

2015 Californian Measles Outbreak: An Eye Opener for Local Public Health Authorities

Saurabh Ram Bihari Lal Shrivastava*, Prateek Saurabh Shrivastava and Jegadeesh Ramasamy

Department of Community Medicine, Shri Sathya Sai Medical College and Research Institute, Kancheepuram, India

Abstract

Measles is an acute infectious viral disease which predominantly affects the children. It has been more than a decade that measles has been declared eliminated from the American region owing to the absence of endemic transmission and subsequently because of the maintenance of high measles vaccine coverage. A suspected case of measles in California was reported in an 11 year old unvaccinated child, on fifth of January 2015, and since then almost 147 measles cases have been reported in four nations. The current outbreak in different parts of America has again highlighted the inability of the public health authorities to sustain high immunization coverage or even ensure adequate immunization against vaccine-preventable diseases among the international travelers. To conclude, the current measles outbreak in America has alerted the public health authorities to expand their vision of activities by ensuring adequate immunization coverage among the local residents and at the same time to take appropriate measures to effectively counter the imported cases.

Keywords: Measles; California; Infectious disease

Introduction

Measles is an acute infectious viral disease which predominantly affects the children [1]. The recent estimates released by the World Health Organization suggest that in excess of 145700 measles-related deaths were reported globally in 2013 [2]. It has been more than a decade that measles has been declared eliminated from the American region owing to the absence of endemic transmission and subsequently because of the maintenance of high measles vaccine coverage [3,4].

Description of Measles Outbreak

A suspected case of measles in California was reported in an 11 year old hospitalized and unvaccinated child, on fifth of January 2015, who also gave a history of appearance of rash a week before and a visit to a Disney theme park in California [5]. On the same day, California Department of Public Health (CDPH) received reports of another four suspected measles cases in California and two in Utah, all with a similar sort of history of visits to Disney theme park (the probable source of infection). Subsequently, in the next couple of days, total seven measles cases were diagnosed [5]. Realizing the public health concern, the CDPH issued an alert to other states [5]. The transmission of the disease continued and eventually extended to three other countries, namely Brazil, Canada, and Mexico [6]. The recent reports suggest that close to 150 measles cases have been diagnosed, of which the United States accounted for 121 cases (California - 88 cases) [6].

Potential Determinants

It is really noteworthy that since 2002 (America was declared measles-free), in excess of 5000 imported measles cases have been reported in last decade [4]. The current outbreak in different parts of America has again highlighted the inability of the public health authorities to sustain high immunization coverage or even ensure adequate immunization against vaccine-preventable diseases among the international travelers [4,7]. Systematic analysis of the recent studies identified various parameters which have resulted in poor immunization coverage, such as attitude of parents towards vaccination, parents education, accessibility to a public sector establishment, myths and misconceptions about the disease and vaccine, lack of coordinated efforts from the team of health workers, etc. [8,9].

Recommended Measures

Since majority of the measles cases has been associated with human mobility (viz. entry of an infected person to a region filled with susceptible individuals), there is a definitive need to adhere to the recommendations proposed by the International Health Regulations, and to consolidate the existing surveillance activities to detect the cases (and their susceptible contacts) at the earliest [7,10,11]. In-fact, to prevent the spread of imported cases in future, the World Health Organization and other agencies have advocated for the administration of two doses of measles vaccine before a child becomes five year old [4]. Furthermore, other measures like ensuring high levels of measles vaccination coverage at all levels; promoting the practice of mandatory measles vaccination of all travelers over the age of six months, sensitizing travelers about symptoms of the disease and desired actions if they suspect the disease (during or after the travel); orienting health professionals to notify any suspected measles cases to public health authorities; and facilitating the practice of contact tracing [4-6]. However, to ensure success of these interventions it is must to involve concerned stakeholders like travel agencies or airport authorities [4,7].

Conclusion

To conclude, the current measles outbreak in America has alerted the public health authorities to expand their vision of activities by ensuring adequate immunization coverage among the local residents and at the same time to take appropriate measures to effectively counter the imported cases.

*Corresponding author: Dr. Saurabh Ram Bihari Lal Shrivastava, Department of Community Medicine, 3rd floor, Shri Sathya Sai Medical College and Research Institute, Ammapettai village, Thiruporur - Guduvancherry Main Road, Sembakkam Post, Kancheepuram-603108, Tamil Nadu, India, Tel: +919884227224; E-mail: drshrisri2008@gmail.com

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