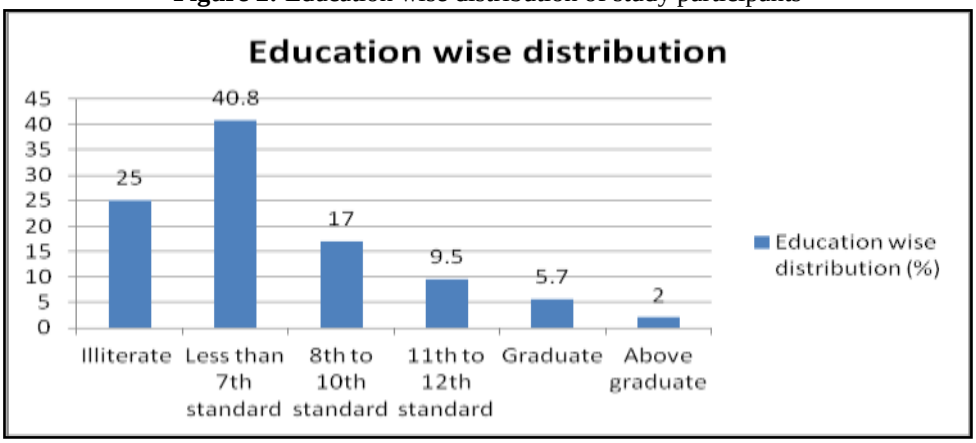


**Table 2: Knowledge of the study Participants regarding source of information**

| | Characteristics | Total (%) n = 507 |
|---|---|---|
| 1 | Have you ever heard about swine flu? | |
| | Yes | 360 ( 71.0 ) |
| | No | 147 ( 29.0 ) |
| 2 | Source of information | |
| | Newspaper | 158 ( 31.2 ) |
| | Television | 186 ( 36.7 ) |
| | Radio | 102 ( 20.1 ) |
| | Posters and banners | 86 ( 17.0 ) |
| | Health staff | 51 ( 10.1 ) |
| | Friends and relatives | 189 ( 37.3 ) |
| | Others ( AWW, Teacher, Principal, Children, Husband) | 34 ( 6.7 ) |

**Table 3: Knowledge of the study Participants regarding signs and symptoms, modes of transmissions and route of transmission**

| | Characteristics | Total (%) n = 507 |
|---|---|---|
| 1 | Signs and Symptoms | |
| | Fever | 269 ( 53.1 ) |
| | Throat pain | 114 ( 22.5 ) |
| | Running nose | 197 ( 38.9 ) |
| | Cough | 281 ( 55.4 ) |
| | Vomiting | 52 ( 10.4 ) |
| | Breathing difficulty | 45 ( 8.9 ) |
| | Others ( headache, weakness, joint pain ) | 6 ( 1.2 ) |
| 2 | Modes of transmission | |
| | Hand shaking | 97 ( 19.1 ) |
| | Sharing meals | 6 ( 1.2 ) |
| | Coughing and sneezing | 235 ( 46.4 ) |
| | Close personal contact | 93 (18.3 ) |
| | Sexual contact | 3 ( 0.6 ) |
| | Mass gathering | 173 ( 34.1 ) |
| 3 | Route of transmission | |

| | | |
|---|---|---|
| | Nose and Mouth | 172 ( 33.9 ) |
| | Don't know | 335 ( 66.1 ) |

**Table 4: Knowledge of the study Participants regarding treatment and vaccination**

| | Characteristics | Total (%) n = 507 |
|---|---|---|
| 1 | Availability of treatment | |
| | Yes | 208 ( 41.0 ) |
| | No | 299 ( 59.0 ) |
| 2 | Name of drug used to treat swine flu | |
| | Oseltamivir | 5 ( 1.0 ) |
| | Tamiflu | 24 ( 4.7 ) |
| | Antiviral | 1 ( 2. 6 ) |
| | Don't know | 178 ( 35.1 ) |
| 3 | Availability of vaccine | |
| | Yes | 63 ( 12.4 ) |
| | No | 55 ( 10.8 ) |
| | Don't know | 389 ( 76.7 ) |

**Table 5: Knowledge of the study Participants regarding preventive measures**

| | Characteristics | Total (%) n = 507 |
|---|---|---|
| 1 | How swine flu can be prevented? | |
| | Face mask | 237 ( 46.7 ) |
| | Home stay | 74 ( 14. 6 ) |
| | Hand washing | 94 ( 18.5 ) |
| | Avoiding crowded place | 159 ( 31.8 ) |

**Table 6: Attitude and Practice**

| | Characteristics | Total (%) n = 507 |
|---|---|---|
| 1 | Taking precaution to prevent occurrence of swine flu | |
| | Yes | 260 ( 51.3 ) |
| | No | 247 ( 48.7 ) |
| 2 | Precautionary measures | |
| | Avoiding mass gathering | 195 ( 38.5 ) |
| | Using face mask | 150 ( 29.6 ) |
| | Using handkerchief/ napkins | 257 (50.7) |
| | Avoid hand shaking | 76 ( 15.0 ) |
| | Staying at home | 35 (6.9 ) |

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