

Supplementary Table S1. Multivariate analysis for positivity of SARS-CoV-2

	Model 1 (ICS use)		Model 2 (ICS dose)		Model 3 (ICS type)	
	OR	95% CI	OR	95% CI	OR	95% CI
Male sex	0.70	0.61–0.80	0.70	0.61–0.80	0.69	0.61–0.80
Age, yr						
0–19	1		1		1	
20–39	2.16	1.60–2.89	2.16	1.61–2.89	2.16	1.61–2.89
40–59	2.89	2.16–3.89	2.89	2.16–3.89	2.89	2.16–3.89
60–79	2.70	1.97–3.71	2.70	1.97–3.71	2.70	1.97–3.71
≥80	1.71	1.18–2.48	1.71	1.18–2.48	1.71	1.18–2.48
Region of residence						
North-western						
Seoul*	1		1		1	
Incheon*	1.33	0.79–2.24	1.33	0.79–2.24	1.33	0.79–2.24
Daejeon*	1.19	0.63–2.25	1.19	0.63–2.25	1.19	0.63–2.25
Gyeonggi†	1.26	0.91–1.76	1.26	0.91–1.76	1.27	0.91–1.76
Chungcheongbuk†	3.11	1.90–5.08	3.10	1.90–5.07	3.11	1.90–5.08
Chungcheongnam†	2.89	1.99–4.21	2.89	1.99–4.21	2.89	1.99–4.20
North-eastern						
Gangwon†	3.36	2.06–5.49	3.36	2.05–5.49	3.36	2.06–5.50
South-eastern						
Busan*	0.99	0.57–1.74	0.99	0.57–1.74	0.99	0.57–1.74
Ulsan*	0.87	0.32–2.38	0.87	0.32–2.38	0.87	0.32–2.38
Daegu*	18.06	14.02–23.28	18.06	14.01–23.27	18.05	14.00–23.27
Gyeongsangbuk†	17.64	13.23–23.51	17.62	13.21–23.48	17.66	13.24–23.55
Gyeongsangnam†	3.99	2.67–5.98	3.99	2.66–5.99	4.0	2.67–5.99
South-western						
Gwangju*	2.99	1.58–5.69	2.99	1.58–5.69	2.97	1.56–5.64
Jeollabuk†	4.12	2.56–6.62	4.11	2.56–6.62	4.12	2.56–6.63
Jeollanam†	1.61	0.69–3.71	1.61	0.69–3.72	1.60	0.69–3.69
Jeju Island†	NA	NA	NA	NA	NA	NA
Medical-aid beneficiaries [§]	1.03	0.81–1.31	1.03	0.81–1.31	1.03	0.81–1.31
Comorbidities						
Heart disease	0.72	0.58–0.90	0.72	0.58–0.90	0.72	0.58–0.90
Diabetes mellitus	0.85	0.69–1.04	0.85	0.69–1.04	0.85	0.69–1.04
Hypertension	0.82	0.68–0.98	0.82	0.68–0.98	0.82	0.68–0.98
Cancer	0.48	0.37–0.64	0.48	0.37–0.64	0.48	0.37–0.64
Charlson comorbidity index						
1	1		1		1	
2	0.82	0.68–0.99	0.82	0.68–0.99	0.82	0.68–0.99
≥3	0.83	0.67–1.03	0.83	0.67–1.03	0.83	0.67–1.03
ICS use						
No	1		-	-	-	-
Yes	0.84	0.68–1.03	-	-	-	-

Supplementary Table S1. Continued

	Model 1 (ICS use)		Model 2 (ICS dose)		Model 3 (ICS type)	
	OR	95% CI	OR	95% CI	OR	95% CI
ICS dose						
No	-	-	1		-	-
Low	-	-	0.83	0.63–1.11	-	-
Medium	-	-	0.75	0.39–1.42	-	-
High	-	-	0.87	0.64–1.17	-	-
ICS type						
No	-	-	-	-	1	
Budesonide	-	-	-	-	0.67	0.42–1.08
Fluticasone	-	-	-	-	0.86	0.67–1.09
Beclomethasone	-	-	-	-	0.88	0.50–1.56
Ciclesonide	-	-	-	-	1.33	0.58–3.09

*Cities in South Korea. †Provinces in South Korea. ‡None in Jeju Island was infected with SARS-CoV-2. §Compared to non-medical-aid beneficiaries which included employee insured and self-employed insured.

SARS-CoV-2: severe acute respiratory syndrome coronavirus 2; ICS: inhaled corticosteroid; OR: odds ratio; CI: confidence interval.