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Knowledge, Awareness, Perception of H1N1 Flu in Urban Dental Fraternity.

Pooja Palwankar^{*}, Vivek Mehta, Vidushi Sheokand, Drishti Palwankar, and Priyanshu Anand.

Department of Periodontology, Manav Rachna Dental College, Surajkund Road, sector-43, Faridabad, Haryana-122001, India.

ABSTRACT

Knowledge and awareness is critically important to undertake any preventive and health education measures. During H1N1 outbreak a lot of preventive and health education measures were taken by the government. To assess the impact of these measures we aimed to evaluate the knowledge, awareness, perception and behavioural changes among dental students towards H1N1 pandemic in 2015. To evaluate the knowledge and attitude among dental students and faculty members towards H1N1 influenza virus. A pre-designed, self-administered questionnaire survey was conducted among dental undergraduate students and dental faculty in Faridabad city in January 2015 through a cross sectional study design. Present study showed that substantial number of participants, have adequate awareness of H1N1 flu, undergraduates(96%), interns(96%), dental staff(100%), mode of spread undergraduates (96%), interns(92%), staff(93%), preventive measures knowledge is undergraduates (52%), interns(62%), dental staff(44%) and recurrence of H1N1 flu can occur undergraduates(60%), interns(58%), and dental staff(49%). There is an appropriate knowledge and awareness regarding various aspects of H1N1 flu in dental staff, interns and undergraduates but through active interventions is required in all areas of H1N1 flu pandemic to improve their knowledge and awareness so as to combat the pandemic H1N1 in health care providers.

Keywords: H1N1 flu, Pandemic, Infectious disease, WHO.

**Corresponding author*

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 [1]. New epidemics of infectious diseases continue to hit the deck and H1N1 flu or influenza A is one of them. Persons with influenza like illness was first reported in Mexico in April 2001 which subsequently confirmed to be Novel H1N1 influenza virus. In June 2009, the world health organization declared the new strain of swine origin H1N1 as a pandemic [2]. Imported cases of Pandemic H1N1 virus was first identified in India in May 2009. This novel virus spread worldwide and had caused about 17000 deaths by the start of 2010[3.4]. Thereafter there was dramatic increase in the number of cases reported all across India. Given the seriousness of the situation and the lack of any specific vaccine initially, against the H1N1 virus, mitigation measures in India have so far have focussed on identifying, treating and isolating the people who have the disease and educating the public about the steps the individuals should take to reduce the risk of transmission. These recommendations include using tissues, when sneezing, washing hands regularly with soap and water and setting up of a network of a few friends to provide mutual assistance [5,6,7]. In October 2011 WHO declared H1N1 a seasonal virus, which made it more contagious or deadly than other flu viruses. In 2014, India had 937 swine flu cases and 218 deaths. The death rate in 2015, so far, is lower as compared with 2014 due to better availability of vaccine. This year Rajasthan is the worst hit, with more than 4,000 cases and 200 deaths. Delhi and Gujarat have reported more than 2,000 cases each in less than 2 months. This paper reports the knowledge and of awareness about H1N1 flu in dental health care providers, undergraduates students, interns and staff members.

MATERIAL AND METHODS

A cross sectional study was conducted by enrolling 248 under graduates students, 48 interns, 43 staff members of age 17 years and above in January 2015 from the institution in Faridabad city, Haryana. The objects in dental institute were assessed in pre-tested self-administered questionnaire containing the following information. Ethical clearance was obtained from institutional Ethical clearance committee, before commencement of the study.

The questionnaire had 3 types of response Yes, No and don't know. Each question answered positively was given a score of 1 and negatively was given a score of 0. For each question that was answered as "Don't know" a score of 2 was given. 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. Questionnaire comprised of following questions-

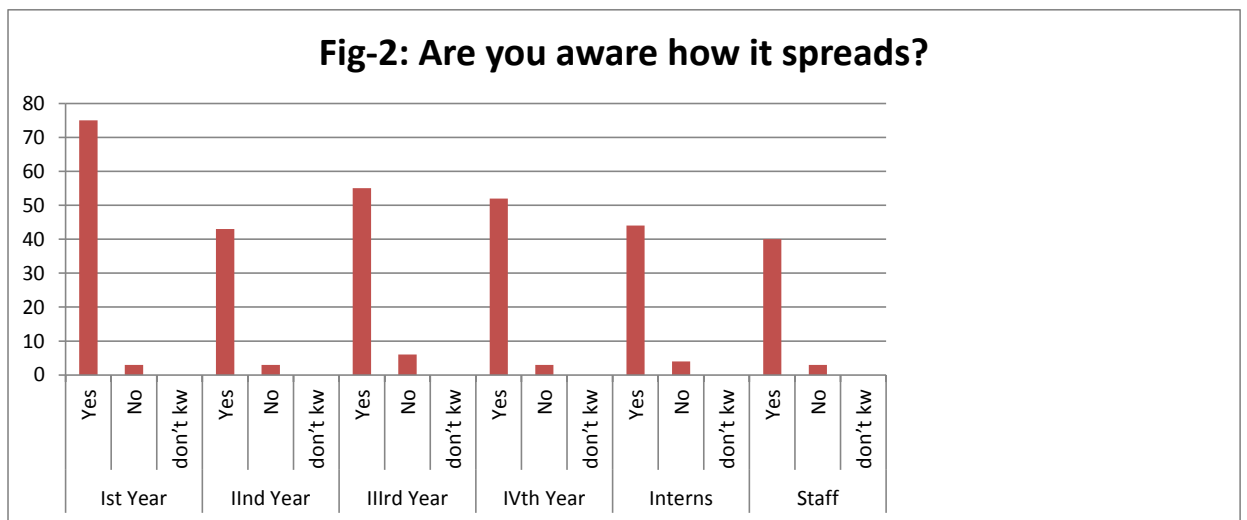
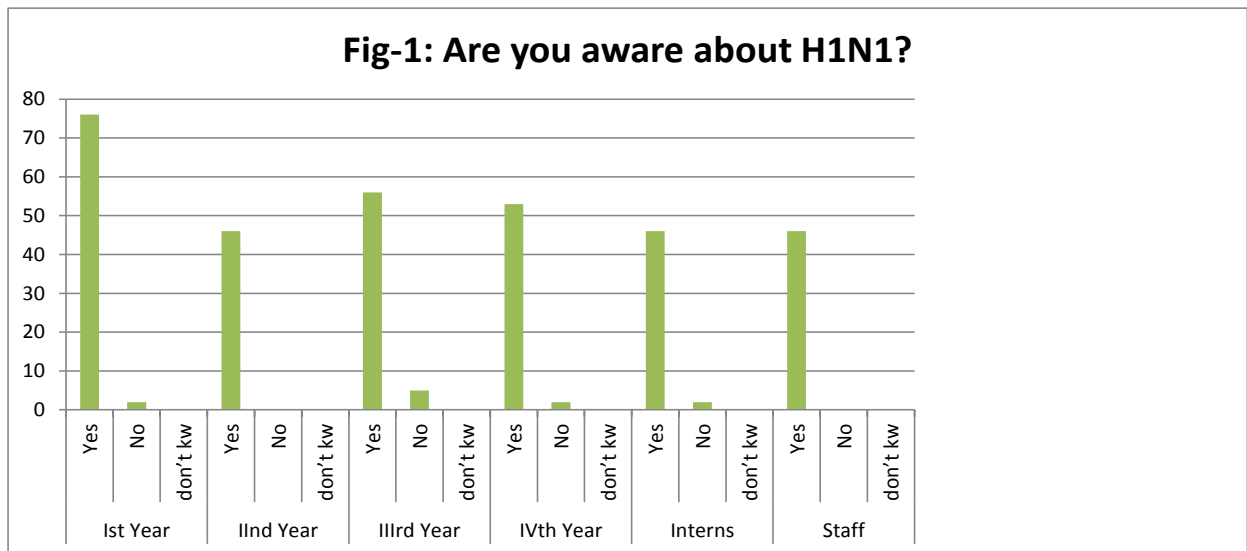
- 1) Are you aware of H1N1 flu?
- 2) Are you aware of how it spreads?
- 3) Is it a communicable disease?
- 4) Do you think Swine Flu/H1N1 flu is different from other types of Flu?
- 5) Are you aware of any vaccine for Swine Flu?
- 6) Are you aware that if Swine Flu doesn't get treated in time, then it can lead to Pneumonia as a complication?
- 7) Do you think that the use of sanitizer in hospitals or clinics by Doctors or Dentists is appropriate preventive measure against H1N1 virus?
- 8) Do you think that the recurrence of Swine Flu can occur?
- 9) Are you aware of the symptoms?
 - a) Fever b) Sore Throat c) Cold d) Body Ache e)Cough f) Diarrhoea & Vomiting
 - g) Stomach Ache h) Burning sensation in the mouth i) Conjunctivitis.
- 10) Are you aware of preventive measures to be taken?
 - a) Use of sanitizer. b) To stay at home c) Wearing H1N1 mask d) Keep away from crowds.
 - e) To take plenty of fluid. f) To cover your nose with handkerchief while sneezing.

Ethical considerations- The participants were informed that all the information gathered would be anonymous and kept confidential. Participation was voluntary, completion of the questionnaire implied consent for study participation. Participants cannot be identified from the material presented and study has caused no plausible harm to the participating individuals.

Statistical Analysis- Statistical analysis of the data and calculation of p values were calculated with chi square test for overall and group wise comparisons using Statistical Package for Social Science (SPSS) software program for Windows (version 17). P values greater 0.05 were defined as statistically significant.

RESULTS

A total of 248 under graduate students, 48 interns, and 43 staff members participated in the study. There was no significant difference noted among the three different groups regarding the awareness about H1N1flu. (p-0.42) (fig-1), spreading of swine flu (p-0.87) (fig-2), its communicability (p-0.16) (fig-3) and is different from other types of flu's (p-0.44) (fig-4), awareness about vaccine against swine flu (p-0.75) (fig-5), as a complication if not treated in time (p-0.06) (pneumonia fig-6),use of sanitizer in hospital/clinics is the appropriate measure (p-0.36), (fig 7) its recurrence (p-0.70) (fig-8),awareness of symptoms fever (p-0.56),sore throat (p-0.05),cold (p-0.61),body ache (p-0.23), cough (p-0.20),diarrhoea and vomiting (p-0.94), stomach ache (p-0.16),burning sensation in the mouth (p-0.42),conjunctivitis (p-0.19) (fig-9), preventive measures like use of sanitizer (p-0.16), staying at home(p-0.77), wearing H1N1 mask (p-0.14), keeping away from crowds (p-0.10), taking plenty of fluids(p-0.21), covering nose with handkerchief while sneezing (p-0.32) (fig-10.) There was statistically significant difference noted between undergraduates and interns (p-6.61), (fig-6) in the question as pneumonia as a complication if not treated in time and awareness of symptom sore throat (p-8.60), (fig-9).



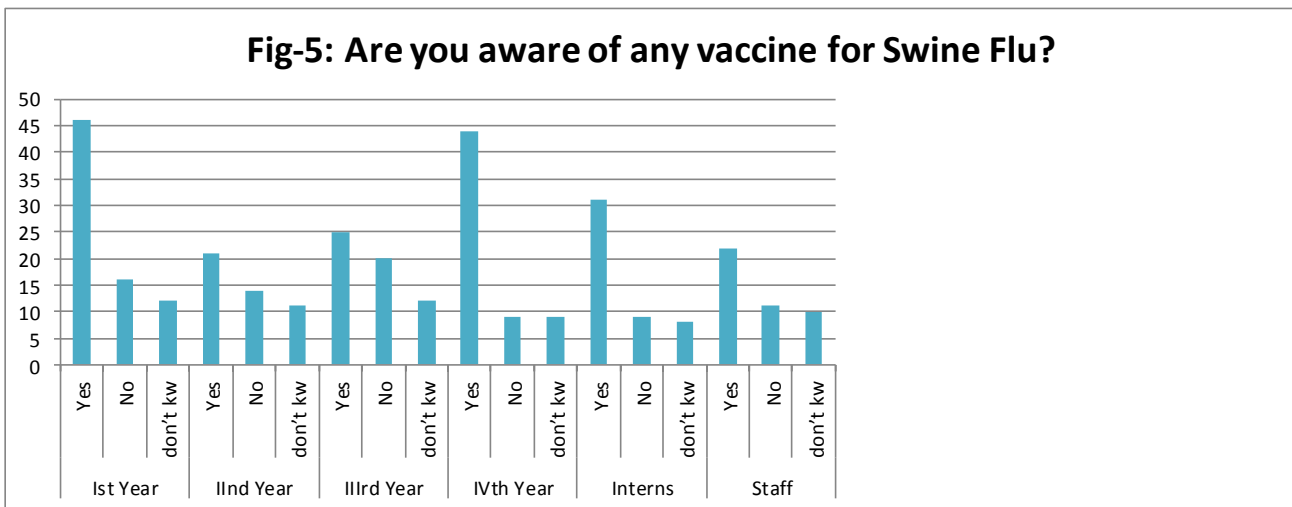
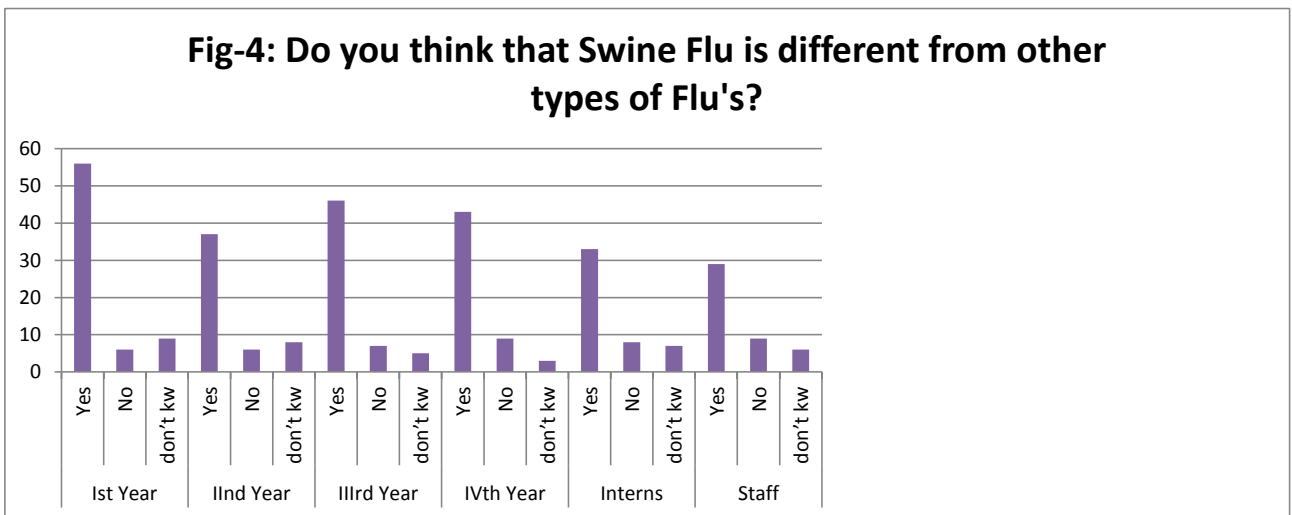
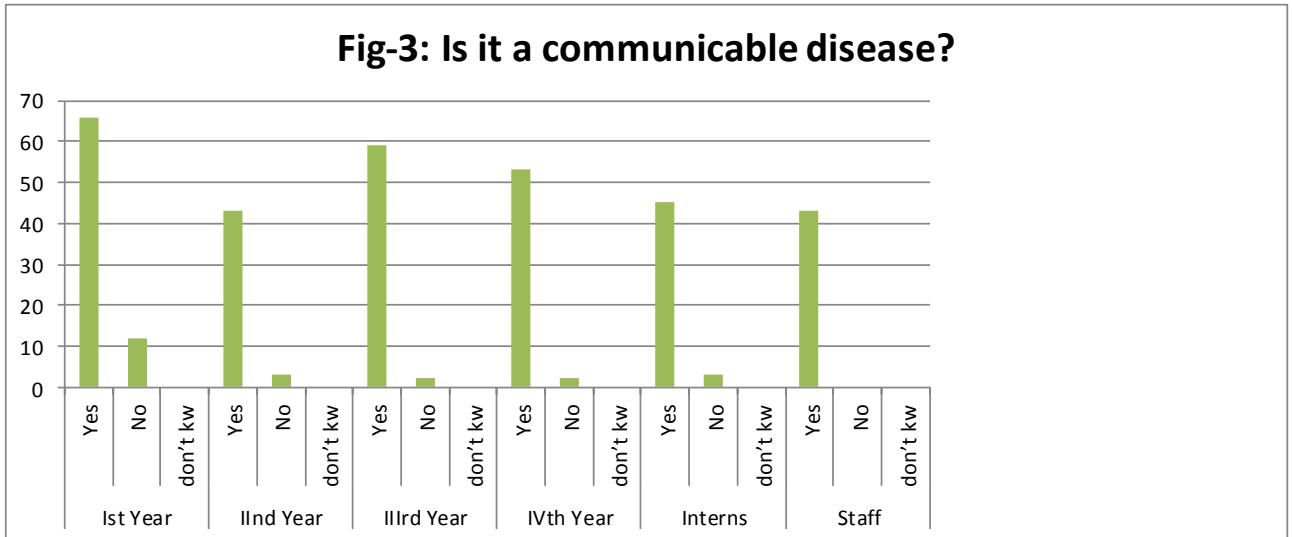


Fig-6: Do you think that the use of sanitizer in hospitals or clinics by Doctors or Dentists is appropriate preventive measure agasint H1N1 virus?

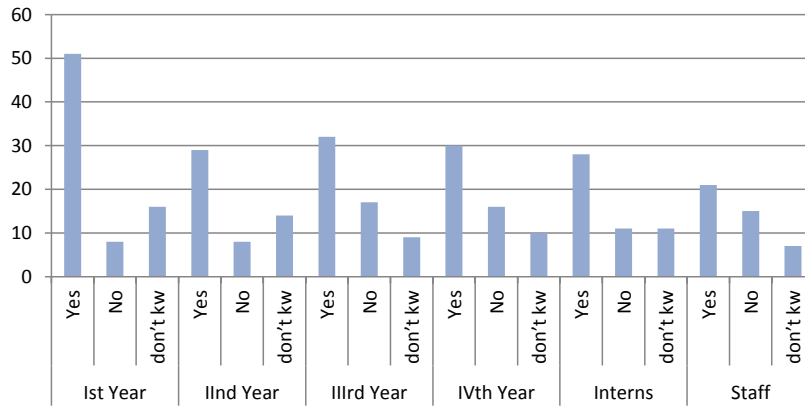


Fig-7: Do you think that the recurrence of Swine Flu can occur?

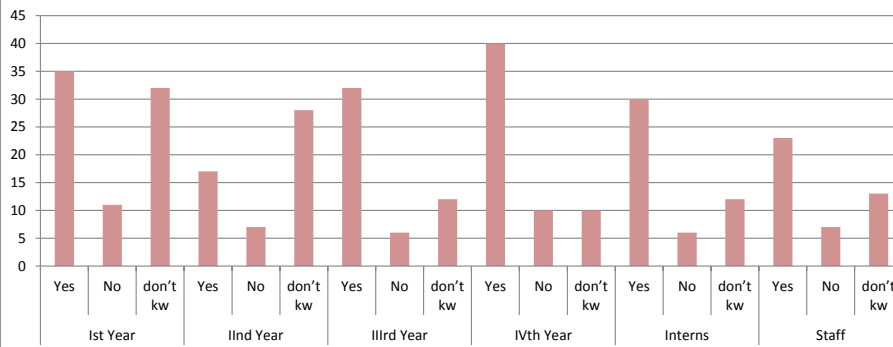
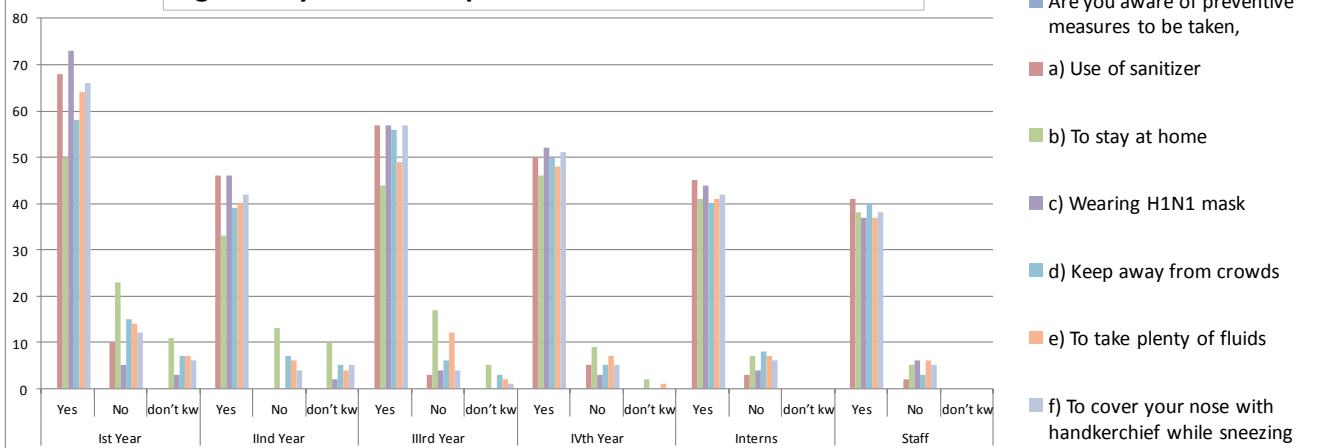
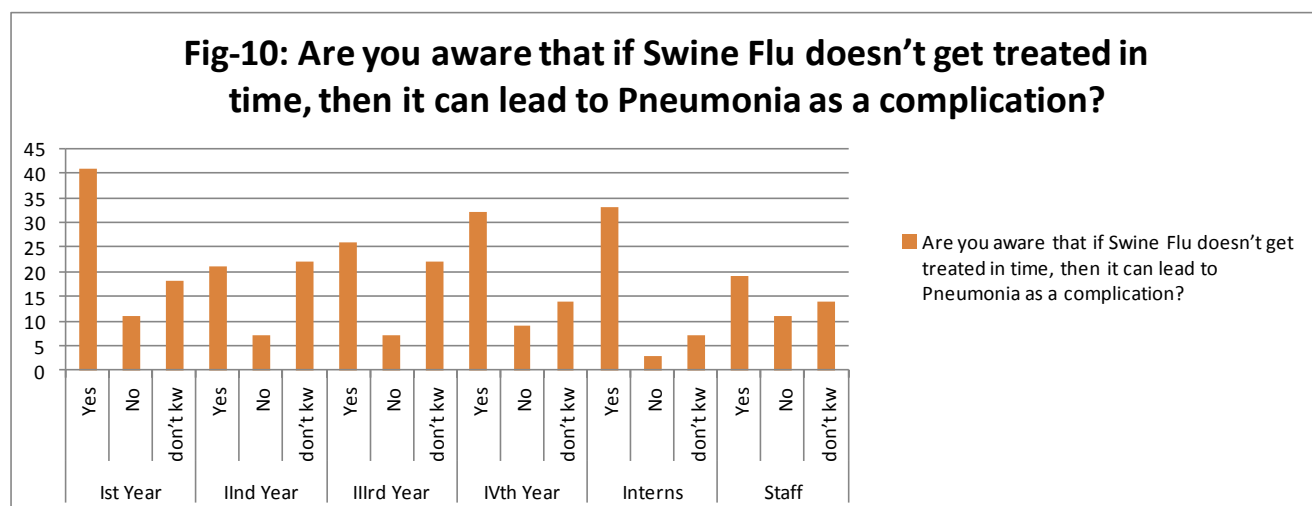
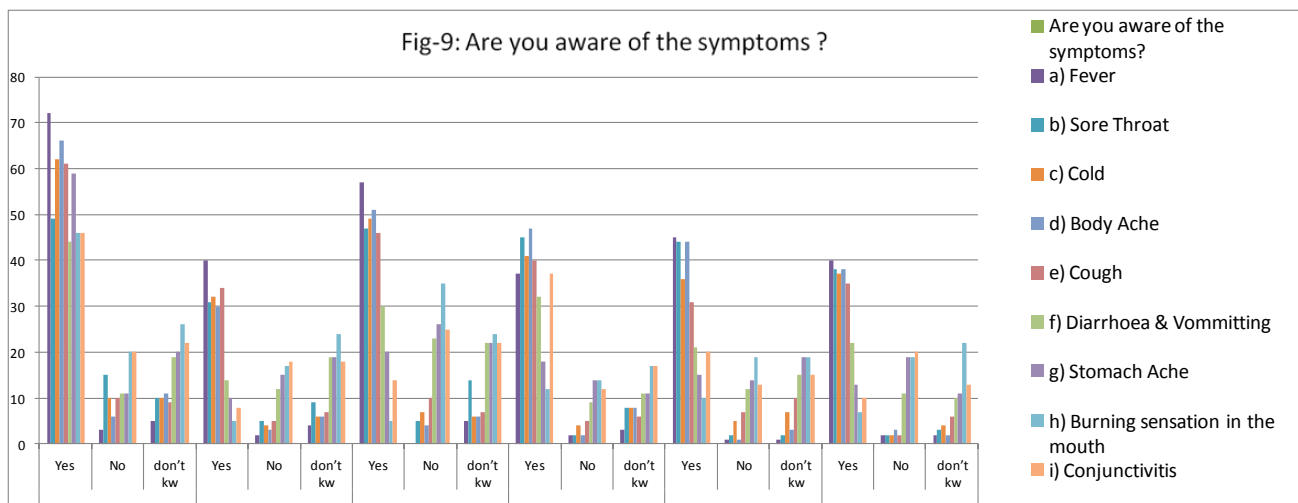


Fig-8: Are you aware of preventive measures to be taken ?





DISCUSSION

The survey was an attempt to understand the knowledge and awareness level in the dental health care provider. The study showed that the majority of the participants from the undergraduates, interns and staff members were adequately aware of H1N1 flu, their vectors of spread, vaccine availability, complication, methods of prevention, symptoms. Results of the study was in accordance with the study done by done by Rath et al (2011)[8], Hao HA et al(2009)[9], Fiore AE et al (2010)[10], Akan H et al (2010) [11]. Thus, this study showed that there is positive attitude of dental health care providers towards H1N1 flu. It has been demonstrated both hand washing and mask wearing are effective in preventing respiratory infections (Cowling et al, 2009) [12]

CONCLUSION

Pandemic outbreak caused by influenza virus and other infectious disease agents still remains the biggest threat to human beings due to high mortality rate associated with their infections. Until now we do not understand why the previous devastating pandemics such as the "Spanish flu" in 1918 and "Swine flu" in 2009 were so severe that we cannot be confident that our modern medical measures would succeed against a similar future challenges. Hence, knowledge, awareness, attitude and preventive measures evaluation through cross sectional survey in the health care providers, is of utmost importance. There is also a need of awareness to be created on pandemic influenza outbreaks among the public. The findings of this study can offer pragmatic contributions to policy makers and academic community with regard to formulating good

strategies and measures to ensure effective messages about ways to handle potential influenza flu spread in the community. Based on this study, it is recommended that there is a need for continuous awareness programs and health campaigns on influenza pandemic targeted for the rural communities as well. If we want to reduce the burden of H1N1 influenza significantly then we have to strengthen the interventions (antiviral drugs, vaccine and behavioural changes) with utmost force. In the light of study findings that however, knowledge and awareness is quiet good but still needs health education sessions, seminars, workshops, mass medias and symposia for creating awareness about pandemic 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. This study will be useful tool for taking up some measures in the right direction for spreading more awareness about swine flu to every corner of the society particularly in urban and rural areas with the help of primary health centres and community in the region.

REFERENCES

- [1] Webster RG, Bean WJ, Gorman OT, Chambers TM, Kawaoka Y. Evolution and ecology of influenza A viruses. *Microbiol. Rev.* 1992; 56: 152–79.
- [2] Rathi SK, Gandhi H, Mark F. Knowledge and Awareness about H1N1 Flu in Urban Adult Population of Vadodara, India. *Electronic Physician* 2011; 392-395.
- [3] Sinha NK, Roy A, Das B, Das S, Basak S. Evolutionary complexities of swine flu H1N1 gene sequences of 2009. *Biochem Biophys Res Commun.* 2009; 390: 349-351.
- [4] Brankston G, Gitterman L, Hirji Z, Lemieux C, Gardam M. Transmission of influenza A in human beings. *Lancet Infect Dis.* 2007; 7: 257–265.
- [5] Lessler J, Reich NG, Brookmeyer R, Perl TM, Nelson KE, Cummings DA. Incubation periods of acute respiratory viral infections: a systematic review. *Lancet Infect Dis.* 2009; 9: 291– 300.
- [6] Jamieson DJ, Honein MA, Rasmussen SA, Williams JL, Swerdlow DL, Biggerstaff MS, et al. H1N1 2009 influenza virus infection during pregnancy in the USA. *Lancet.* 2009; 9688: 451–8.
- [7] Scalera NM, Mossad MB. The first pandemic of the 21st century: a review of the 2009 pandemic variant influenza A (H1N1) virus. *Postgrad Med.* 2009; 121: 43-47.
- [8] Rathi SK, Gandhi H, Bhavsar BS “Modeling for appropriate awareness of H1N1 among urban population of Vadodara, India,” *Healthline* 2011; 2: 19-23.
- [9] Hao AH, Cai YS, Feng WR, Wang M. Needs on information related to influenza pandemic by the Public. *Zhonghua Liu Xing Bing Xue Za Zhi* 2009; 30: 1117-1120
- [10] Fiore AE, Neuzil KM. 2009 influenza A (H1N1) monovalent vaccines for children. *JAMA.* 2010; 303: 73-74.
- [11] Akan H, Gurol Y, Izbirak G, Ozdatli S, Yilmaz G, Vitrinel A, Hayran O. Knowledge and attitudes of university students toward pandemic influenza: a cross-sectional study from Turkey. *BMC Public Health.* 2010; 10: 413.
- [12] Cowling BJ, Chan KH, Fang VJ, et al. Facemasks and hand hygiene to prevent influenza transmission in households. *Ann Internal Med* 2009; 151: 437-46