

Press Briefing

Sero Survey Delhi

The Government of National Capital Territory of Delhi had commissioned a follow-up sero survey for evaluation of the prevalence and trends of the SARS-CoV-2 infection in the general population of Delhi. The sero survey applied a repeated cross-sectional study design, and the first round was conducted in the first week of August 2020. The other two rounds are scheduled in the first weeks of September and October' 2020.

The survey was planned by the Government of NCT Delhi with technical support of Maulana Azad Medical College (MAMC), New Delhi.

The sample size for the survey was calculated as 15000 (calculated using expected prevalence of the SARS-CoV-2-infection as 23.48% based on NCDC Delhi serosurvey, 95% confidence levels, 1% absolute precision for increased accuracy in the first round. The serosurvey has been implemented across all the 11 districts with the number of participants selected as per the population allocation to the size sampling method both at the district and ward level. Multistage sampling was done for selection of the study participants in each ward within the communities of the catchment area of the Delhi government dispensaries and primary urban health facilities through a team consisting of local frontline health workers. The sample was stratified at the health facility level as per age strata of

<18, 18-49, ≥50 years in the proportion of 25%, 50% and 25%, respectively. Furthermore, it has been taken care that any individual who was part of the previous round of the serosurvey is not been included in the current or forthcoming round of the sero survey.

DELHI SEROSURVEY RESULTS

Sampling strategy:

- Survey conducted in all 11 districts of the state
- Total number of participants in each district was calculated by in two stages-District and ward; allocation done in proportion to population size.
- Age stratification was recommended from 5-17 years: 25%; 18-49: 50%; and ≥50 years: 25%
- From each household, participants were selected using the age order procedure (Kish) method. Any individual who was included in the previous NCDC survey was not included in this round.

Seroprevalence of SARS-CoV-2 antibody is 28.35% (N=15,239)

- Total Calculated Sero-Prevalence: 28.35%
- True Prevalence (TP) at 97.7 specificity and 92.1% sensitivity
$$TP = 28.37 + (Sp - 1) / Sp + (Sen - 1)$$
$$0.284 + (0.977 - 1) / 0.977 + (0.921 - 1) = 29.1\%$$

Median age of the participants was 32 years.

Name of the district	Seroprevalence of SARS-CoV-2 antibody
North East	29.6
South	27.2
South East	33.2
New Delhi	24.6
South West	16.3
North	31.6
Central	31.4
Shahdara	29.9
West	26.5
East	28.9
North West	29.6

- Total Calculated Sero-Prevalence:28.35%
- $TP = 28.37 + (Sp-1)/Sp + (Sen-1)$
 $0.284 + (0.977-1)/0.977 + (0.921-1) = 29.1\%$

DATA ANALYSED FOR 12,598 subjects on Gender and Age strata for Sero Prevalence

- Seroprevalence in Males: 28.3%; Females: 32.2% (p=0.003)
- Seroprevalence in <18: 34.7%; 18-49: 28.5%; >=50: 31.2% (p<0.001)

Comparison of 1st and second sero survey round in Delhi

Name of the district	1 st round	2 nd round	% increase
North East	27.7	29.6	6.71
South	18.61	27.2	46.21
South East	22.12	33.2	50.09
New Delhi	22.87	24.6	7.70
South West	12.95	16.3	25.5
North	25.26	31.6	24.98
Central	27.86	31.4	12.6
Shahdara	27.61	29.9	8.40
West	19.13	26.5	38.6
East	23.9	28.9	25.4
North West	23.31	29.6	26.98
Total	22.86	28.35	

**2nd round ---Seroprevalence of SARS-CoV-2 antibody is 28.35%
(N=15,239)**

- Total Calculated Sero-Prevalence:28.35%
- True Prevalence(TP) at 97.7 specificity and 92.1% sensitivity

$$TP = 28.37 + (Sp-1)/Sp + (Sen-1)$$

$$0.284 + (0.977-1)/0.977 + (0.921-1) = \mathbf{29.1\%}$$