Supplemental Table 1. Initial parameter estimates and estimation bounds for the model fitting process to calibrate each of the models to the data reported up until 13 February 2020.

GLM	***r***	***p***	***K***
	0.8 [0, 10]	1.0 [0, 1]	10000 [0, 1000000]
Richards	***r***	***a***	***K***
	0.8 [0, 10]	1.0 [0, 10]	10000 [0, 1000000]

Sub-epidemic	***r***	***p***	***q***	K_0
	0.3 [0, 10]	0.9 [0, 1]	0.1 [0, 10]	*Based on total cases at time of calibration

Supplemental Table 2. Guangdong: GLM, Richards, and sub-epidemic model parameter estimates, mean squared error (MSE) for the best-fit solution, and prediction interval (PI) coverage. Mean parameter estimates are presented with the 95% confidence intervals obtained from the *M* bootstrap solutions. Estimates of q are not presented for the sub-epidemic model for Guangdong, as only one sub-epidemic was predicted, and q was not utilized.

GLM	***r* (95% CI)**	***p* (95% CI)**	***K* (95% CI)**	**MSE**	**PI coverage (%)**
2/12/2020	0.66 (0.45, 1.0)	0.88 (0.80, 0.94)	1305 (1202, 1379)	37.63	86.36
2/13/2020	0.69 (0.44, 1.07)	0.87 (0.79, 0.94)	1309 (1222, 1389)	36.95	86.96
Richards	***r* (95% CI)**	***a* (95% CI)**	***K* (95% CI)**	**MSE**	**PI coverage**
2/12/2020	0.45 (0.36, 0.61)	0.59 (0.37, 0.84)	1307 (1232, 1396)	36.95	90.91
2/13/2020	0.45 (0.35, 0.61)	0.59 (0.37, 0.83)	1306 (1234, 1386)	35.87	86.96
Sub-epidemic	***r* (95% CI)**	***p* (95% CI)**	***K_0* (95% CI)**	**MSE**	**PI coverage**
2/12/2020	0.65 (0.46, 0.87)	0.88 (0.82, 0.94)	1300 (1220, 1380)	37.46	90.91
2/13/2020	0.65 (0.46, 0.88)	0.88 (0.82, 0.94)	1310 (1230, 1380)	35.68	91.30

Supplemental Table 3. Zhejiang: GLM, Richards, and sub-epidemic model parameter estimates, mean squared error (MSE) for the best-fit solution, and prediction interval (PI) coverage. Mean parameter estimates are presented with the 95% confidence intervals obtained from the *M* bootstrap solutions.

GLM	***r* (95% CI)**	***p* (95% CI)**	***K* (95% CI)**	**MSE**	**PI coverage (%)**
2/12/2020	1.53 (1.06, 2.09)	0.76 (0.69, 0.82)	1182 (1121, 1254)	411.22	59.09
2/13/2020	1.57 (1.10, 2.18)	0.75 (0.68, 0.82)	1192 (1128, 1260)	393.76	65.22
Richards	***r* (95% CI)**	***a* (95% CI)**	***K* (95% CI)**	**MSE**	**PI coverage**
2/12/2020	1.10 (0.62, 1.86)	0.25 (0.13, 0.45)	1191 (1123, 1258)	395.89	60.87
2/13/2020	1.14 (0.72, 2.10)	0.23 (0.12, 0.39)	1197 (1125, 1272)	378.71	59.09

Sub-epidemic	***r* (95% CI)**	***p* (95% CI)**	***K_0* (95% CI)**	**q (95% CI)**	**MSE**	**PI coverage**
2/12/2020	0.58 (0.55, 0.65)	0.99 (0.97, 1.0)	693 (634, 752)	0.45 (0.25, 0.65)	281.98	59.09
2/13/2020	0.60 (0.56, 0.66)	0.99 (0.97, 1.0)	735 (675, 795)	0.57 (0.38, 0.75)	278.48	56.52