***Epidemiology and Infection***

**Measles and rubella seroprevalence in adults using residual blood samples from health facilities and household serosurveys in Palghar District, Maharashtra, India, 2018-19**

Authors: Christine Prosperi, Alvira Z Hasan, Amy K Winter, Itta Krishna Chaaithanya, Neha R Salvi, Sanjay L Chauhan, Ragini N Kulkarni, Abhishek Lachyan, Poonam Gawali, Mitali Kapoor, Vaishali Bhatt, Ojas Kaduskar, Gururaj Rao Deshpande, Ignacio Esteban, R Sabarinathan, Velusamy Saravana Kumar, Shaun A Truelove, Muthusamy Santhosh Kumar, Jeromie W Vivian Thangaraj, Lucky Sangal, Sanjay M Mehendale, Gajanan N Sapkal, Nivedita Gupta, Kyla Hayford, William J Moss, Manoj V Murhekar

**Supplementary Tables and Figures**

Supplementary Table S1. Age of adult patients with residual specimens

|  |  |
| --- | --- |
|  | Median age in years (IQR) |
| Overall (N=650) | 27 (22, 35) |
| Female (N=476) | 26 (22, 32) |
| Male (N=174) | 30 (23, 40) |
| ANC attendees (N=167) | 24 (22, 27) |
| Male and non-ANC female patients (N=483) | 29 (23, 37.5) |

IQR, interquartile range

Supplemental Table S2. Seroprevalence of IgG antibodies against measles and rubella among adults 15 to 50 years with residual specimens

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Antigen | Overall (N=650) | By sex | | | By patient type | | |
| Female (N=476) | Male (N=174) | aORa (95% CI) | ANC attendees (N=167) | Male and non-ANC female patients (N=483) | aORb  (95% CI) |
| % (95% CI) | % (95% CI) | % (95% CI) | % (95% CI) | % (95% CI) |
| Measles | 98.5 (97.5, 99.4) | 98.3 (97.2, 99.5) | 98.9 (97.3, 100) | 1.31 (0.32, 8.77) | 97.0 (94.4, 99.6) | 99.0 (98.0, 99.9) | 0.37 (0.07, 1.55) |
| Rubella | 91.5 (89.4, 93.8) | 92.6 (90.0, 95.0) | 88.5 (83.8, 93.2) | **0.54 (0.30, 0.99)** | 91.6 (87.4, 95.8) | 91.5 (89.0, 94.0) | 0.95 (0.47, 1.97) |

1. Logistic regression adjusted for age in years. Bold indicates p-value < 0.05.
2. Logistic regression adjusted for age in years and sex.

Supplementary Figure S1. Age distribution of adults with specimens collected, by survey type

A graph of a graph

Description automatically generated with medium confidence

Median (IQR) age of adult females enrolled in community-based survey (N=314): 30.8 (23.3, 37.9).

Supplementary Table S3. Moran's I statistic results for measles and rubella seroprevalence estimated from post-SIA serosurvey conducted in Palghar District, Maharashtra

|  |  |  |
| --- | --- | --- |
|  | **Measles** | **Rubella** |
| Moran's Index, (SD) | 0.1 (1) | -0.09 (-0.48) |
| Expected Index | -0.03 | -0.03 |
| Variance | 0.017 | 0.013 |
| *p-value (Monte Carlo simulation, 1000 permutations)* | 0.139 | 0.718 |