## Estimated first-wave (top) and second-wave (bottom) underreporting factors associated with SARS-CoV-2 for states in India Wave 1: April 1, 2020 - January 31, 2021. Wave 2: February 1, 2021 - June 30, 2021. Andhra Pradesh-URF(D): 8.99 ( 8.92– 9.06) URF(C): 43.08 (42.96–43.20) Goa-URF(D): 6.32 ( 6.02-6.61) URF(C): 28.39 (27.12-29.58) Delhi-URF(D): 6.29 ( 6.24– 6.33) URF(C): 28.26 (28.18–28.35) Uttarakhand-URF(D): 5.26 (4.02-6.33) URF(C): 22.34 (16.52-27.43) Madhya Pradesh-URF(D): 2.91 ( 2.60– 3.20) URF(C): 10.16 ( 8.69–11.42) Jharkhand-URF(D): 2.78 ( 1.59- 4.00) URF(C): 9.62 (5.49-13.96) State/Union territory Punjab-URF(D): 2.79 ( 2.54- 3.04) URF(C): 8.97 (8.15-9.79) Haryana-URF(D): 2.57 (2.24-2.92) URF(C): 8.26 (7.05–9.66) Karnataka-URF(D): 2.55 ( 2.36- 2.74) URF(C): 7.77 (7.01-8.52) Assam-URF(D): 2.44 ( 2.10- 2.81) URF(C): 7.26 (6.21-8.37) Tamil Nadu-URF(D): 2.44 ( 2.33-2.55) URF(C): 7.12 (6.82-7.42) Bihar-11.5) URF(D): 2.38 ( 2.05-2.73) URF(C): 6.72 (5.61-7.94) URF(C) for India URF(D) for India 3.56 (3.48-3.64) Kerala-URF(D): 2.35 ( 2.15- 2.54) URF(C): 6.58 ( 6.04– 7.11) Uttar Pradesh-URF(D): 2.28 ( 2.12- 2.44) URF(C): 6.39 (5.93-6.86) 11.1 (10.7 Gujarat-URF(D): 2.09 (1.96-2.22) URF(C): 5.91 (5.55-6.28) West Bengal-URF(D): 2.10 (1.89-2.33) URF(C): 5.56 (5.01-6.18) Telangana-URF(D): 2.14 ( 1.94– 2.33) URF(C): 5.53 (4.95-6.10) Maharashtra-URF(D): 2.10 ( 2.04– 2.17) URF(C): 5.48 (5.25-5.67) Rajasthan-URF(D): 2.01 (1.88-2.14) URF(C): 5.34 (5.04-5.66) Odisha-URF(D): 1.98 (1.53-2.51) URF(C): 4.87 (3.74-6.24) 20 10 15 40 25 **Estimated underreporting factor** Assam-URF(D): 7.43 ( 6.58-8.14) URF(C): 35.43 (30.80-39.33) Odisha-URF(D): 7.07 (6.44-7.58) URF(C): 34.93 (31.40-37.60) West Bengal-URF(D): 5.81 (5.22-6.31) URF(C): 26.58 (23.24-29.35) Rajasthan-URF(D): 5.79 (4.94-6.55) URF(C): 26.20 (21.54-30.41) 3.69) -14.6Telangana-URF(D): 5.69 (4.77 – 6.27) URF(C): 25.59 (20.43 – 28.60) URF(C) for India URF(D) for India Tamil Nadu-URF(D): 5.39 (5.06-5.67) URF(C): 24.86 (23.00-26.45) State/Union territory Punjab-URF(D): 5.53 (5.05-5.89) URF(C): 24.67 (22.04-26.60) 13.3 (11.4 Andhra Pradesh-URF(D): 5.44 (5.09-5.73) URF(C): 24.30 (22.43-25.86) 3.46 (3.13 Uttar Pradesh-URF(D): 5.02 (4.61 – 5.50) URF(C): 22.93 (20.75 – 25.52) Bihar-URF(D): 4.95 (4.36-5.43) URF(C): 21.64 (18.42-24.27) Haryana-URF(D): 4.93 (4.54–5.30) URF(C): 21.00 (18.84–23.02) Uttarakhand-URF(D): 4.84 ( 4.44-5.18) URF(C): 20.01 (17.84-21.79) Karnataka-URF(D): 4.70 (4.44-4.91) URF(C): 19.81 (18.32-20.91) Jharkhand-URF(D): 4.55 (4.10-5.14) URF(C): 18.83 (16.52-21.98) Delhi-URF(D): 4.39 (4.35-4.43) URF(C): 17.96 (17.92-17.99) Gujarat-URF(D): 4.09 (3.82-4.29) URF(C): 16.26 (14.81-17.29) Madhya Pradesh-URF(D): 3.99 (3.58-4.32) URF(C): 15.92 (13.72-17.70) Maharashtra-URF(D): 3.77 ( 3.65- 3.88) URF(C): 14.65 (13.98-15.20) Kerala-URF(D): 3.19 (3.15 – 3.23) URF(C): 11.97 (11.85 – 12.10) Goa-URF(D): 3.23 (3.14-3.32) URF(C): 11.84 (11.64-12.02) 5 20 10 15 40 0 45 **Estimated underreporting factor** © COV-IND-19 Study Group Source: covid19india.org

- Owing to lack of sufficient data, estimates for only twenty states with highest case counts have been presented.

- Coloured blue for URF(C) and red for URF(D) values.