

Table S4: Simulation Study Results: The Effect of Broader Priors on Deterministic Coalescent SIR

η	St. Dev.	Truth	Mean	Median	Error	Bias	Relative HPD width	95% HPD accuracy
\mathcal{R}_0	2	1.50	2.06	1.75	0.40	0.35	0.86	79.00%
\mathcal{R}_0	1	1.50	1.80	1.49	0.24	0.15	0.52	85.00%
\mathcal{R}_0	2	2.50	3.31	2.85	0.34	0.24	1.43	95.00%
\mathcal{R}_0	1	2.50	2.68	2.49	0.13	0.04	0.80	99.00%
γ	2	0.30	0.31	0.23	0.37	-0.12	1.59	96.00%
γ	1	0.30	0.26	0.23	0.27	-0.22	1.15	89.00%
γ	2	0.30	0.31	0.25	0.33	-0.09	1.59	95.00%
γ	1	0.30	0.32	0.29	0.16	3.14E-3	1.27	99.00%
$S_{(0)}$	2	499	2041	249	1.40	0.49	7.75	85.00%
$S_{(0)}$	1	499	562	361	0.44	-0.26	3.36	91.00%
$S_{(0)}$	2	999	3028	717	1.05	0.33	6.60	94.00%
$S_{(0)}$	1	499	553.38	337	0.42	-0.26	3.08	92.00%
$z_{(0)}$	2	(varies)	65.10	62.01	0.04	0.03	0.25	86.00%
$z_{(0)}$	1	(varies)	91.03	72.51	0.39	0.38	0.42	88.00%
$z_{(0)}$	2	(varies)	40.97	39.85	0.03	-6.78E-4	0.08	81.00%
$z_{(0)}$	1	(varies)	112.79	90.37	0.26	0.26	0.94	85.00%