Descriptive Epidemiology of Rubella in Saudi Arabia: Progress Toward the 2020 Elimination Target

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Introduction

- Rubella is a viral disease with usually mild symptoms
- Cause for congenital rubella syndrome (CRS)
- The Americas only region in the world that achieved rubella elimination
- Rubella targeted for elimination in Saudi Arabia by 2020

Objectives

- Determine incidence of rubella and CRS in Saudi Arabia from 2013 – 2015
- Assess the distribution of rubella cases by person-related characteristics and geographic regions

Methods

- Secondary data analysis of 3,193 cases of febrile rash illness reported From 2013 to 2015
- Dataset obtained from the Expanded Program for Immunization, Directorate of Infectious Diseases Control, Saudi Ministry of Health

Results

- 94 confirmed rubella cases
- No confirmed CRS cases reported.
- Incidence rate for confirmed rubella cases was 0.22 per 100,000 population in 2013, which dropped to 0.07 in 2014 and 0.02 in 2015
- Out of 94 cases of rubella, 15 were also found to be positive for the measles immunoglobulin M (IgM) antibody

Table 1. Descriptive epidemiology of confirmed rubella cases

Descriptive characteristics	Confirmed cases	%
Age group (year)		
Less than 1	5	5.3
1 to 4	40	42.6
5 to 19	19	20.2
20 to 34	22	23.4
35 to 49	8	8.5
Gender		
Female	47	50
Male	47	50

Confirmed rubella cases by year and month of occurrence

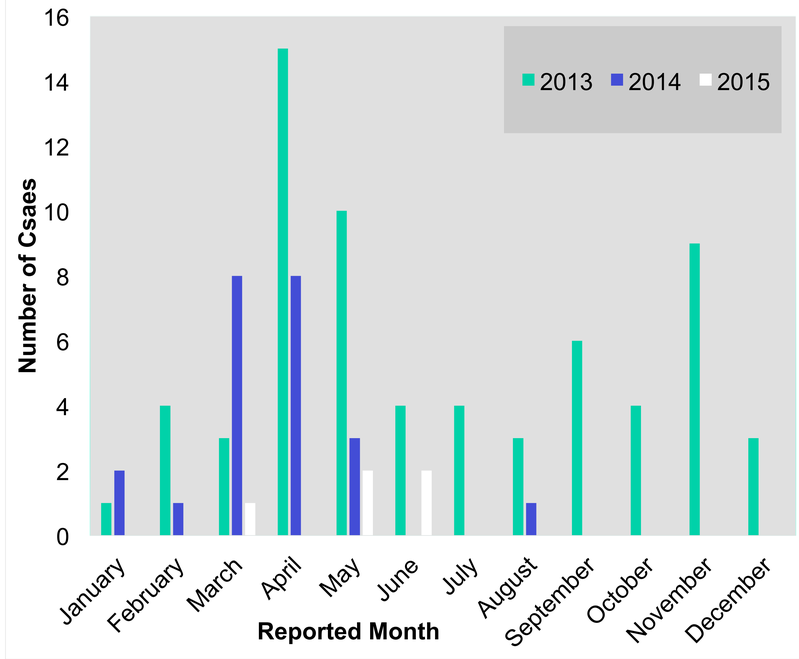

Table 2. Vaccination status of confirmed rubella cases

Vaccination status	Confirmed cases	%
One MMR Dose	8	8.5
Two or more MMR Doses	1	1.1
Not Eligible	5	5.3
Not Vaccinated	48	51.1
Unknown	28	29.8
N/A	4	4.3

Conclusion

- Annual incidence of rubella in the Kingdom of Saudi Arabia was very low (less than 1/100,000 population), over the study period
- No cases of CRS reported
- Results provide encouraging evidence that elimination is attainable by the 2020 target

Recommendations

- Maintain high population immunity
- Rigorously analyze surveillance and vaccination coverage
- Obtain accurate molecular epidemiology data from confirmed cases to assist in determining which isolates are endemic and which are imported
- Target females of childbearing age
- Conduct further studies to characterize rubella genotypes, vaccine coverage rate, and surveillance quality

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