

# Prevalence of Mumps in Baghdad, Iraq - 2015 & 2016

**Kareem MTA<sup>1\*</sup>, Khaleel AM<sup>2</sup> and Hasan HS<sup>3</sup>**<sup>1</sup>Al Shaheed Dhari Hospital, Iraq<sup>2</sup>Al-Kendy Teaching Hospital, Iraq<sup>3</sup>Al-Emam Ali Hospital, Iraq

## Abstract

**Background:** Mumps is a viral infection transmitted by direct contact, droplet infection and fomites. Iraq witness several epidemics of mumps.**Objective:** To report on last epidemic of mumps 2015-2016.**Methods:** Al-Rusafa side of Baghdad was selected randomly from two sides of Baghdad. A review of data from department of public health, Directorate of Health of Baghdad /Al-Rusafa was carried out. The data was all the notification cases of mumps for the years 2015-2016.**Results:** The registered cases of mumps were 9780 and 33728 for 2015 and 2016, respectively. The peak age in 2015 and 2016 was 5-14 year. The peaks mumps cases were in October, December 2015 and January 2016, and disappear in June 2016.**Conclusions:** Epidemic of mumps was clear in Baghdad. Social strife plays a role in developing the epidemic.**Keywords:** Mumps; Epidemic; Social Strife**\*Correspondence to:** Muataz Taha Abdul Kareem, Al Shaheed Dhari Hospital, Iraq; E-mail: [Muataztaha71@gmail.com](mailto:Muataztaha71@gmail.com)**Citation:** Kareem MTA, Khaleel AM, Hasan HS (2021) Prevalence of Mumps in Baghdad, Iraq - 2015 & 2016, Prensa Med Argent, Volume 107:2. 313. DOI: <https://doi.org/10.47275/0032-745X-313>.**Received:** October 20, 2020; **Accepted:** November 04, 2020; **Published:** November 09, 2020

## Introduction

Mumps is a viral infection manifested by swelling of parotid gland [1]. It is transmitted by direct contact, droplet infection or fomites [2]. The incubation period is 12-25 days. Mumps is prevented by vaccination (live attenuated mumps virus used worldwide). It is widely distributed in low- and medium- income countries.

This study was carried out to through a light on outbreak of mumps, 2015-2016 in Baghdad.

## Materials and Methods

Al-Rusafa side of Baghdad was selected to be site of study by randomly from both sides of Baghdad. A review of data from public health department Baghdad health directorate / Al-Rusafa. The requested data was age, sex and resident. The data was resembling all notifiable cases of mumps for the years 2015 and 2016. The data was analyzed systematically.

## Results

The registered cases were 9780 and 33728 during 2015 and 2016, respectively.

Figure 1 shows the age distribution of mumps cases during 2015 and 2016. The age distribution was similar in years of study. A peak age of mumps cases was 5 to 14 years in both years.

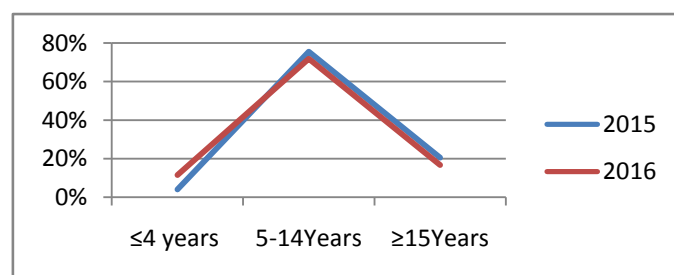


Figure 1: Age distribution of mumps cases.

Male to female ratio was similar in 2015 and 2016, 1.8 and 1.7, respectively.

Figure 2 demonstrate the month distribution of mumps in 2015 and 2016. Cases of mumps started to appear in October 2015 and a peak in December 2015, January 2016 and then decline to disappear in June 2016.

## Discussion

The study revealed that number mumps cases in 2016 was more than tripled the number mumps cases in 2015. It is an outbreak of mumps in 2016. This finding is consistent with that in literature [3,4].

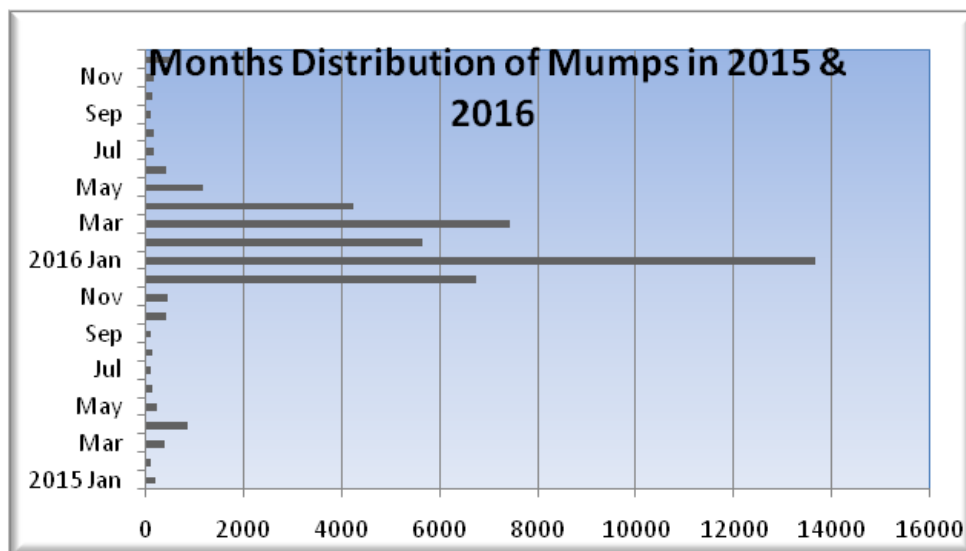


Figure 2: Months distribution of mumps in both years.

The outbreak might be attributed to low coverage rate in mumps vaccine or using a single dose of vaccine was given, a situation was documented in southern Iraq too [5]. Low herd immunity is responsible for such epidemic. Conflicts in Iraq led to deterioration of the system i.e. affect services (immunization), infrastructure (i.e. cold chain) and storage negatively. Conflicts led to internal displaced people (IDPs) to Baghdad which are burden on health system. They were lived in crowded camps in unhygienic conditions. Similar reports were from Al-Anbar and Babil [5,6].

In lines of other studies, the peak age of mumps was among 5-15 year [3,6 and 7]. Similar to that in literature males were predominates in 2015 and 2016 [4]. This finding might be attributed to social activity of males.

It was noticed that mumps epidemic started at October 2015 and the peak at December 2015 and January 2016 i.e. in winter. It is in contrast with that of another study on the same epidemic in Iraq [3]. The difference might be attributed to the variation in the study area which might reflect a registration error. Definition of mumps case is another variation to explain the difference; this study was a clinical based and another study was using ELISA testing (Laboratory based). Laboratory work need a quality control which is so difficult in Iraq during conflict.

Cases of mumps were noticed in May and June might attributed to

variation to strain of virus used in vaccination. In 2015 there was peak of cases in April. It might be a missed epidemic in mumps.

## Conclusion

Epidemic of mumps was clear in Baghdad. It was most prominent in overcrowded districts. Social strife plays a role in developing the epidemic.

## References

1. Rubin S, Michael E, Linda J R, Conner GG B, Paul DW (2015) Molecular biology, pathogenesis and pathology of mumps virus. *J Pathol* 235: 242-252. <https://doi.org/10.1002/path.4445>
2. Atkinson W (2012) Mumps epidemiology and prevention of vaccine-preventable disease. (12th edn), Public health foundation.
3. Hussein AA (2016) Infection rate of mumps Iraq during 2016. *IOSR-JPBS* 13: 50-53. <https://doi.org/10.9790/3008-1302065053>
4. Barrak AS (2017) Epidemiological characteristics of mumps in Baghdad, Iraq, 2013-2016. A dissertation. University of Baghdad.
5. Baie H A, Hatif W (2017) Epidemiological characteristic of mumps outbreak in the south district of Babylon province during the year 2016-2017. *Med J Babylon* 14: 585-592.
6. Al-Khazraji YT, Al-Khazraji MT (2018) Mumps outbreak in Amiriyat Alfallujah, west of Iraq. *Res Rev J Med Health Sci* 7: 45-47.
7. Abertson JP, Clegg WJ, Reid HD, Arbise BS, Pryde J, et al. (2016) Mumps outbreak at a university and recommendation for third dose measles-Mumps-Rubella vaccine Illinois 2015-2016. *Morbidity and Mortality Weekly Report* 65: 731-734.