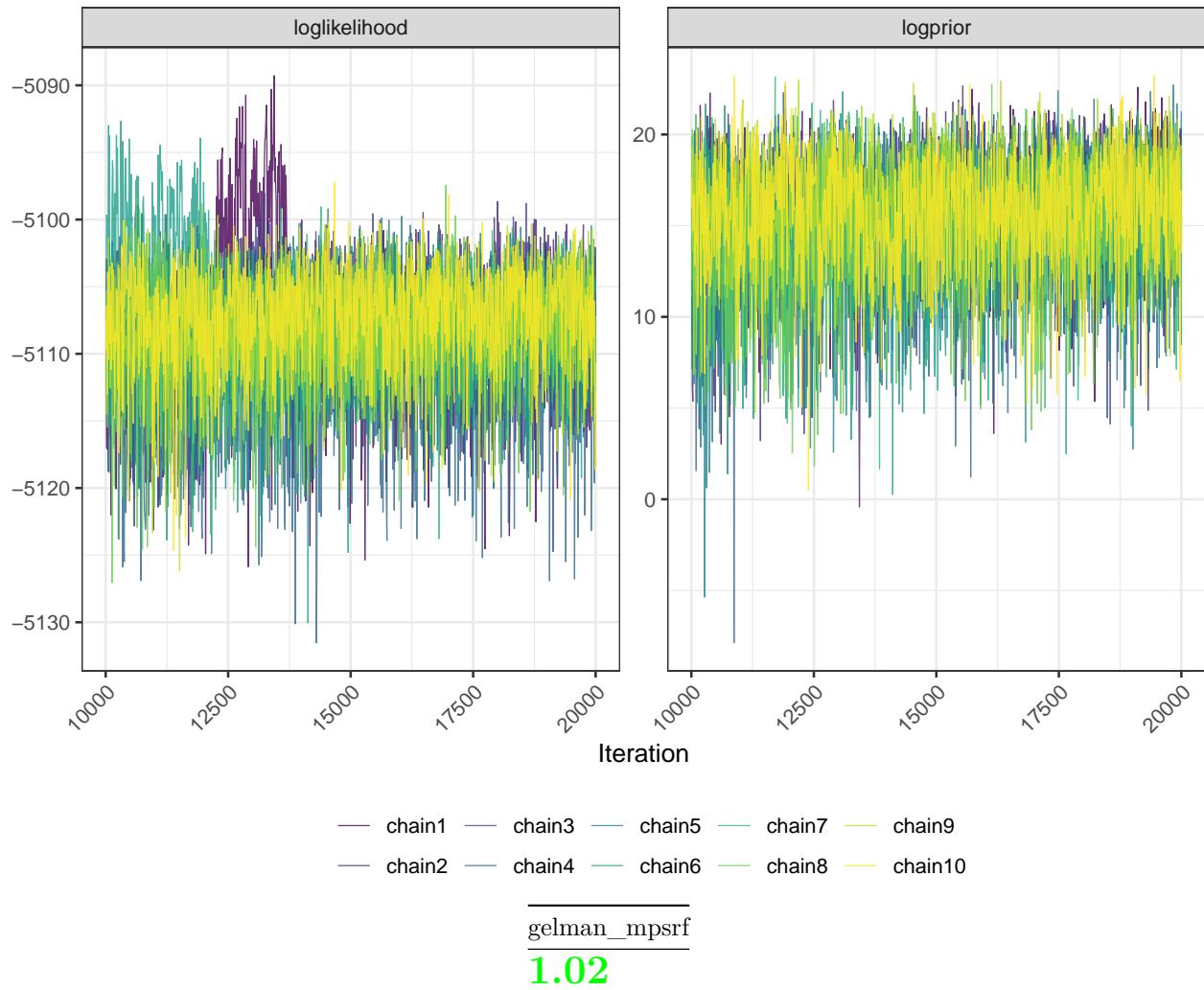


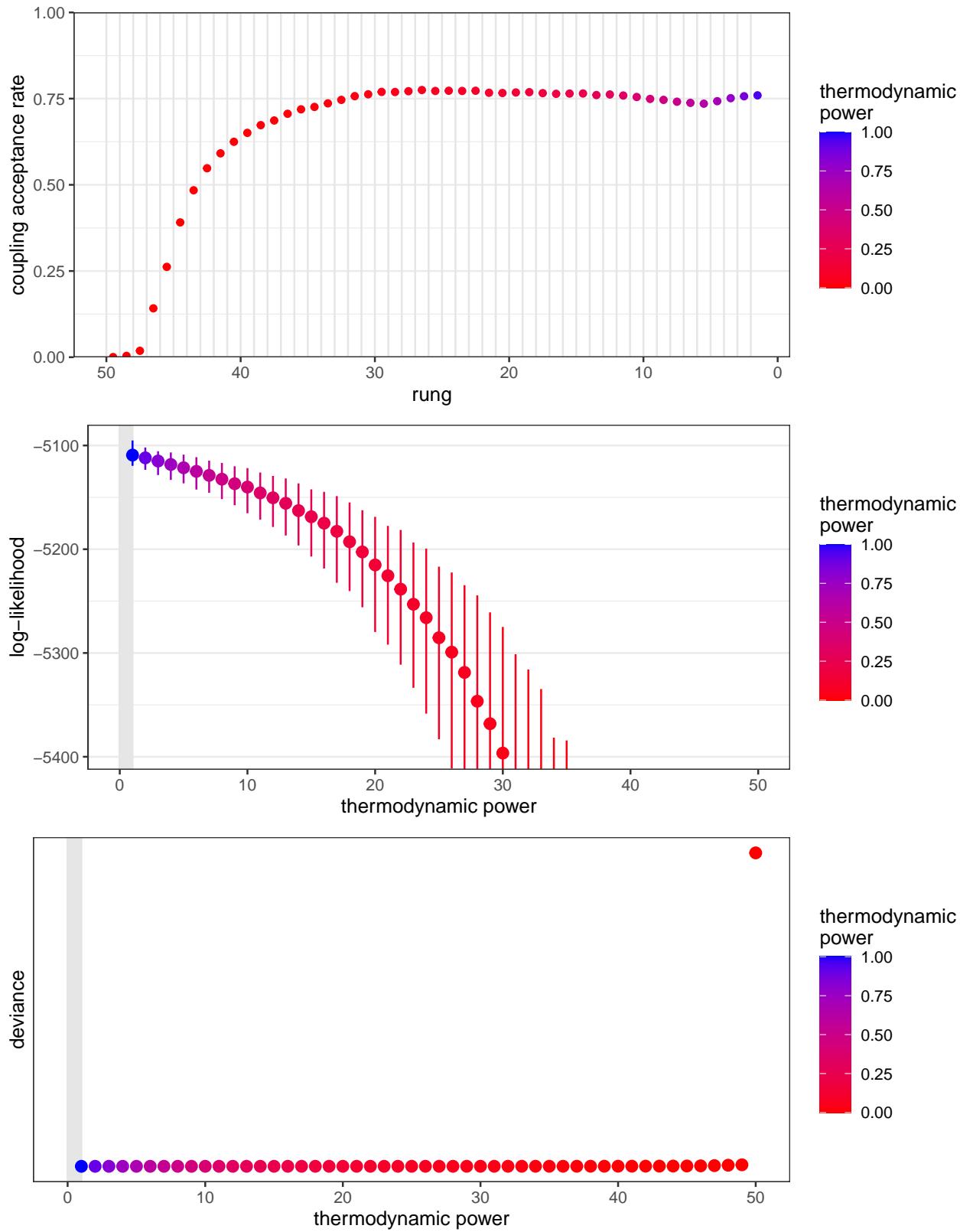
BRA1 with the Potential for Seroreversion Included

Fit Diagnostics

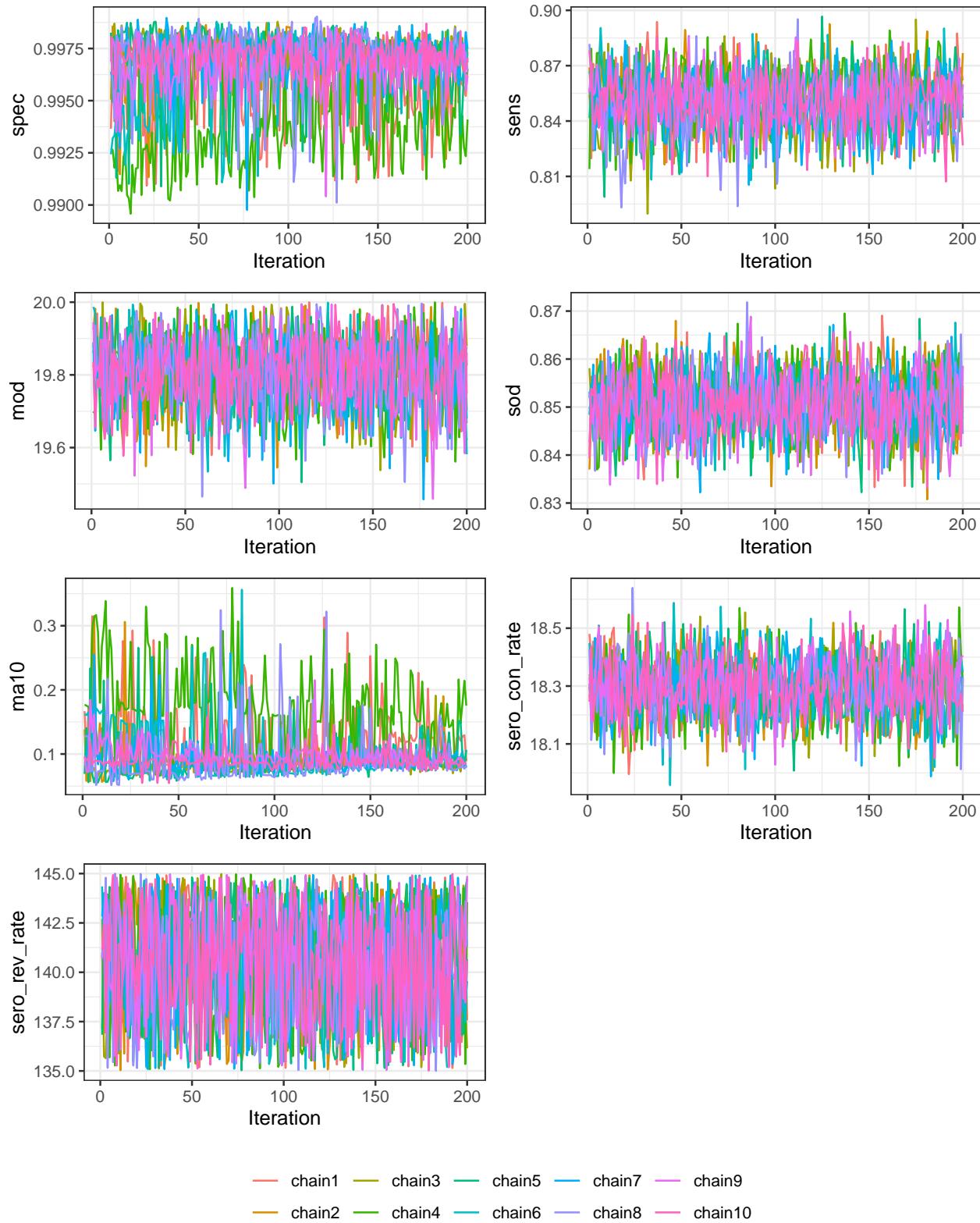
Log Likelihood & Prior Plot



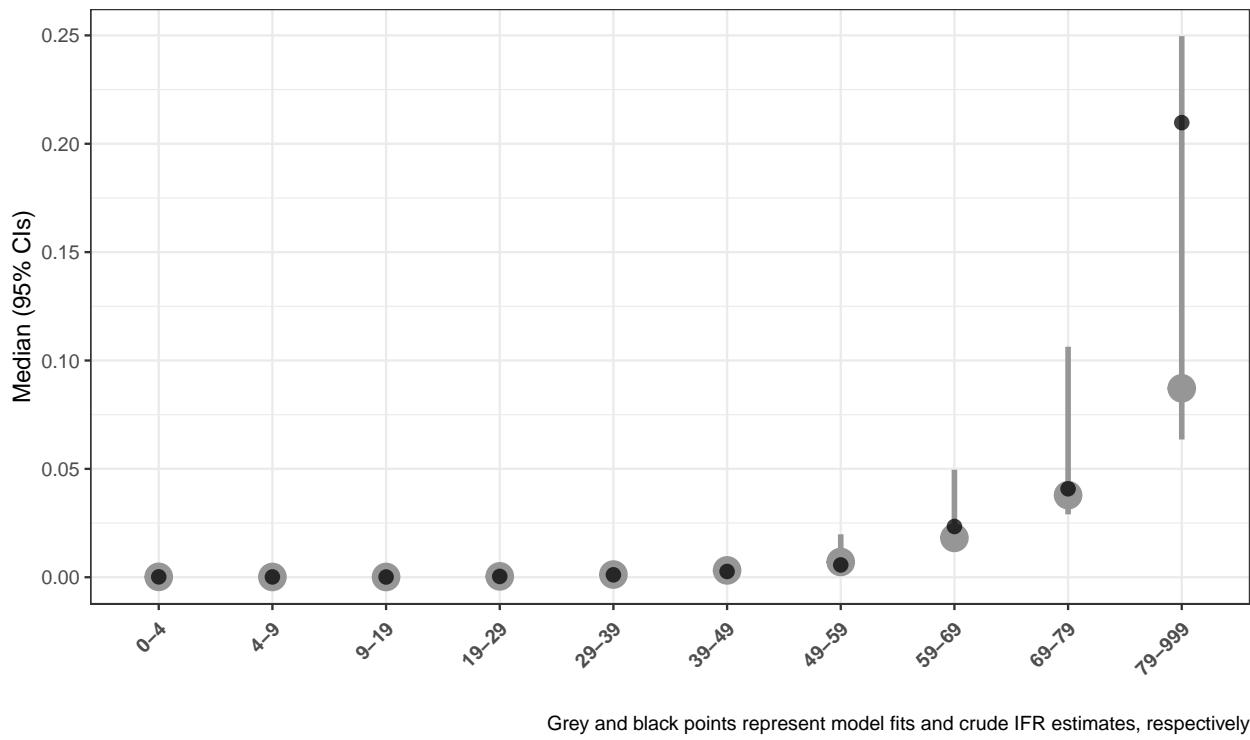
Metropolis Coupling Acceptance Plot



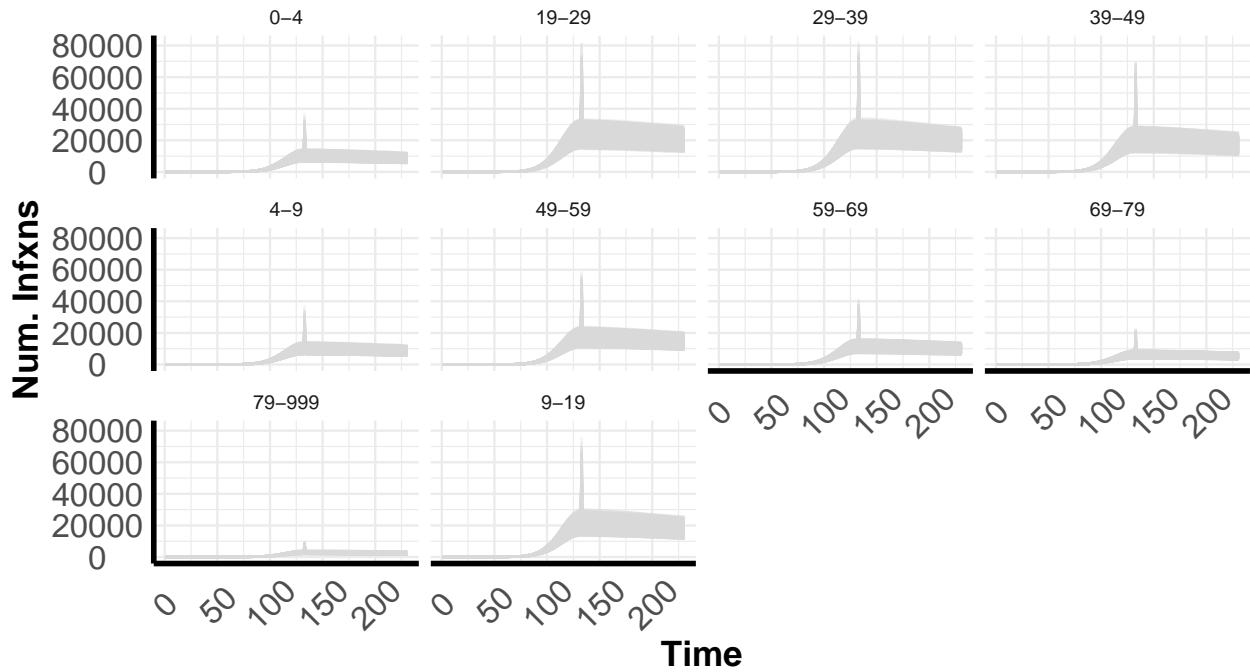
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



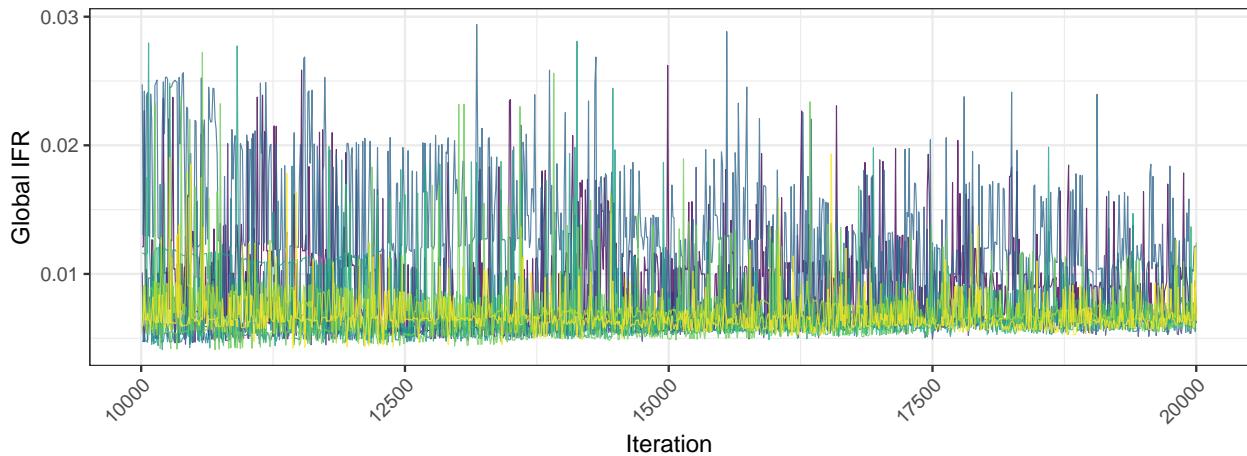
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-4	ma1	0.0001	0.0001	0.0002	0.0002	0.0005	0.0009	57.8127	9.8312	0
4-9	ma2	0.0001	0.0001	0.0001	0.0001	0.0003	0.0007	60.0668	8.5777	0
9-19	ma3	0.0001	0.0001	0.0001	0.0001	0.0003	0.0006	69.7576	9.3697	0
19-29	ma4	0.0002	0.0003	0.0004	0.0005	0.0011	0.0020	65.3949	9.0139	0
29-39	ma5	0.0008	0.0010	0.0012	0.0015	0.0035	0.0059	69.0086	8.7583	0
39-49	ma6	0.0020	0.0024	0.0032	0.0037	0.0089	0.0163	65.9102	9.6139	0
49-59	ma7	0.0044	0.0055	0.0070	0.0083	0.0198	0.0333	63.6430	9.0591	0
59-69	ma8	0.0118	0.0141	0.0182	0.0213	0.0496	0.0871	64.0036	8.4253	0
69-79	ma9	0.0232	0.0290	0.0379	0.0447	0.1064	0.1885	69.4223	8.2464	0
79-999	ma10	0.0504	0.0635	0.0872	0.1035	0.2497	0.3955	53.0358	10.2717	0

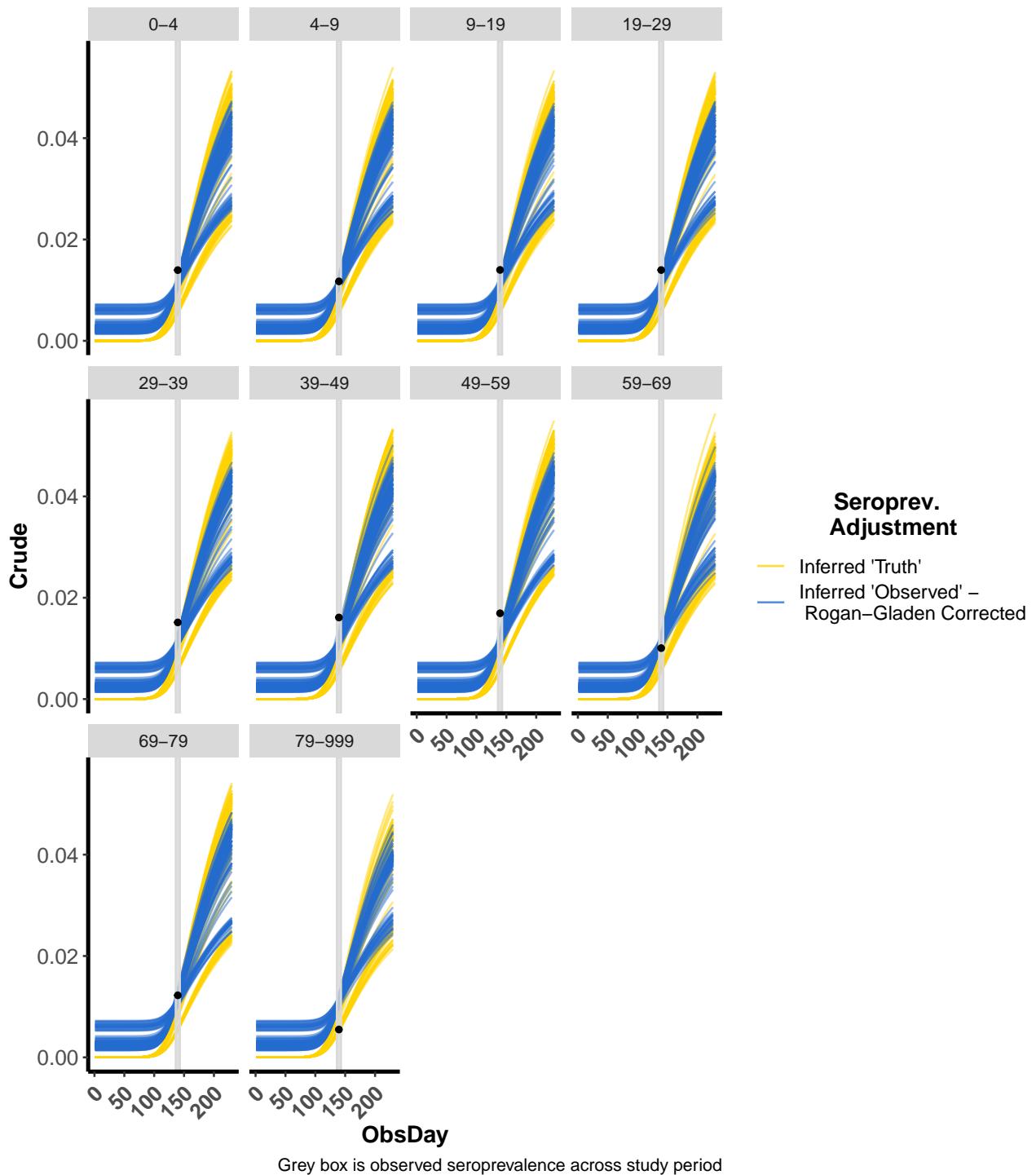
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0041	0.005	0.0064	0.0076	0.018	0.0294	2243.183	7.5193	0

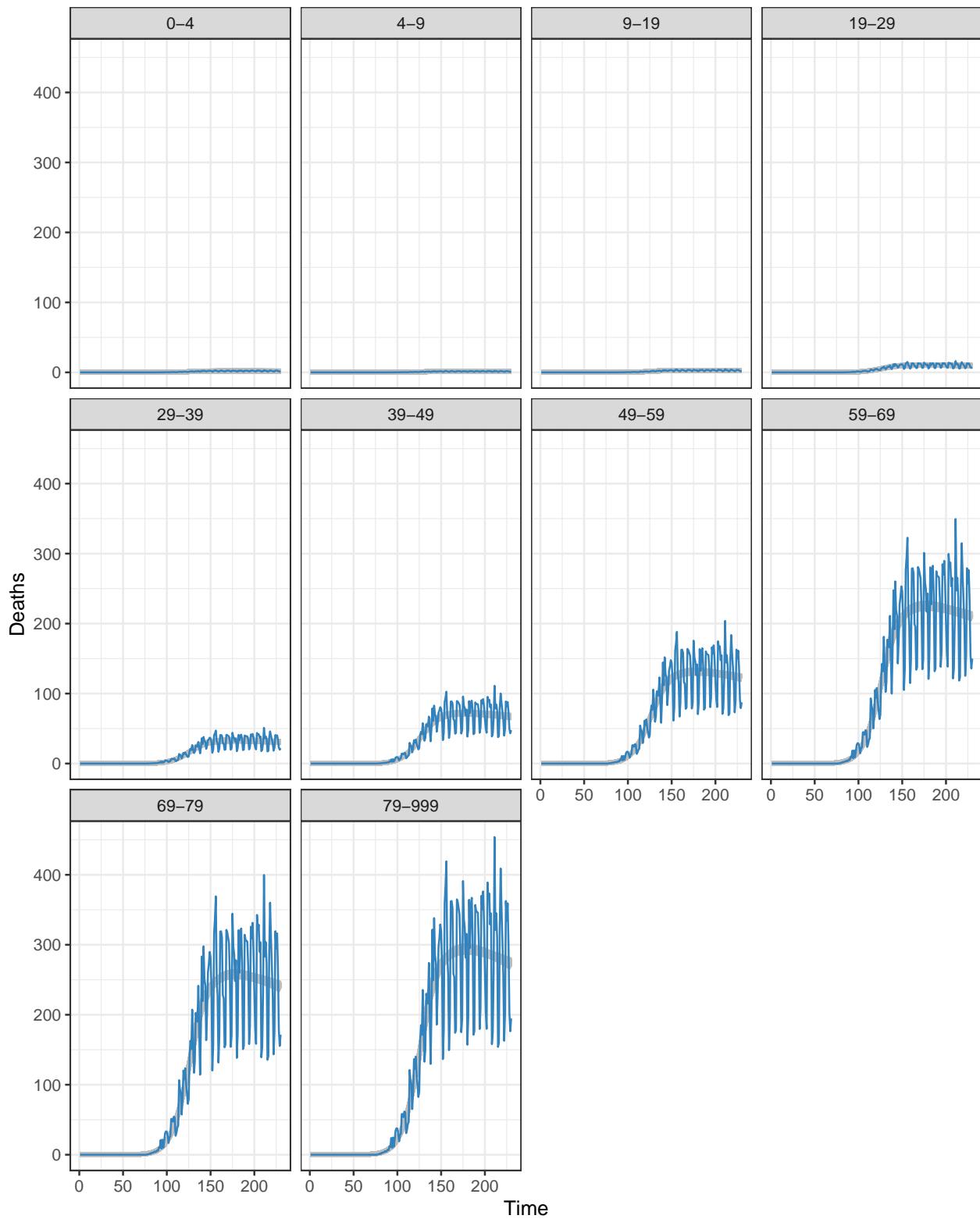
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0053	0.0056	0.0089	0.0091	0.0194	0.0262	324.7156	2.4624	0.0192
chain2	0.0045	0.0050	0.0065	0.0068	0.0104	0.0220	606.6286	1.7119	0.0922
chain3	0.0045	0.0050	0.0061	0.0063	0.0081	0.0219	535.9025	-2.2077	0.0349
chain4	0.0048	0.0054	0.0122	0.0127	0.0247	0.0294	100.5521	5.5631	0.0000
chain5	0.0044	0.0047	0.0057	0.0063	0.0116	0.0205	588.8402	-1.4767	0.1341
chain6	0.0041	0.0048	0.0061	0.0074	0.0121	0.0281	28.7135	16.6635	0.0000
chain7	0.0044	0.0052	0.0062	0.0066	0.0094	0.0248	866.2944	1.7488	0.0865
chain8	0.0041	0.0045	0.0058	0.0067	0.0138	0.0272	1014.7801	1.8910	0.0667
chain9	0.0046	0.0055	0.0069	0.0072	0.0093	0.0179	218.6671	4.2537	0.0000
chain10	0.0042	0.0053	0.0064	0.0067	0.0109	0.0193	795.0872	2.0317	0.0507



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



Grey Lines are Draws from Posterior, Blue Line is Observed Data (from JHU CSSE COVID-19 Data)

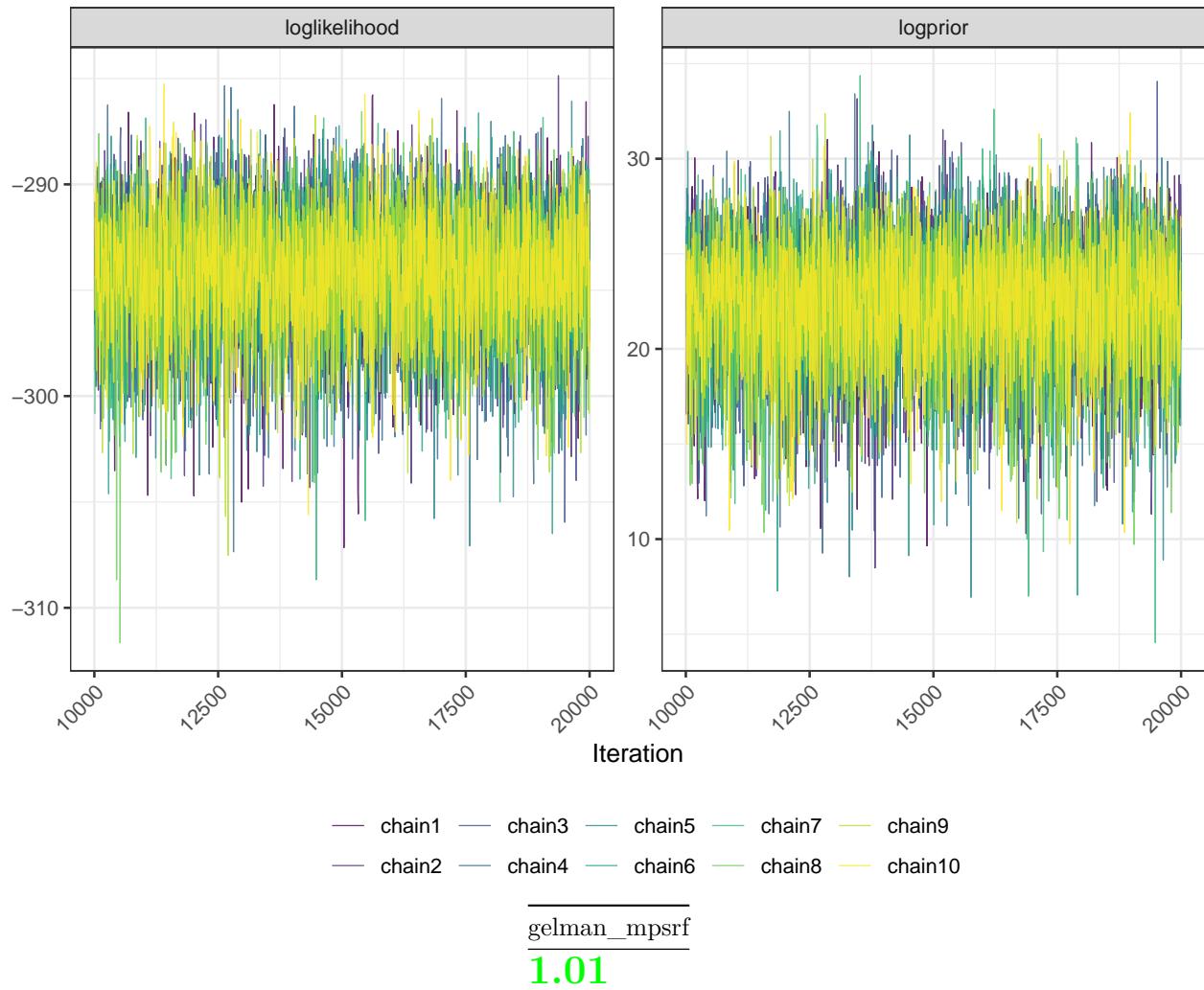
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.3560	3.0051	18.0068	19.7955	44.0217	63.3830	302.6529	0.9428	0.2558
x2	129.3898	130.8705	131.9390	131.9645	133.2617	135.2559	1182.6675	-7.1574	0.0000
x3	130.4747	131.4028	133.5386	133.6025	136.0470	139.2124	510.3590	-2.8142	0.0076
x4	216.0021	216.3887	224.2593	223.6751	229.7585	229.9997	366.7636	0.7366	0.3042
y1	0.0000	0.0035	0.0979	0.1358	0.4835	1.0386	1540.7352	0.0713	0.3979
y2	0.0807	0.2298	1.5094	1.7680	4.5333	7.0889	337.2225	0.1903	0.3918
y3	10.5375	11.0556	12.0872	11.9754	12.3235	12.5200	58.0114	-8.5533	0.0000
y4	10.5367	11.0555	12.0866	11.9747	12.3227	12.5193	58.0170	-8.5429	0.0000
y5	10.3818	10.8679	11.9031	11.7952	12.1464	12.3563	59.0763	-8.0791	0.0000
Ne1	0.8219	0.9005	0.9988	0.9987	1.0967	1.1879	7622.3091	-0.0723	0.3979
Ne10	0.7929	0.8902	0.9897	0.9903	1.0989	1.2350	248.0588	-1.5521	0.1196
Ne2	0.7979	0.9006	0.9978	0.9977	1.0952	1.1621	7726.7870	2.3683	0.0242
Ne3	0.8129	0.9063	1.0013	1.0019	1.0994	1.1793	4821.1946	-0.7071	0.3107
Ne4	0.7970	0.9061	1.0009	1.0006	1.0949	1.1979	4097.7345	0.1326	0.3954
Ne5	0.8433	0.9154	1.0089	1.0097	1.1068	1.1907	2949.1320	0.2217	0.3893
Ne6	0.8454	0.9211	1.0146	1.0149	1.1118	1.2109	2243.1050	-0.1288	0.3956
Ne7	0.8560	0.9278	1.0214	1.0214	1.1153	1.2114	1228.9587	-0.1259	0.3958
Ne8	0.7611	0.8756	0.9763	0.9754	1.0746	1.1578	505.9456	3.7628	0.0003
Ne9	0.7816	0.8867	0.9890	0.9896	1.0901	1.1811	516.4776	4.4017	0.0000

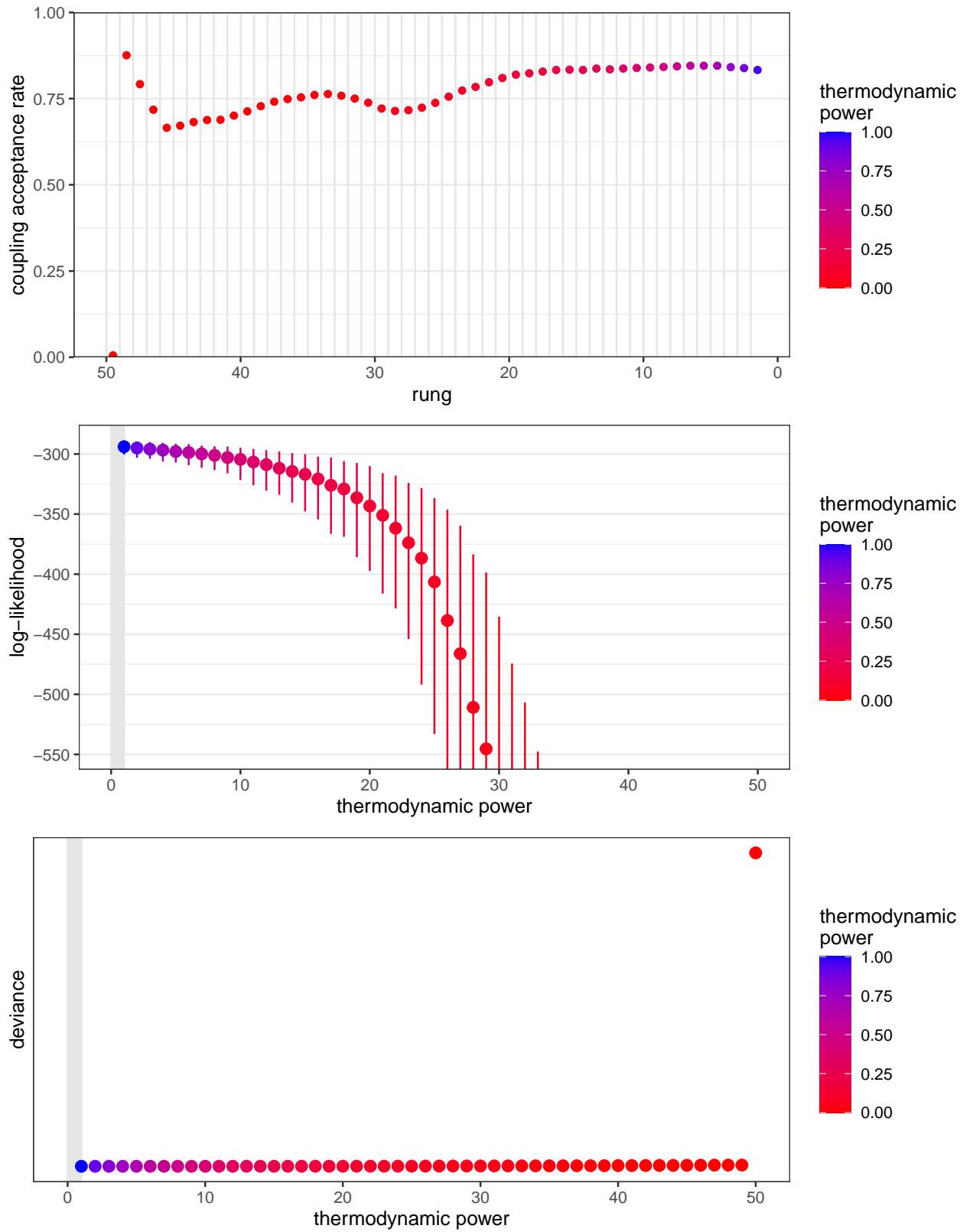
CHE1 with the Potential for Seroreversion Included

Fit Diagnostics

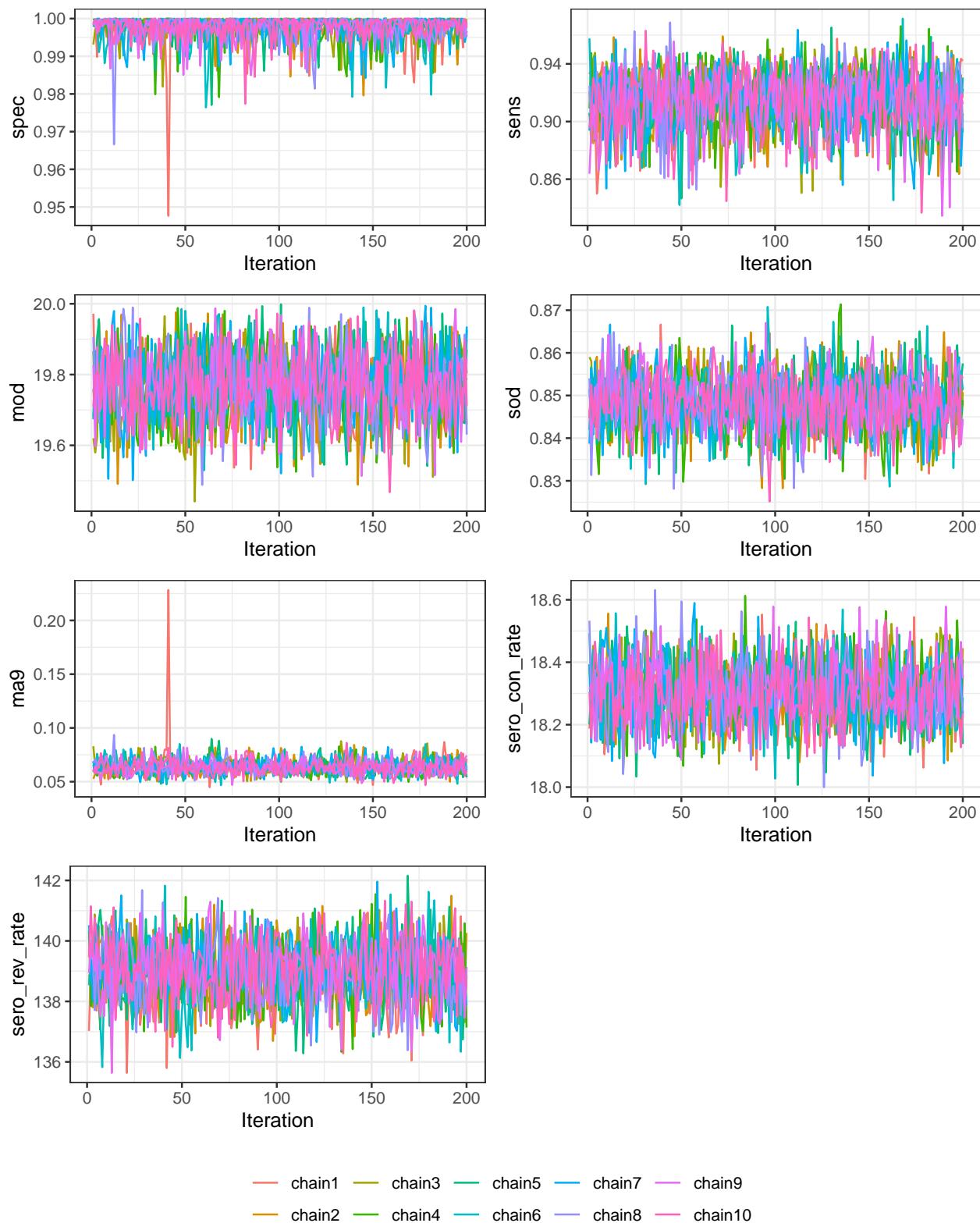
Log Likelihood & Prior Plot



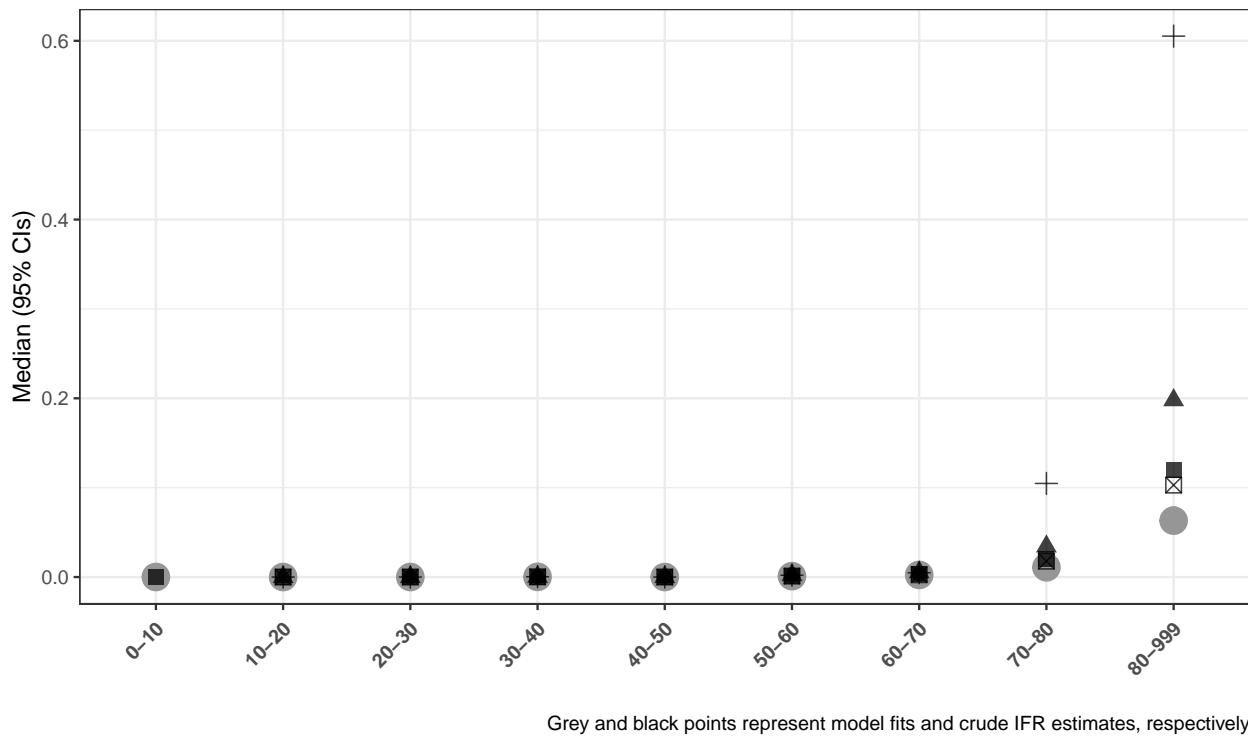
Metropolis Coupling Acceptance Plot



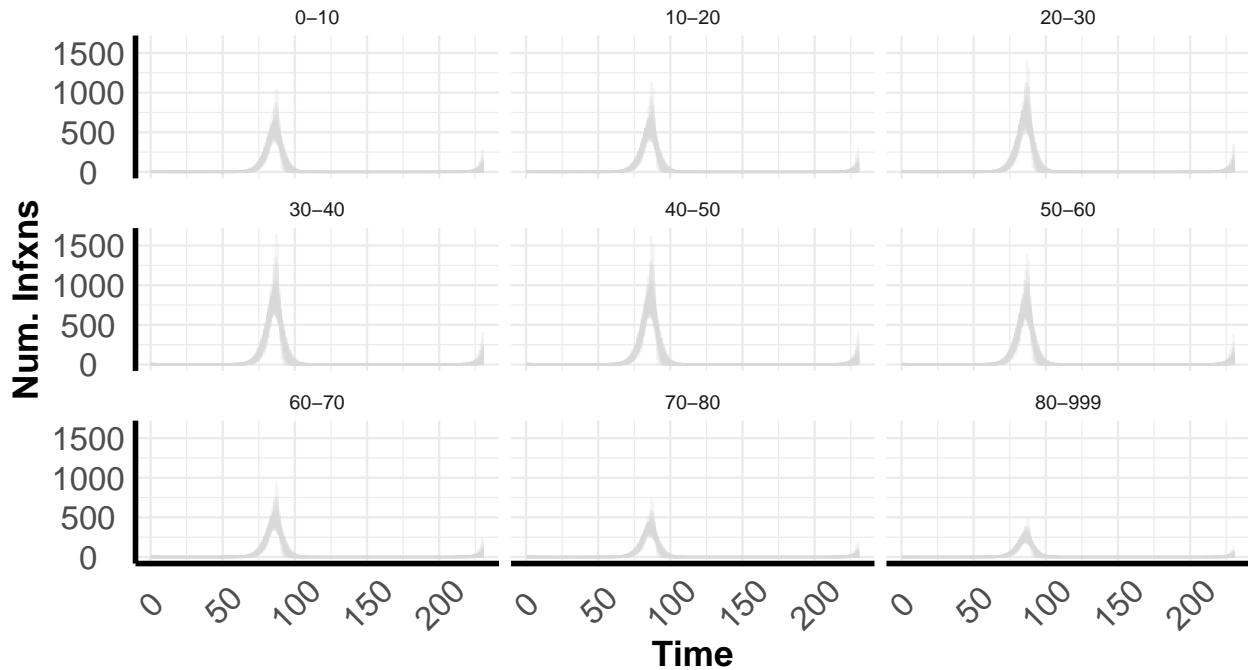
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



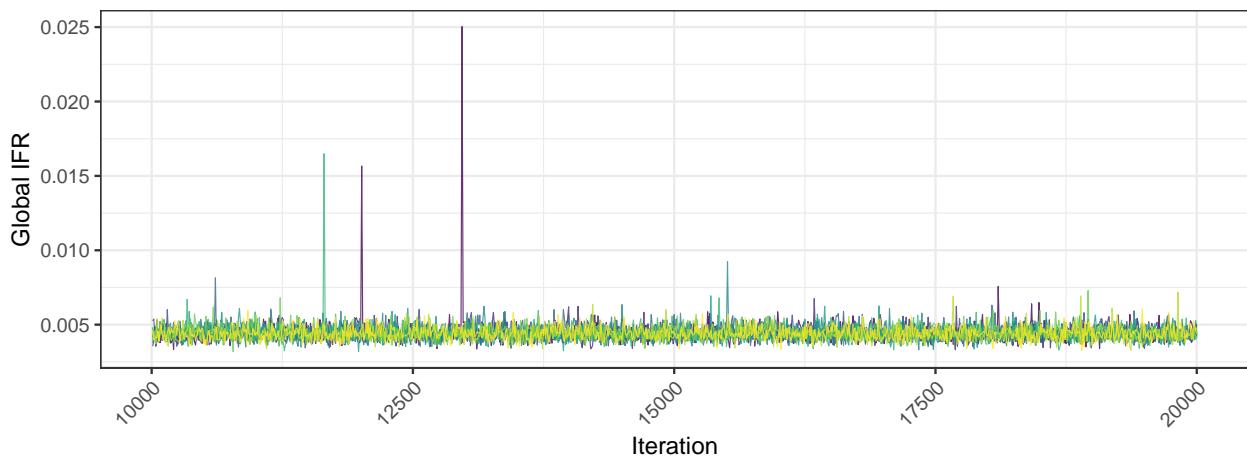
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-10	ma1	0.0000	0.0000	0.0000	0.0000	0.0001	0.0004	9160.339	0.2622	0.3855
10-20	ma2	0.0000	0.0000	0.0000	0.0000	0.0001	0.0004	10000.000	0.5012	0.3518
20-30	ma3	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	9374.161	-1.7960	0.0795
30-40	ma4	0.0000	0.0000	0.0002	0.0002	0.0005	0.0016	9427.063	1.1035	0.2170
40-50	ma5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	9357.540	1.0833	0.2219
50-60	ma6	0.0001	0.0004	0.0010	0.0010	0.0018	0.0055	10000.000	-0.2784	0.3838
60-70	ma7	0.0003	0.0012	0.0024	0.0024	0.0039	0.0133	10000.000	-0.6244	0.3283
70-80	ma8	0.0055	0.0077	0.0109	0.0110	0.0149	0.0639	9206.669	1.0684	0.2255
80-999	ma9	0.0413	0.0516	0.0631	0.0638	0.0791	0.3601	7084.537	0.6581	0.3213

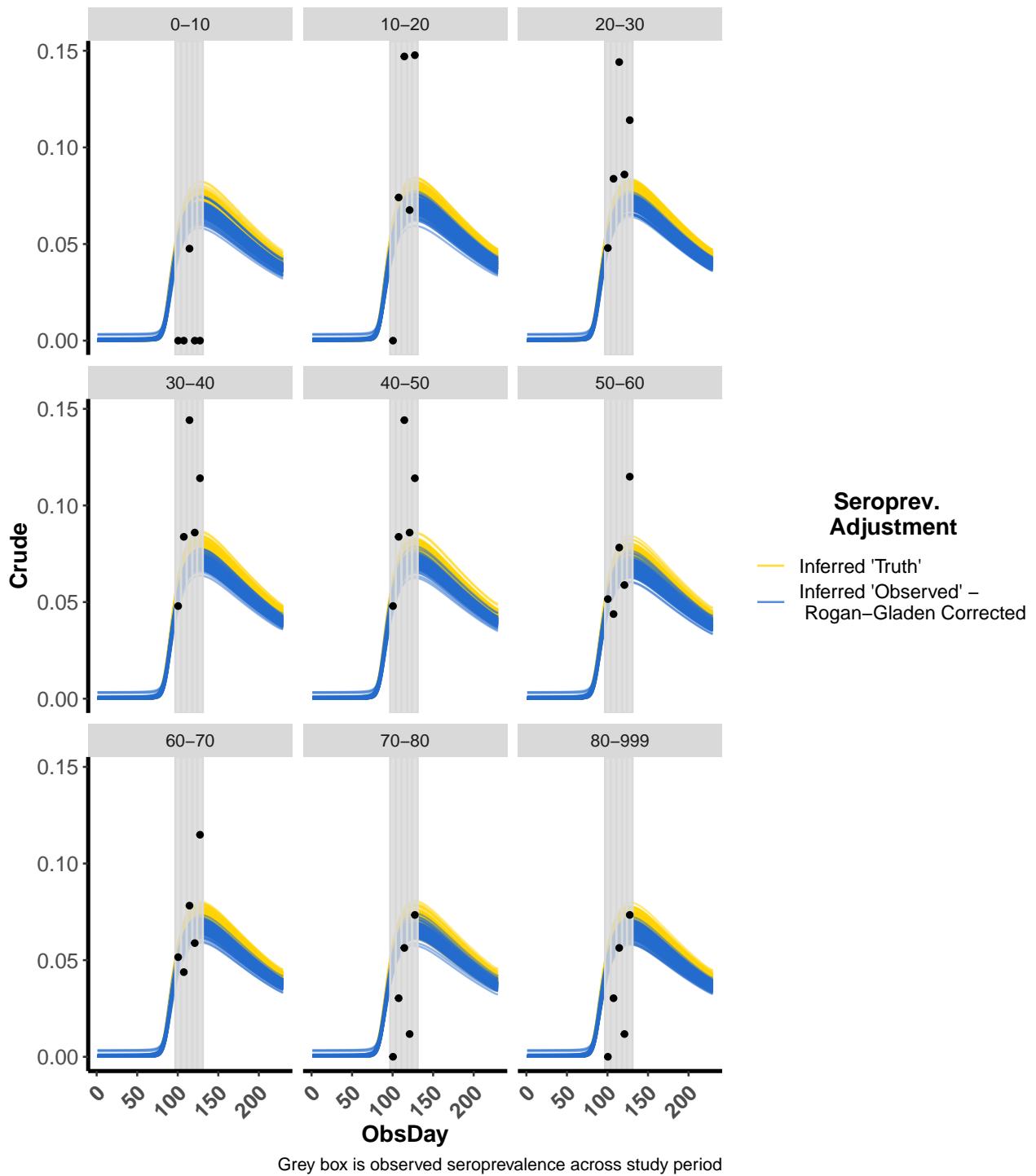
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0032	0.0037	0.0044	0.0044	0.0054	0.025	8798.704	1.2627	0.1798

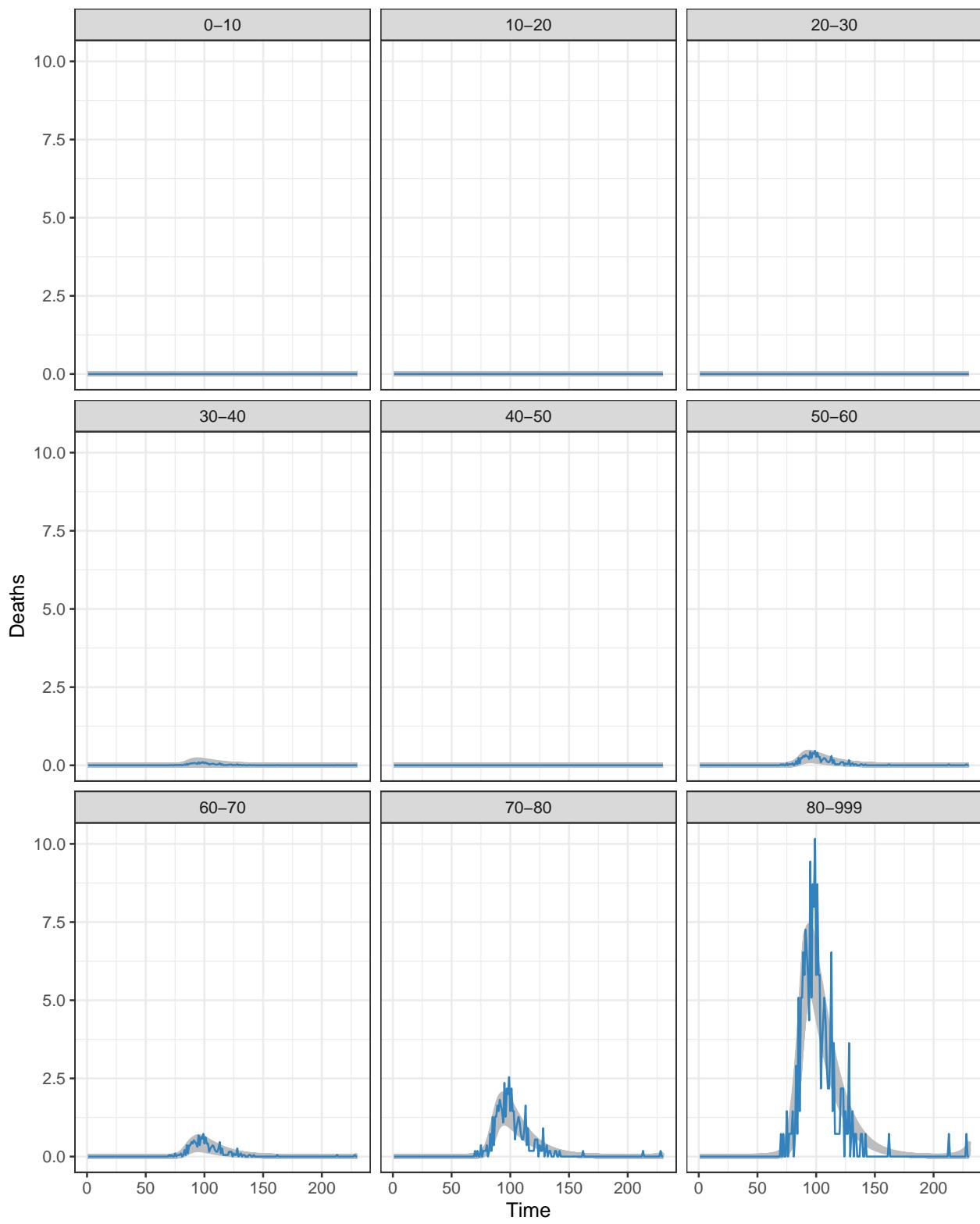
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0033	0.0037	0.0044	0.0045	0.0053	0.0250	1000.0000	-0.2811	0.3835
chain2	0.0033	0.0037	0.0044	0.0044	0.0053	0.0068	903.5437	-2.2326	0.0330
chain3	0.0034	0.0037	0.0044	0.0044	0.0053	0.0060	907.5705	0.1652	0.3935
chain4	0.0033	0.0037	0.0044	0.0044	0.0054	0.0081	858.2071	0.4224	0.3649
chain5	0.0033	0.0037	0.0044	0.0044	0.0054	0.0092	838.8158	0.8689	0.2735
chain6	0.0032	0.0036	0.0044	0.0044	0.0054	0.0069	866.8249	2.1117	0.0429
chain7	0.0032	0.0037	0.0044	0.0045	0.0054	0.0165	912.4282	2.0789	0.0460
chain8	0.0032	0.0037	0.0044	0.0044	0.0054	0.0073	1000.0000	0.7943	0.2910
chain9	0.0033	0.0037	0.0044	0.0044	0.0054	0.0072	874.1693	-0.0624	0.3982
chain10	0.0033	0.0037	0.0044	0.0044	0.0053	0.0061	1000.0000	-0.6855	0.3154



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



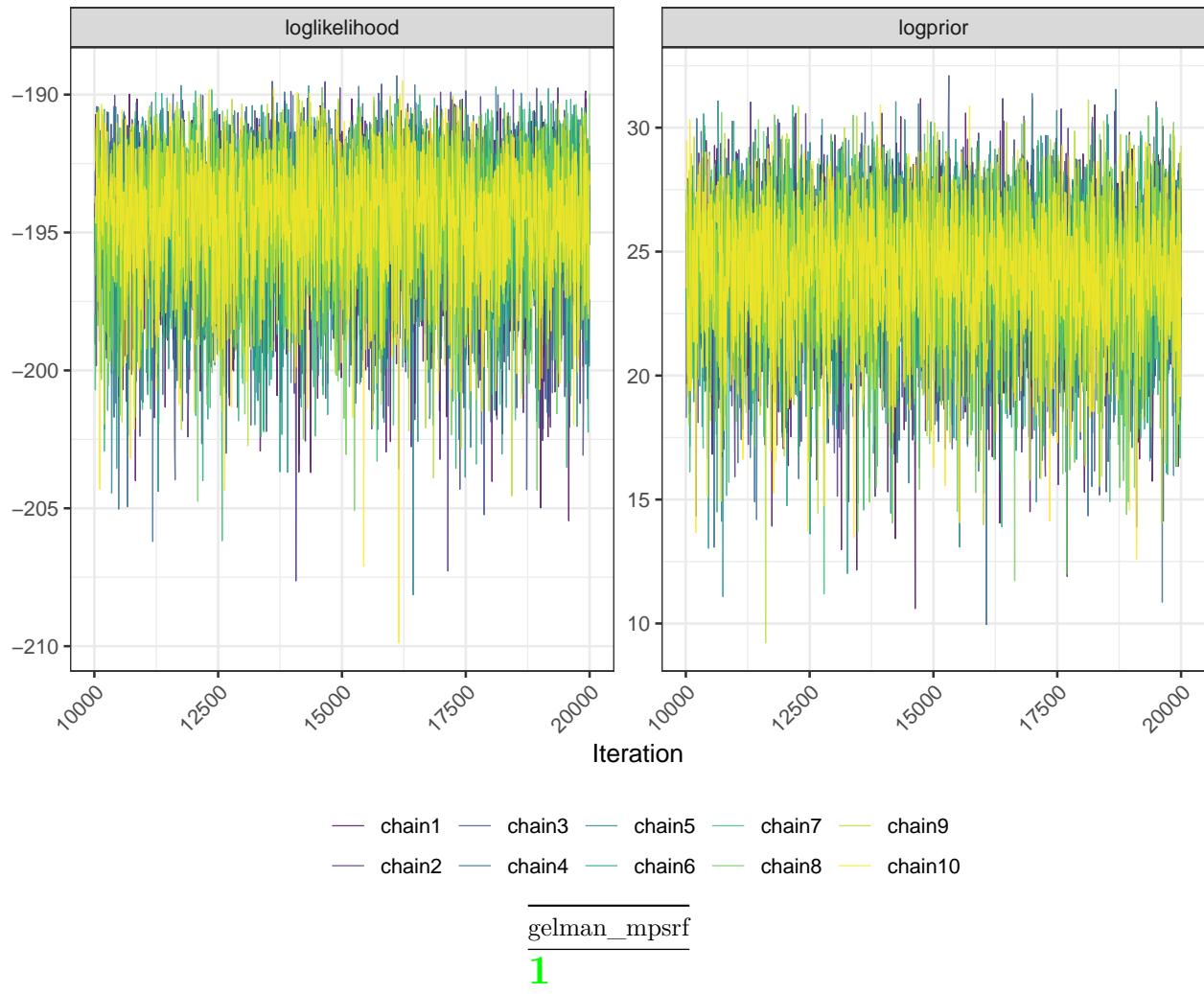
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.0461	5.1455	64.0455	63.5380	81.4098	87.4914	885.7408	1.9610	0.0583
x2	69.0835	77.1680	88.7797	88.5327	97.8220	102.0538	2759.1834	-2.9961	0.0045
x3	87.7125	93.7283	104.2000	104.8629	116.4677	229.0074	1572.0427	-1.1083	0.2159
x4	214.0004	214.4964	222.4789	222.3464	229.6514	229.9953	3486.7478	-0.1585	0.3940
y1	0.0003	0.0839	1.5811	1.7723	4.5031	6.3814	7004.2677	0.2406	0.3876
y2	0.0014	0.1437	3.2939	3.5598	7.9029	9.0595	952.8542	2.2849	0.0293
y3	4.4519	5.5294	8.1580	7.8934	8.7817	9.3492	501.2506	2.4233	0.0212
y4	0.0007	0.1192	2.5027	2.8091	6.6795	8.2930	1657.3455	1.0478	0.2304
y5	0.0002	0.5570	3.7548	3.7026	6.5710	8.4365	6455.0065	0.5943	0.3344
Ne1	0.7737	0.8770	0.9757	0.9755	1.0732	1.1542	9486.4524	0.0204	0.3989
Ne2	0.8004	0.9152	1.0099	1.0103	1.1051	1.1844	10000.0000	0.0296	0.3988
Ne3	0.8599	0.9504	1.0391	1.0391	1.1279	1.1967	10000.0000	0.8706	0.2731
Ne4	0.8653	0.9529	1.0390	1.0395	1.1293	1.2164	10000.0000	1.6174	0.1079
Ne5	0.8583	0.9487	1.0390	1.0392	1.1294	1.2105	9442.1134	0.1920	0.3917
Ne6	0.7982	0.8929	0.9855	0.9851	1.0783	1.1554	10000.0000	0.6478	0.3234
Ne7	0.7765	0.8946	0.9838	0.9841	1.0756	1.1669	9681.5596	-2.2407	0.0324
Ne8	0.7847	0.8648	0.9589	0.9589	1.0531	1.1798	9653.1112	-0.7998	0.2897
Ne9	0.7742	0.8646	0.9583	0.9585	1.0526	1.1408	9193.1642	0.2455	0.3871

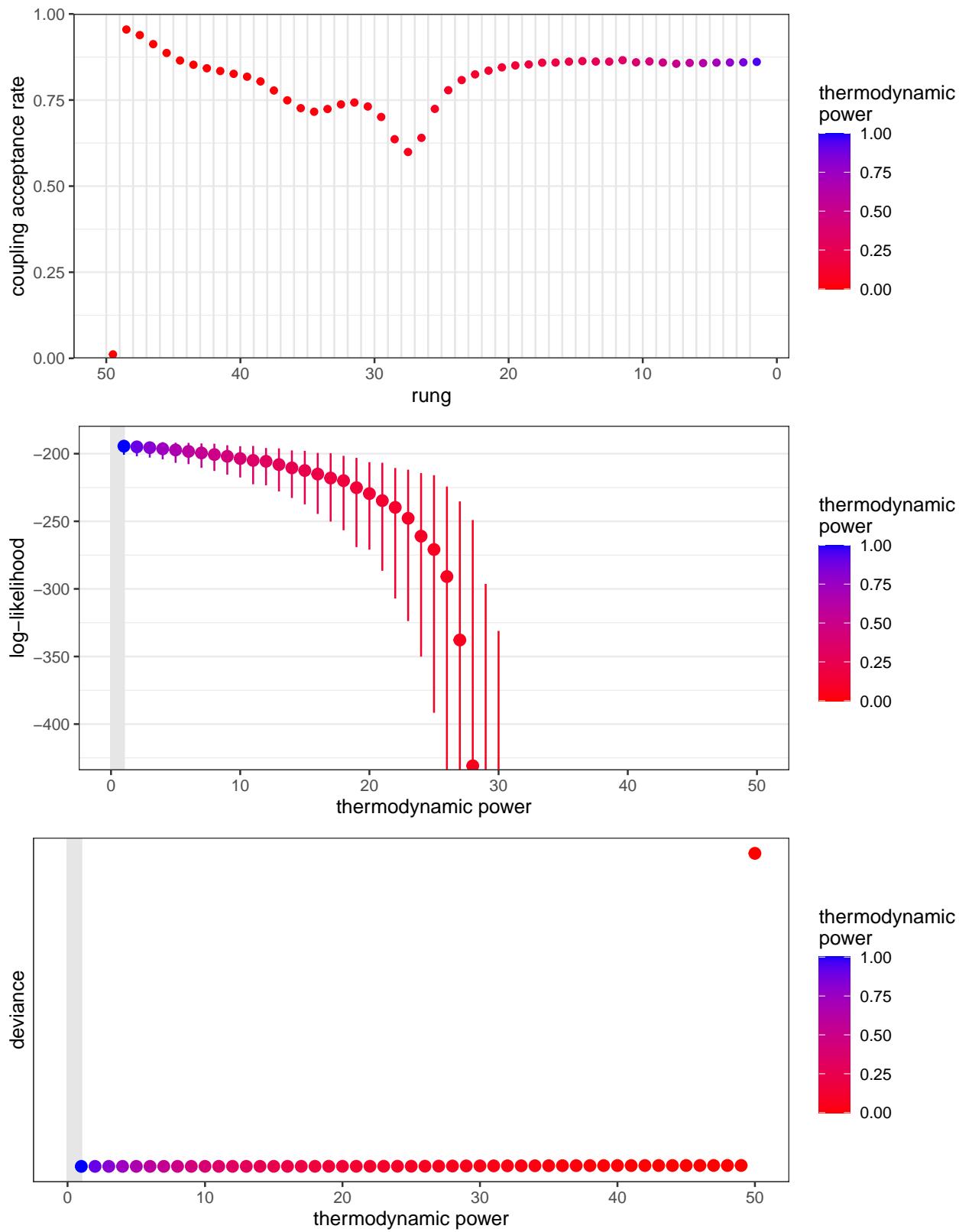
CHE2 with the Potential for Seroreversion Included

Fit Diagnostics

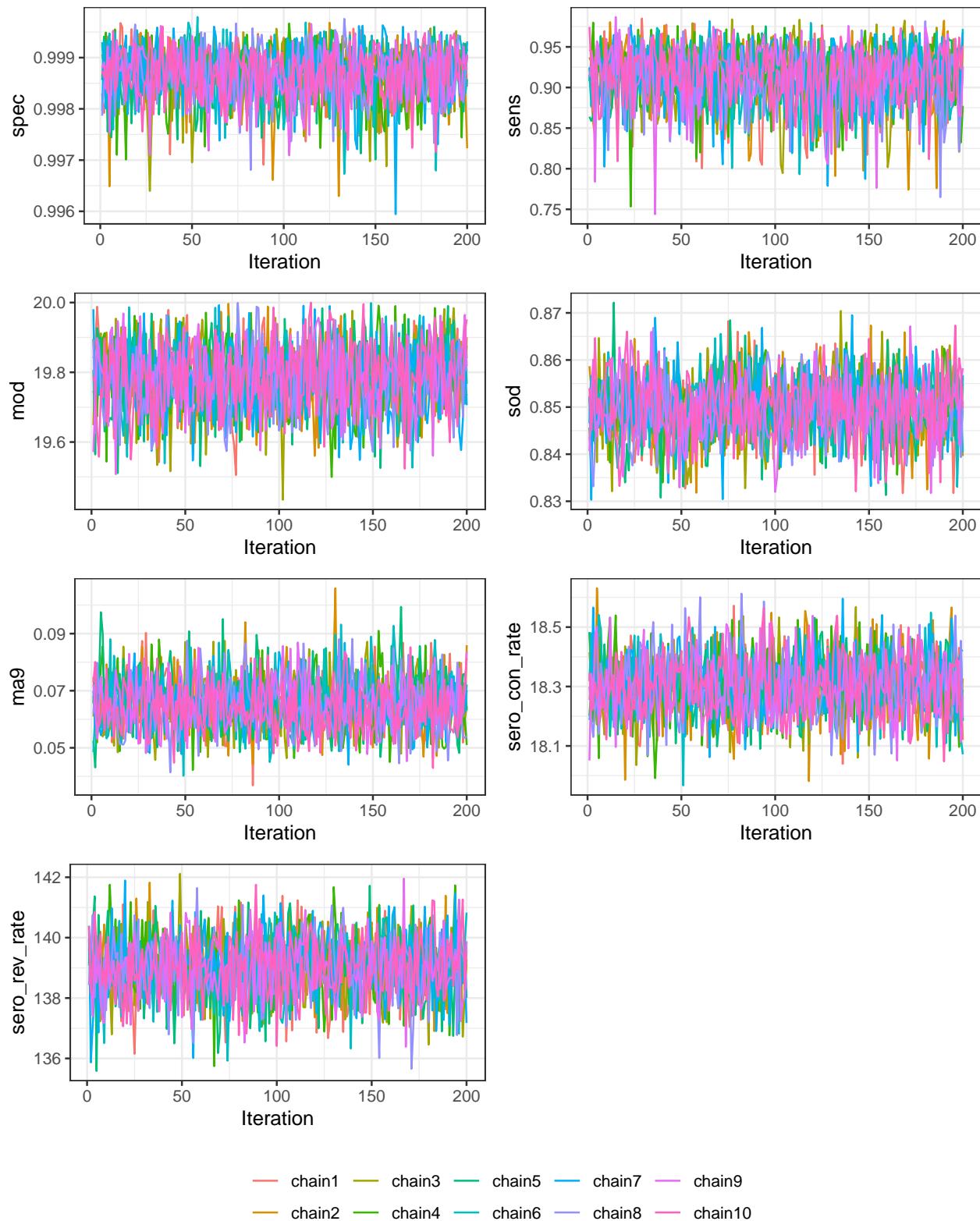
Log Likelihood & Prior Plot



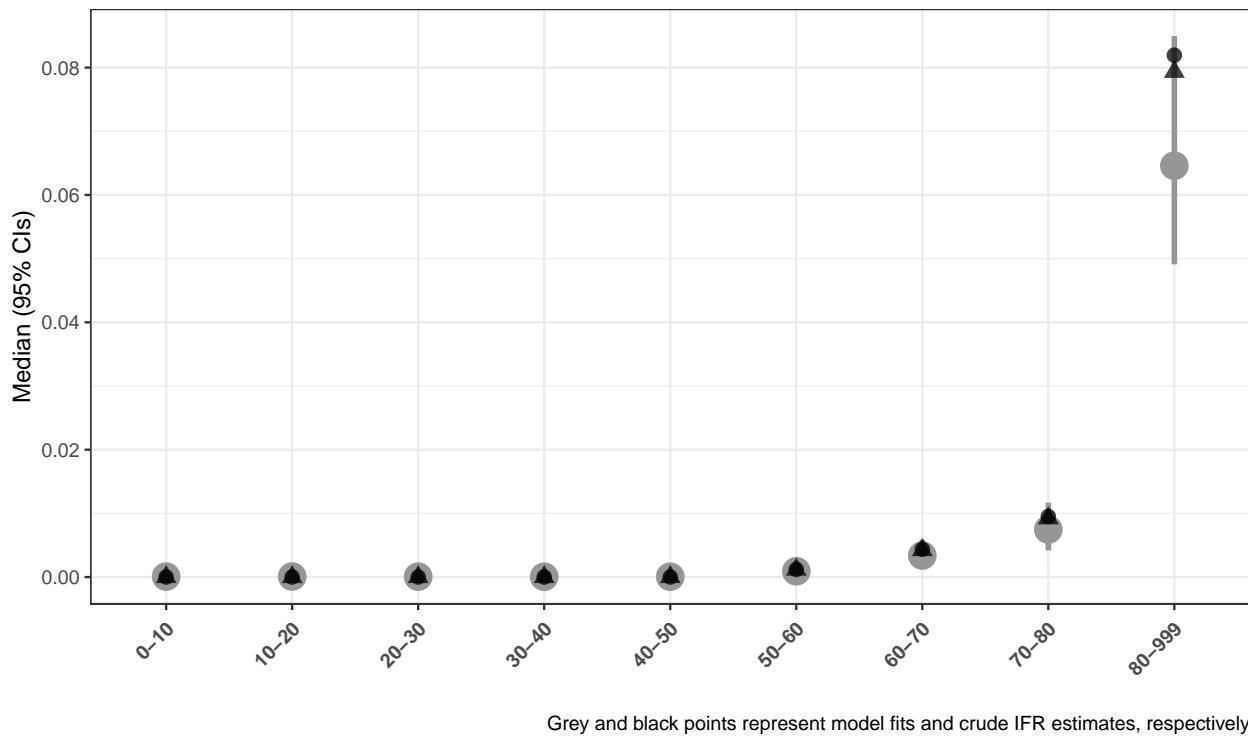
Metropolis Coupling Acceptance Plot



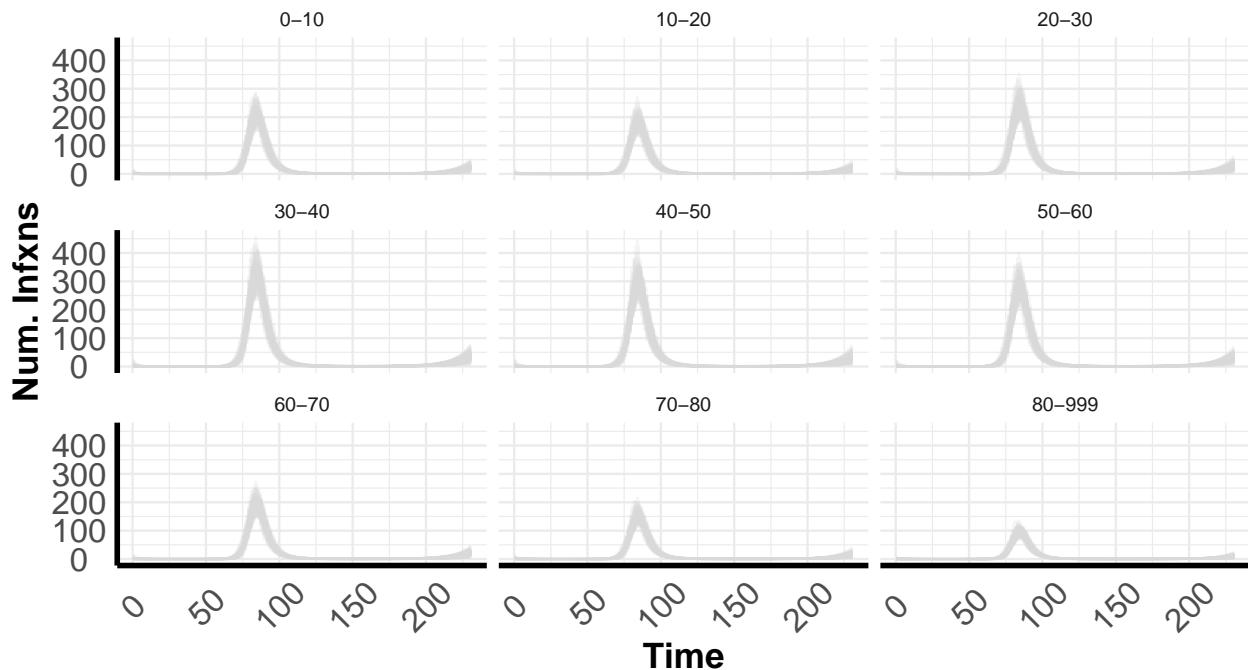
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



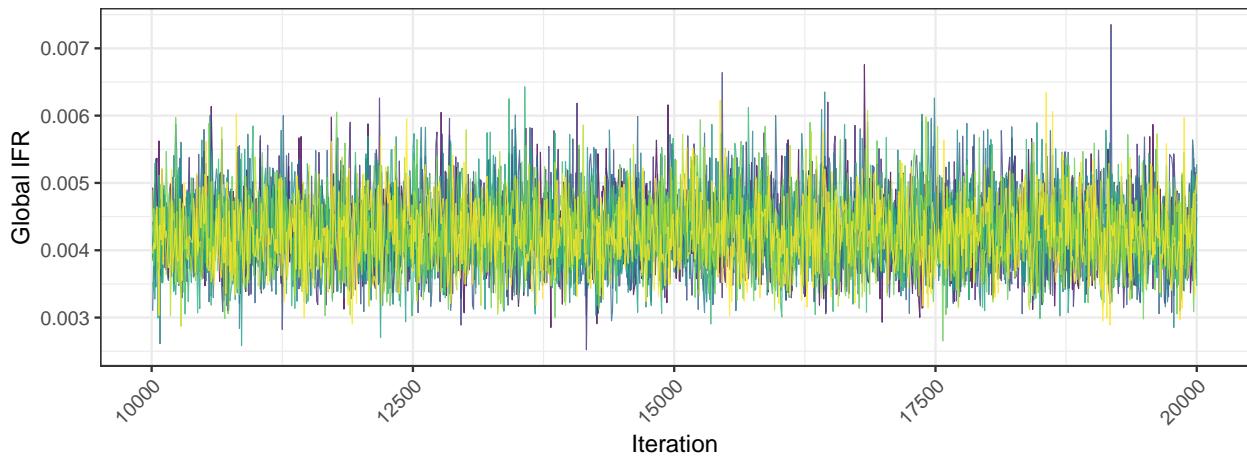
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-10	ma1	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	9437.717	-1.7479	0.0866
10-20	ma2	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	9403.217	-0.9018	0.2657
20-30	ma3	0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	10072.285	-0.3250	0.3784
30-40	ma4	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	9247.427	1.1218	0.2126
40-50	ma5	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	8789.517	-1.0411	0.2320
50-60	ma6	0.0000	0.0002	0.0009	0.0010	0.0020	0.0033	10483.433	1.0788	0.2229
60-70	ma7	0.0003	0.0015	0.0034	0.0035	0.0059	0.0095	9611.975	0.5059	0.3510
70-80	ma8	0.0019	0.0042	0.0075	0.0076	0.0117	0.0179	10000.000	-1.5845	0.1137
80-999	ma9	0.0368	0.0491	0.0646	0.0652	0.0849	0.1095	8051.903	1.1355	0.2094

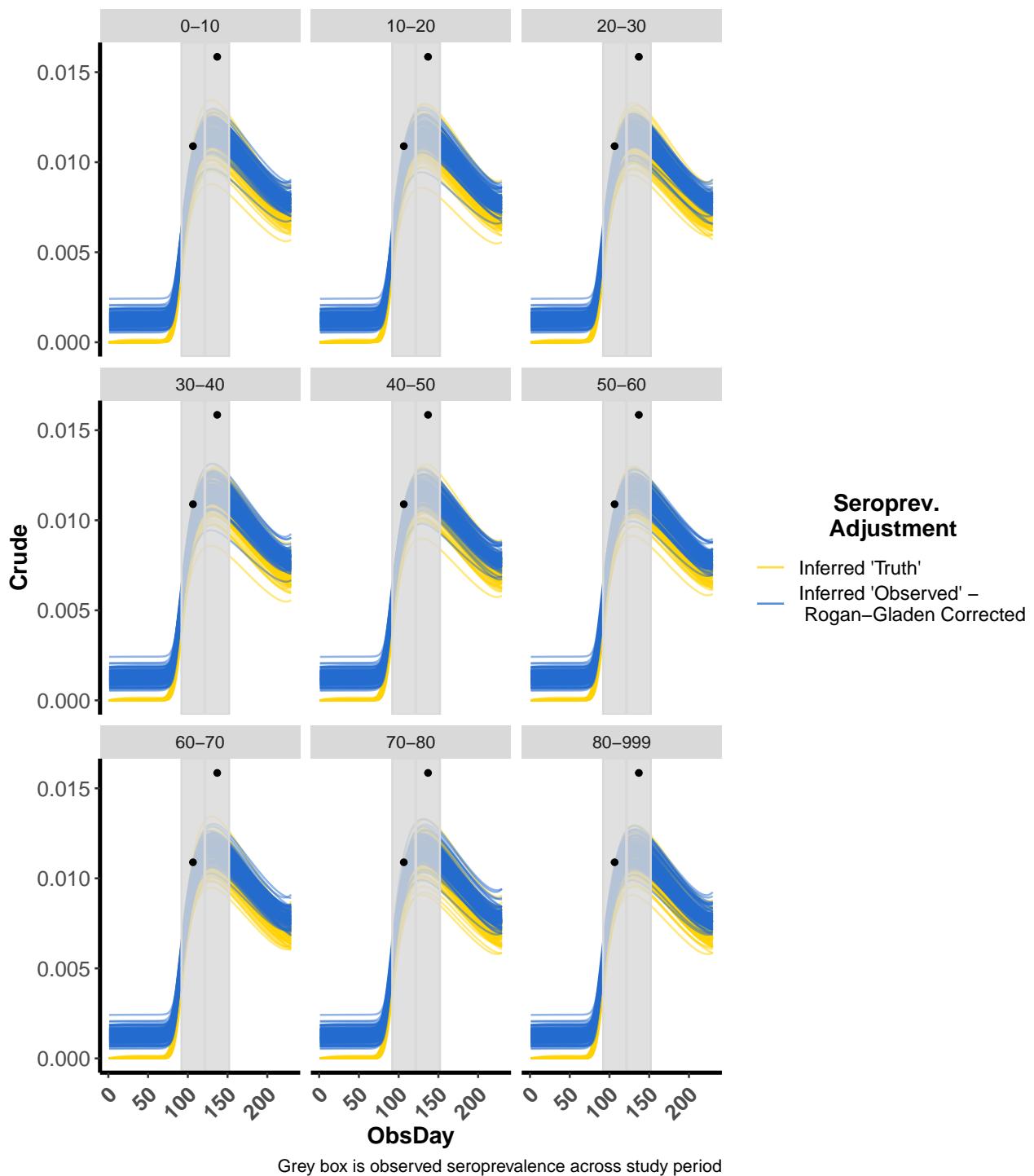
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0025	0.0033	0.0042	0.0043	0.0054	0.0074	8834.665	-1.2299	0.1873

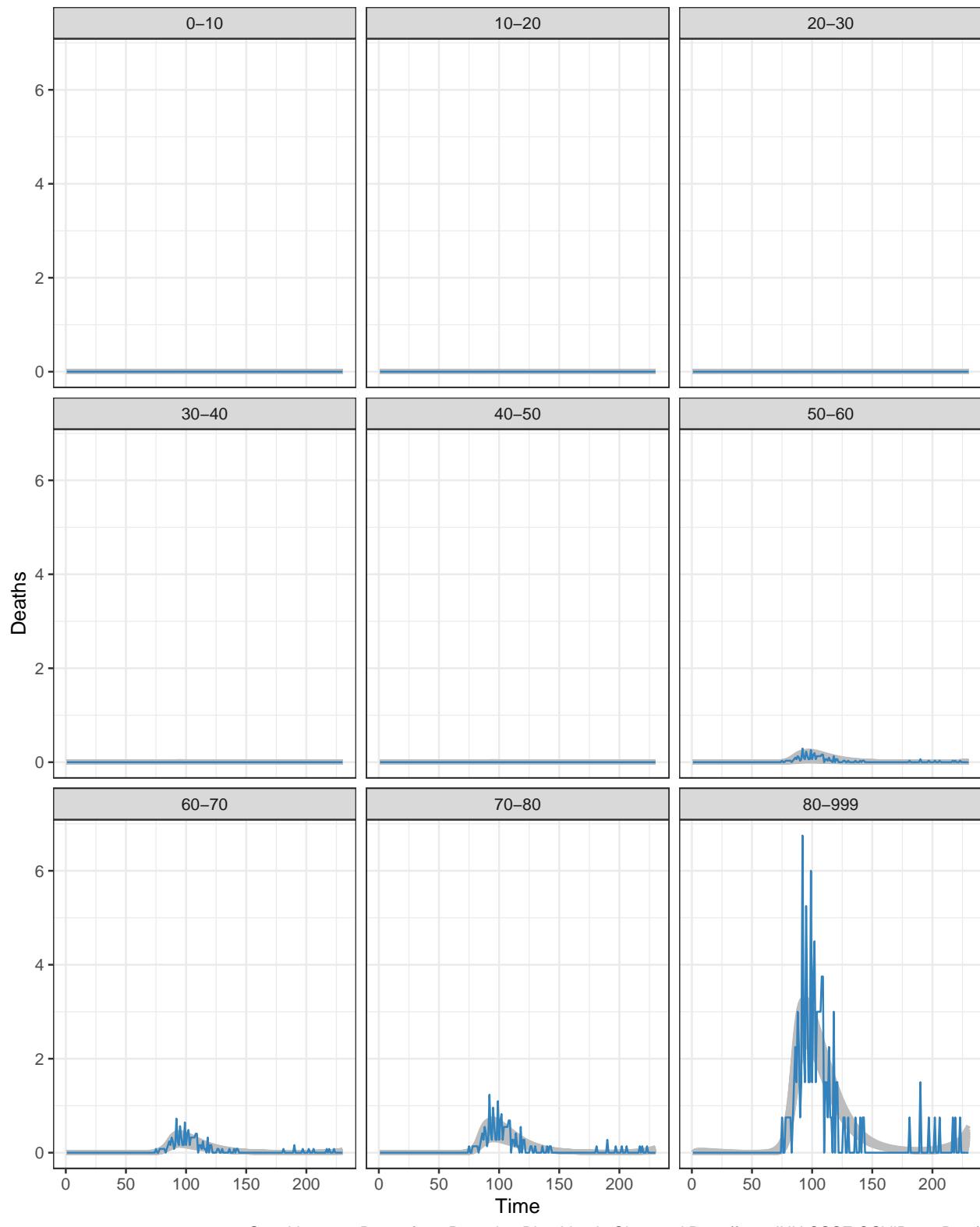
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0029	0.0034	0.0042	0.0043	0.0054	0.0068	728.5262	0.3680	0.3728
chain2	0.0025	0.0033	0.0043	0.0043	0.0054	0.0063	849.8786	2.5136	0.0169
chain3	0.0028	0.0033	0.0042	0.0043	0.0055	0.0074	801.4846	-1.6303	0.1056
chain4	0.0029	0.0033	0.0042	0.0043	0.0054	0.0060	864.3093	-0.6696	0.3188
chain5	0.0026	0.0033	0.0042	0.0043	0.0055	0.0064	867.1569	0.1277	0.3957
chain6	0.0026	0.0033	0.0042	0.0043	0.0055	0.0059	886.3089	-1.4359	0.1423
chain7	0.0029	0.0033	0.0042	0.0043	0.0053	0.0064	1000.0000	-0.2685	0.3848
chain8	0.0027	0.0032	0.0042	0.0043	0.0054	0.0061	834.2634	-0.7089	0.3103
chain9	0.0029	0.0033	0.0043	0.0043	0.0053	0.0061	1000.0000	-1.3897	0.1519
chain10	0.0029	0.0033	0.0042	0.0042	0.0053	0.0063	664.2081	-0.7774	0.2949



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



Grey Lines are Draws from Posterior, Blue Line is Observed Data (from JHU CSSE COVID-19 Data)

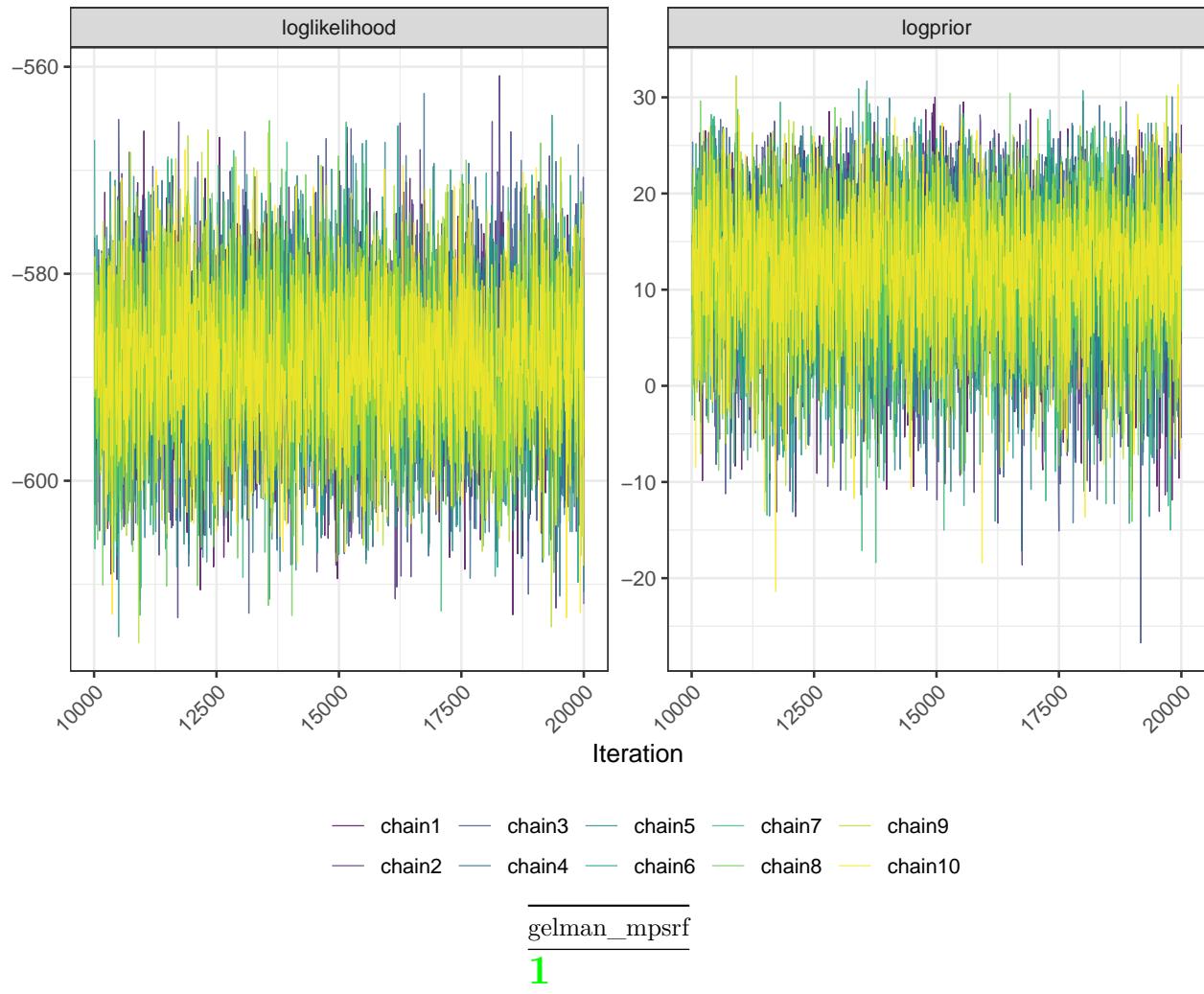
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.1282	2.2914	62.3360	57.2217	74.2057	83.3678	2517.350	-1.6706	0.0988
x2	66.3900	71.8850	81.1852	81.3176	91.8487	100.7214	3836.354	-0.6289	0.3274
x3	80.7725	88.1406	99.0395	99.8503	115.7380	137.0714	3548.502	0.0762	0.3978
x4	214.0026	214.2931	220.9781	221.3403	229.4571	229.9967	5452.377	-0.3179	0.3793
y1	0.0005	0.0841	1.8097	1.9809	4.9006	6.5657	7710.759	1.7288	0.0895
y2	0.0000	0.0664	1.6805	2.0131	5.5018	7.5439	5544.704	-0.8904	0.2684
y3	4.0509	5.4714	7.2667	7.0745	7.8208	8.2131	2153.687	0.3754	0.3718
y4	0.0419	2.7512	5.7026	5.5197	7.1894	7.9151	3902.000	-0.1116	0.3965
y5	1.0857	3.1324	4.6352	4.6336	6.0661	7.7371	8180.040	-0.7689	0.2968
Ne1	0.8324	0.9053	0.9997	1.0000	1.0953	1.1963	10000.000	0.1154	0.3963
Ne2	0.8062	0.9047	1.0002	1.0004	1.0931	1.1940	8927.244	-0.2890	0.3826
Ne3	0.8076	0.9068	1.0001	1.0004	1.0946	1.1855	9641.013	-0.0663	0.3981
Ne4	0.8154	0.9056	1.0001	1.0005	1.0958	1.1729	9759.589	-0.2712	0.3845
Ne5	0.8217	0.9057	0.9994	1.0002	1.0971	1.1879	10000.000	-0.6305	0.3270
Ne6	0.8192	0.9063	1.0000	1.0000	1.0953	1.1805	9144.610	0.1209	0.3960
Ne7	0.8199	0.9062	1.0005	1.0005	1.0947	1.1726	9993.893	-0.0234	0.3988
Ne8	0.7995	0.9054	0.9990	0.9995	1.0943	1.1774	10030.985	1.0882	0.2207
Ne9	0.8016	0.9064	0.9995	0.9997	1.0953	1.1769	9589.310	-0.9499	0.2541

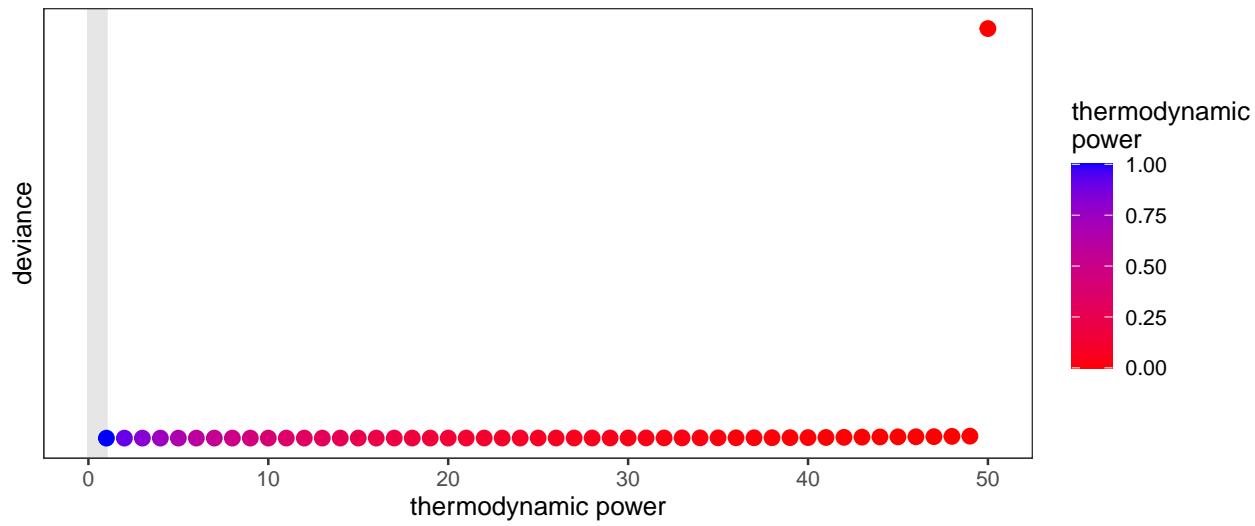
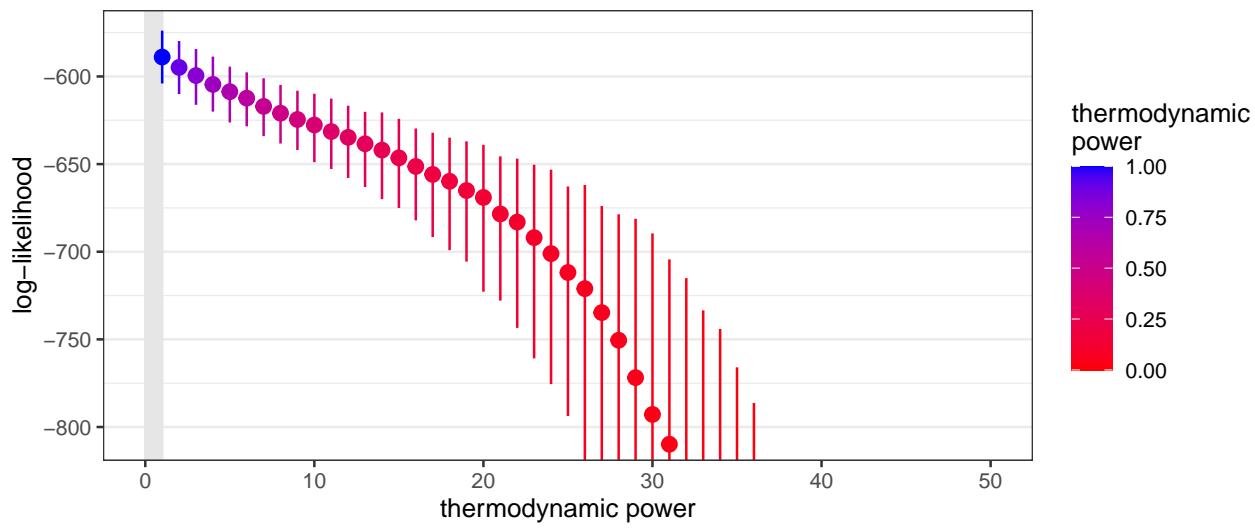
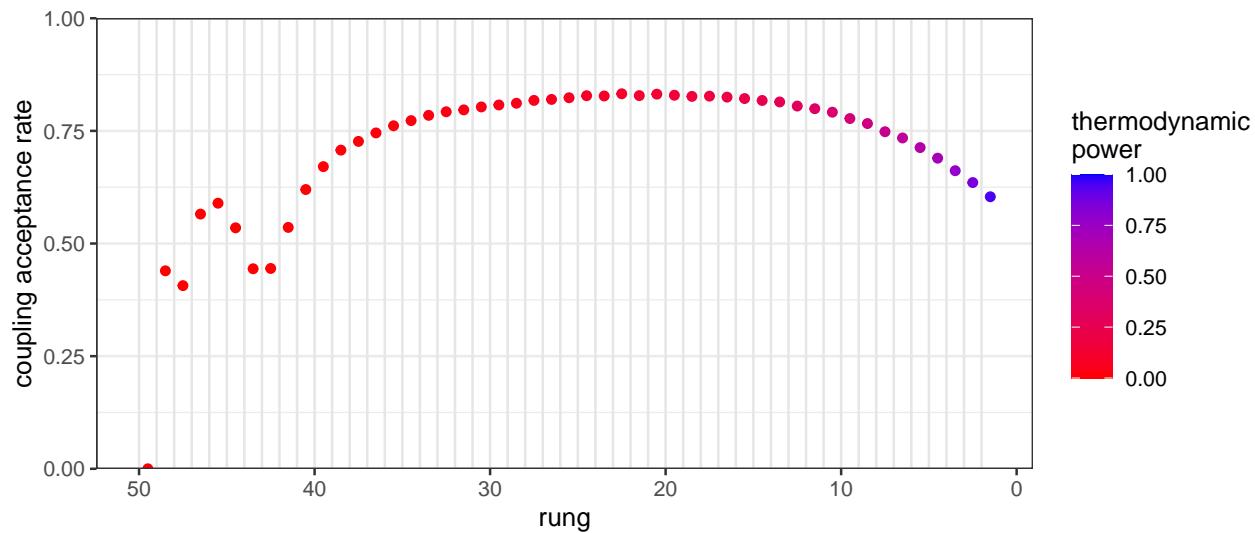
CHN1 with the Potential for Seroreversion Included

Fit Diagnostics

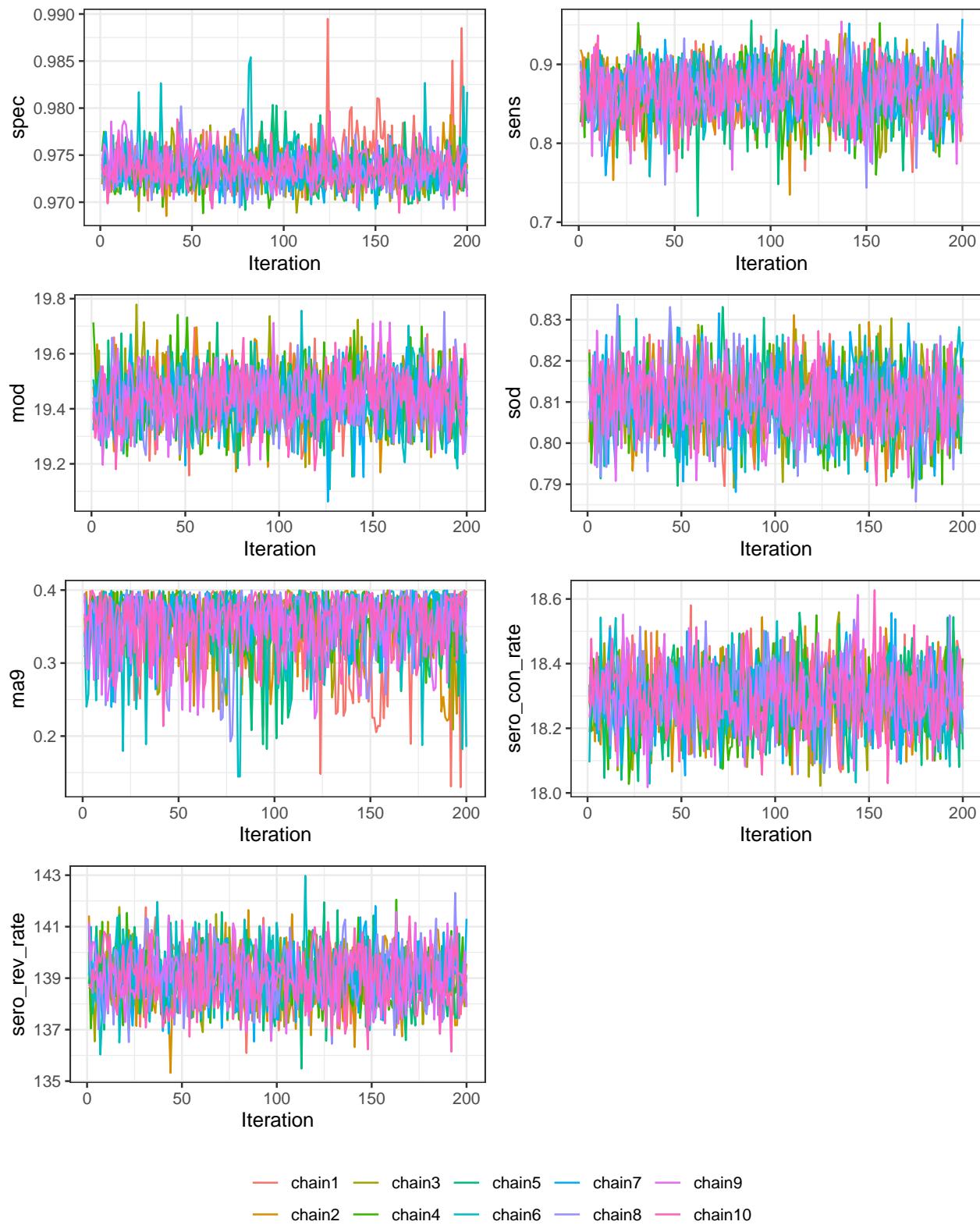
Log Likelihood & Prior Plot



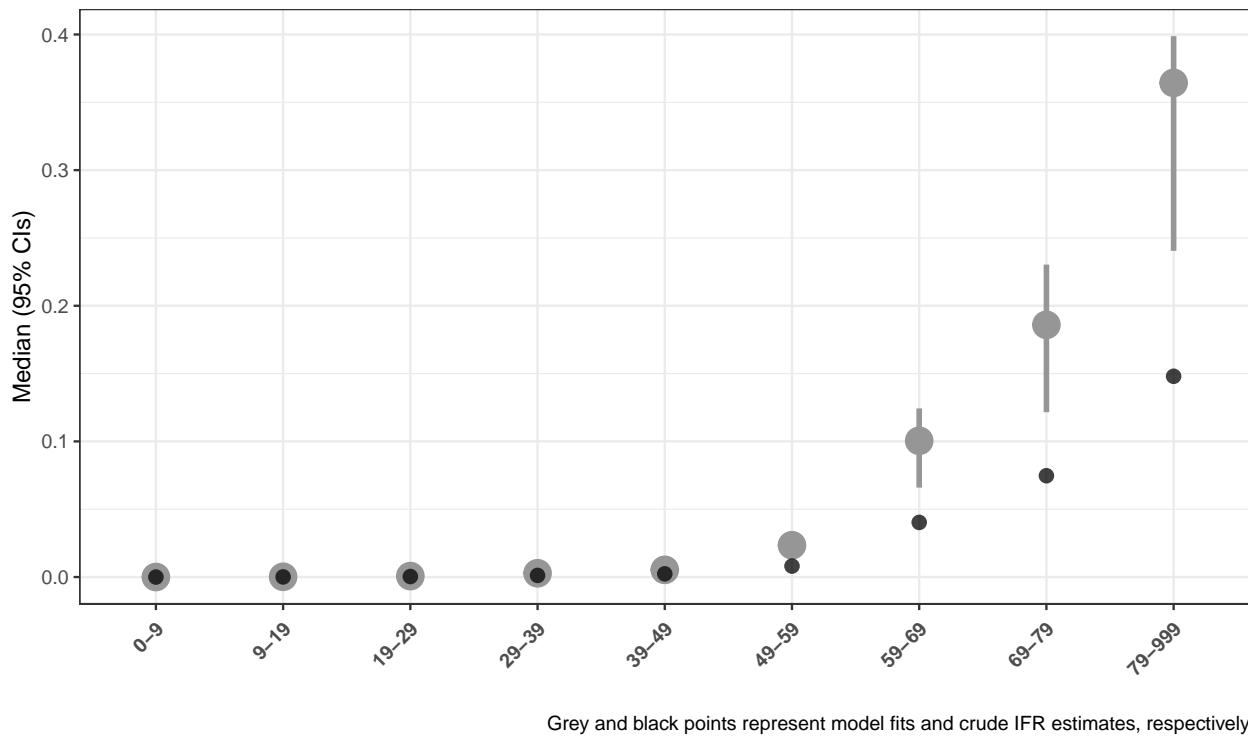
Metropolis Coupling Acceptance Plot



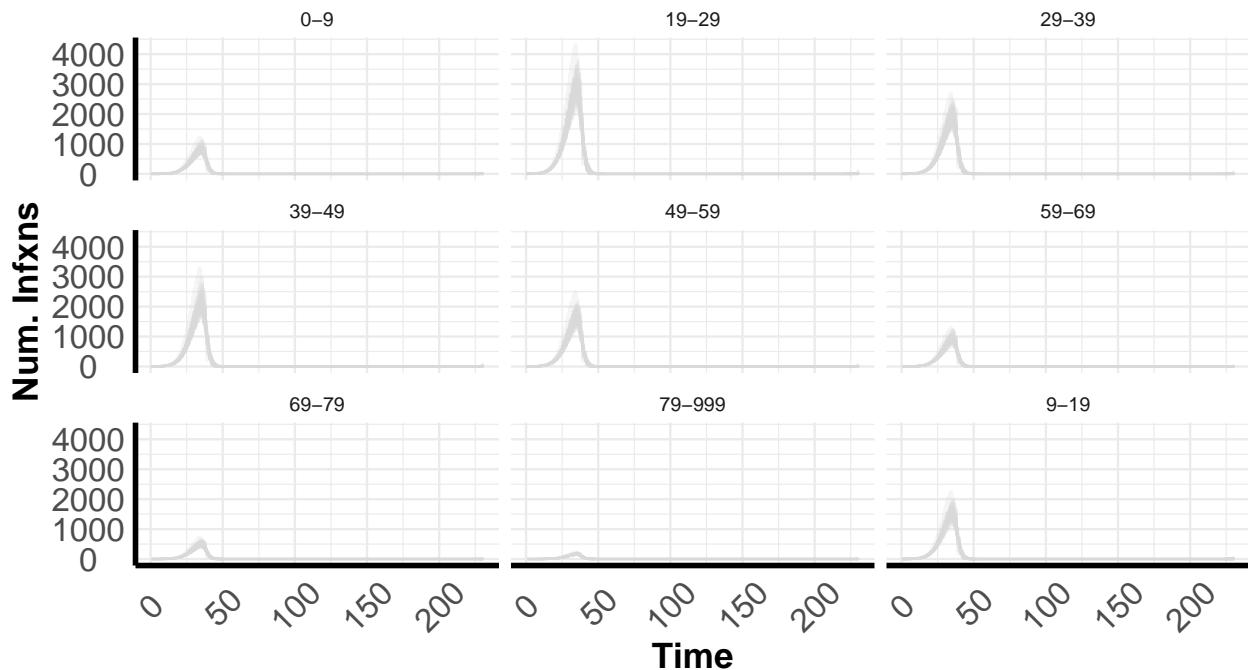
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



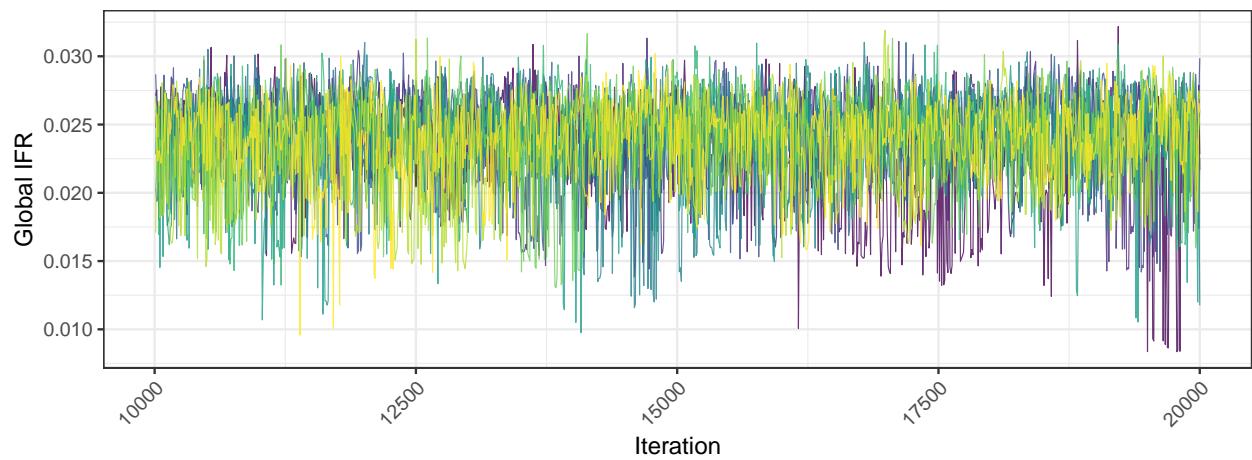
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-9	ma1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	8634.0421	-0.8369	0.2811
9-19	ma2	0.0000	0.0000	0.0002	0.0002	0.0004	0.0007	9445.4860	-0.2257	0.3889
19-29	ma3	0.0002	0.0004	0.0007	0.0007	0.0011	0.0014	4537.2578	-2.6181	0.0130
29-39	ma4	0.0008	0.0017	0.0028	0.0028	0.0038	0.0048	2640.9533	-0.8514	0.2776
39-49	ma5	0.0015	0.0034	0.0053	0.0053	0.0069	0.0086	1893.2418	-0.7984	0.2901
49-59	ma6	0.0071	0.0155	0.0235	0.0232	0.0296	0.0358	1590.2625	-0.6352	0.3261
59-69	ma7	0.0334	0.0659	0.1005	0.0990	0.1243	0.1452	1427.5715	-0.7549	0.3000
69-79	ma8	0.0628	0.1216	0.1859	0.1833	0.2304	0.2820	1352.0166	-0.8452	0.2791
79-999	ma9	0.1193	0.2405	0.3643	0.3525	0.3988	0.4000	839.1124	-0.9630	0.2509

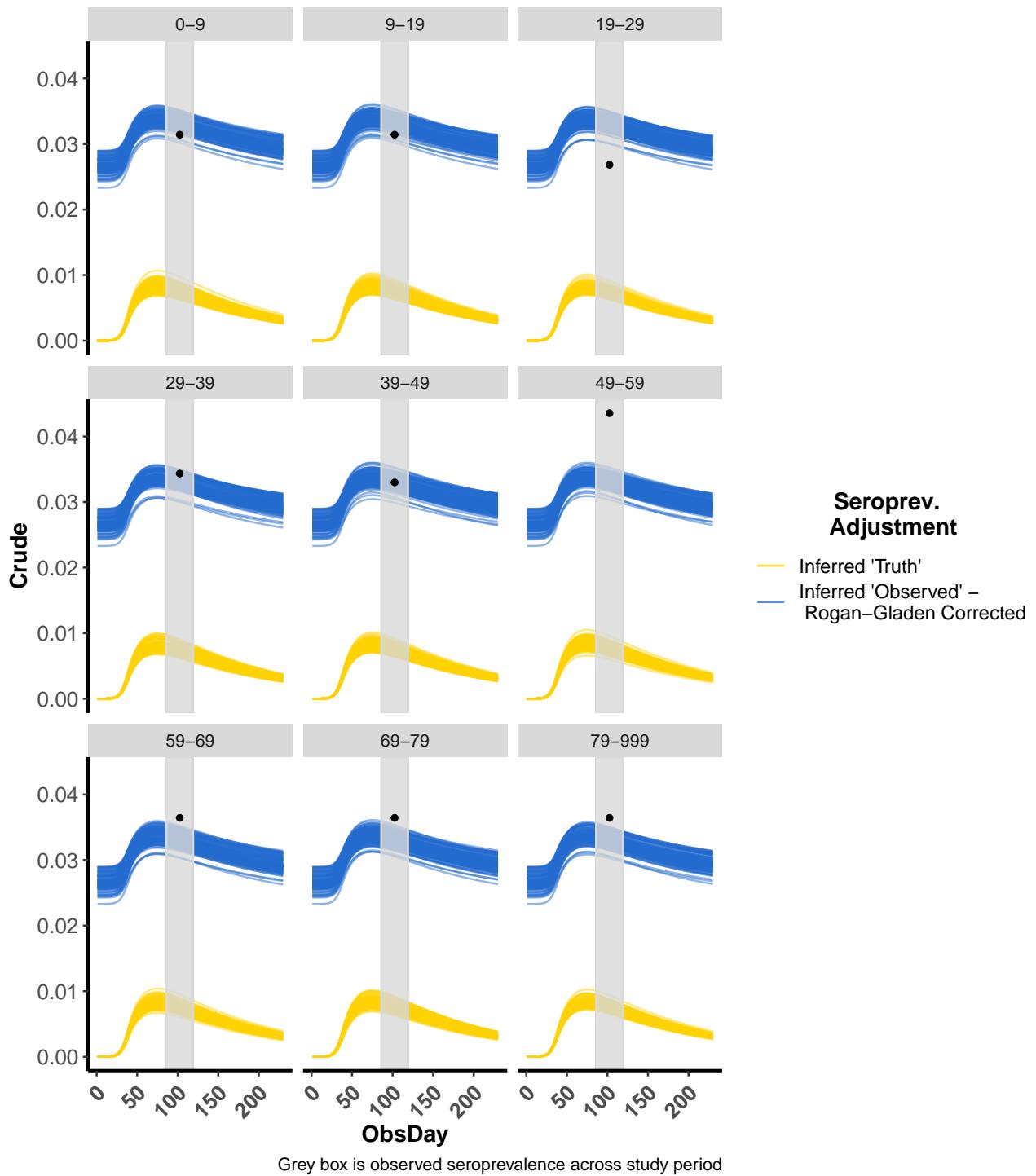
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0084	0.0161	0.0244	0.0238	0.0286	0.0322	5677.116	-0.5312	0.3464

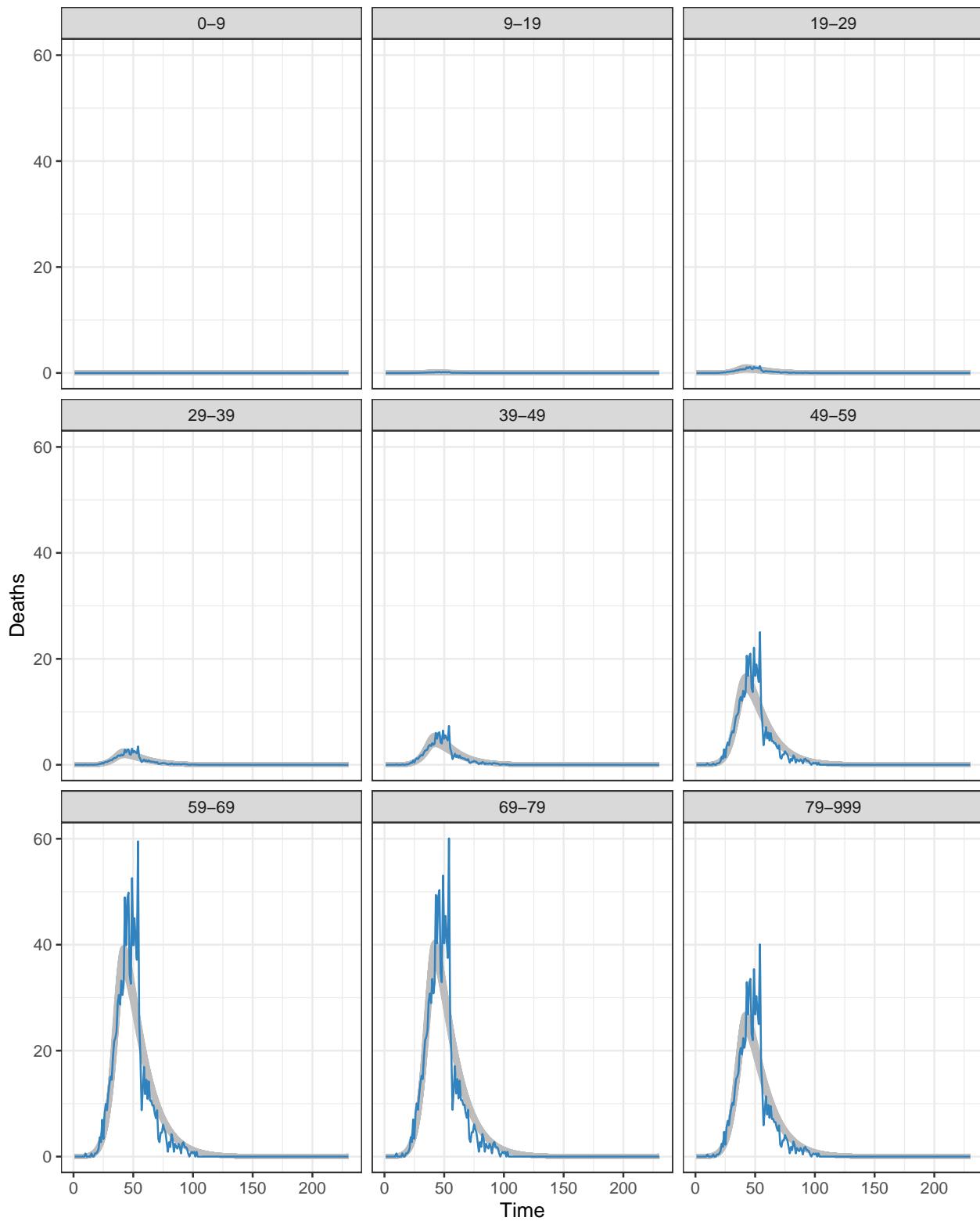
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0084	0.0145	0.0245	0.0234	0.0284	0.0322	71.6308	7.4922	0.0000
chain2	0.0135	0.0159	0.0243	0.0237	0.0285	0.0313	275.6698	2.1026	0.0437
chain3	0.0142	0.0167	0.0242	0.0238	0.0287	0.0302	103.6489	0.3457	0.3758
chain4	0.0157	0.0182	0.0247	0.0245	0.0289	0.0310	297.3995	1.1647	0.2025
chain5	0.0116	0.0154	0.0245	0.0240	0.0287	0.0310	248.6124	-2.0221	0.0516
chain6	0.0097	0.0153	0.0240	0.0233	0.0286	0.0310	320.6677	-2.9124	0.0057
chain7	0.0132	0.0183	0.0247	0.0244	0.0288	0.0309	237.7917	-1.0454	0.2310
chain8	0.0130	0.0162	0.0244	0.0240	0.0287	0.0317	319.8822	-3.0644	0.0036
chain9	0.0143	0.0162	0.0238	0.0232	0.0286	0.0319	137.0040	-3.4997	0.0009
chain10	0.0096	0.0175	0.0244	0.0239	0.0283	0.0302	291.9281	1.0982	0.2183



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



Grey Lines are Draws from Posterior, Blue Line is Observed Data (from JHU CSSE COVID-19 Data)

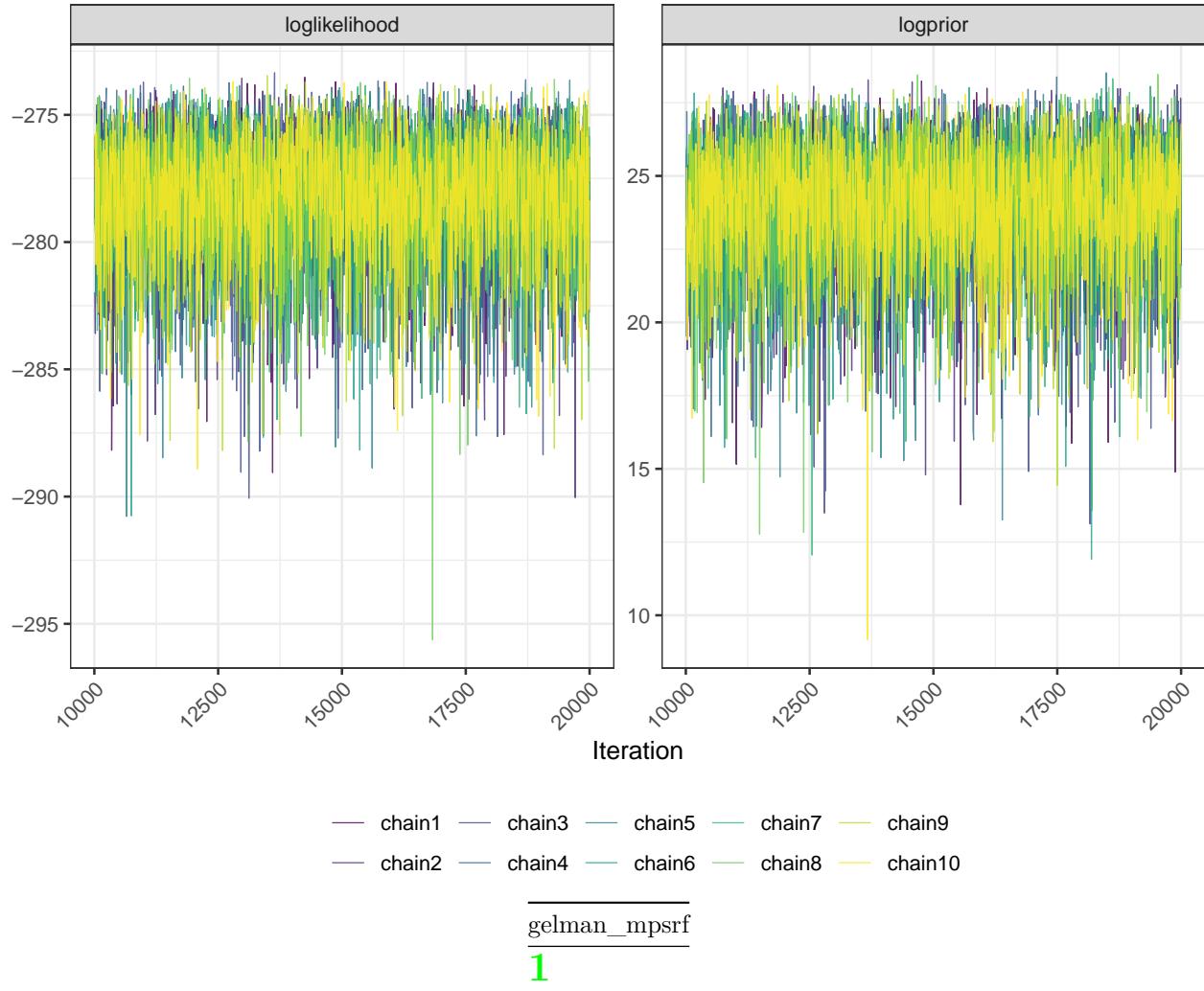
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.0403	4.0050	28.0204	24.3178	35.6041	54.6815	590.0510	-4.0162	0.0001
x2	31.0743	34.2238	37.0974	38.9091	46.6941	228.9190	2340.7792	2.2661	0.0306
x3	39.7081	44.1084	51.4002	56.5513	228.7883	229.9349	400.6431	-0.8354	0.2814
x4	214.0316	216.2049	225.8459	225.0539	229.8696	229.9995	3873.0235	-1.2920	0.1732
y1	0.0000	0.6013	2.1864	2.1472	3.4626	4.6759	5392.8428	0.8034	0.2889
y2	0.0184	2.9364	8.8890	7.7212	9.6693	10.1578	724.1359	-3.7309	0.0004
y3	0.0253	5.6668	9.1279	8.5206	9.7362	10.1728	888.7568	-3.3891	0.0013
y4	0.0003	0.0690	1.9121	2.2159	5.9243	8.1177	2307.8311	-0.0358	0.3987
y5	0.0000	0.0531	1.3771	1.6222	4.5413	7.2690	5791.3013	-1.7051	0.0932
Ne1	0.8009	0.8998	0.9981	0.9979	1.0970	1.2059	9353.8619	0.8658	0.2742
Ne2	0.8181	0.9009	0.9982	0.9978	1.0962	1.1645	9423.0951	0.6799	0.3166
Ne3	0.7905	0.8871	0.9839	0.9839	1.0817	1.1642	8758.2357	-1.2612	0.1801
Ne4	0.8189	0.8998	0.9956	0.9958	1.0935	1.1879	9772.2942	0.3576	0.3742
Ne5	0.7714	0.8930	0.9934	0.9929	1.0930	1.1895	8922.2205	0.7979	0.2902
Ne6	0.8403	0.9202	1.0199	1.0200	1.1171	1.2038	8397.4922	-0.4179	0.3656
Ne7	0.7940	0.8981	0.9960	0.9965	1.0956	1.1853	6864.1527	-0.2372	0.3879
Ne8	0.8032	0.9007	0.9981	0.9977	1.0926	1.1781	6169.0499	-0.2483	0.3868
Ne9	0.8142	0.9175	1.0160	1.0152	1.1124	1.1846	5361.3957	1.4050	0.1487

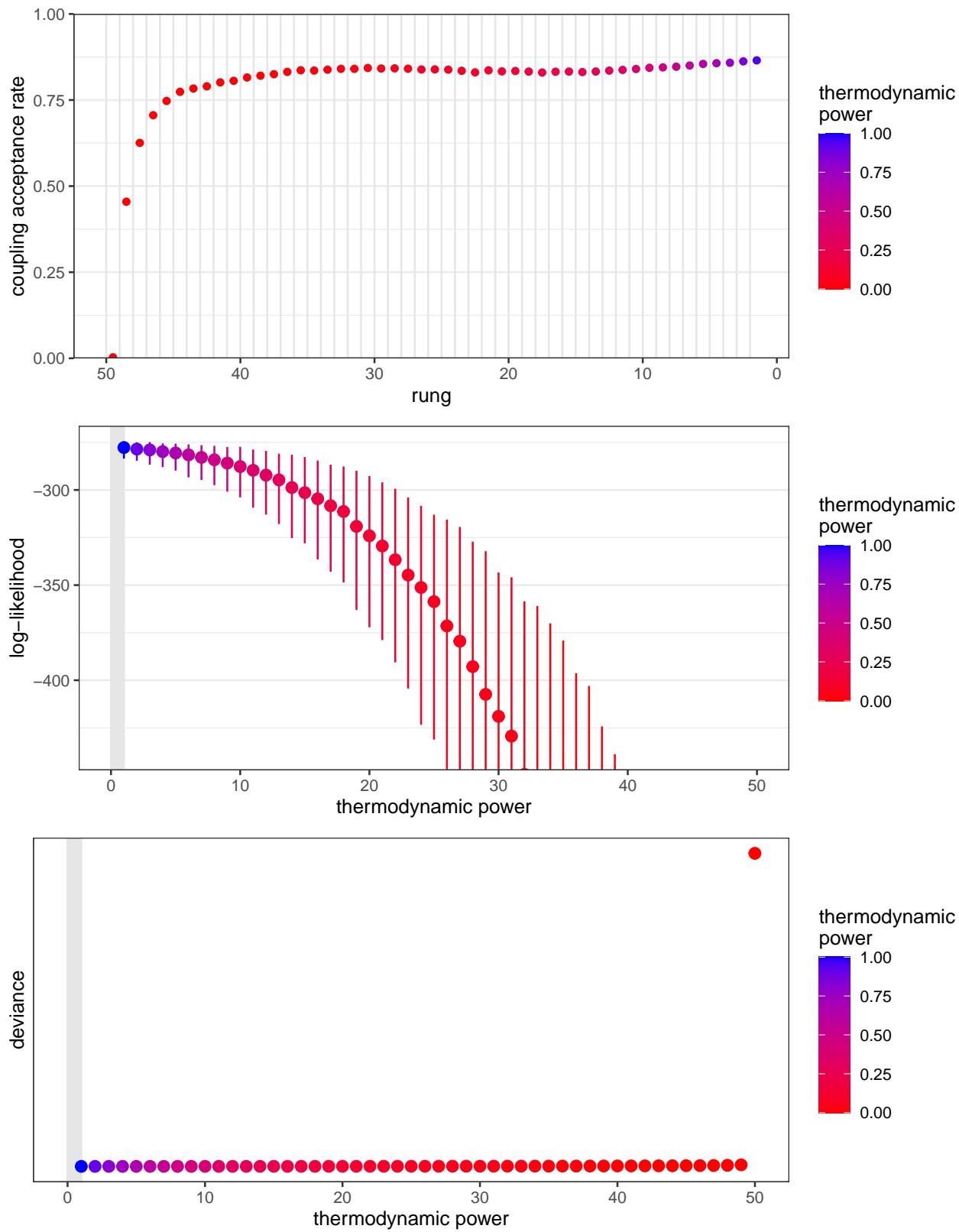
DNK1 with the Potential for Seroreversion Included

Fit Diagnostics

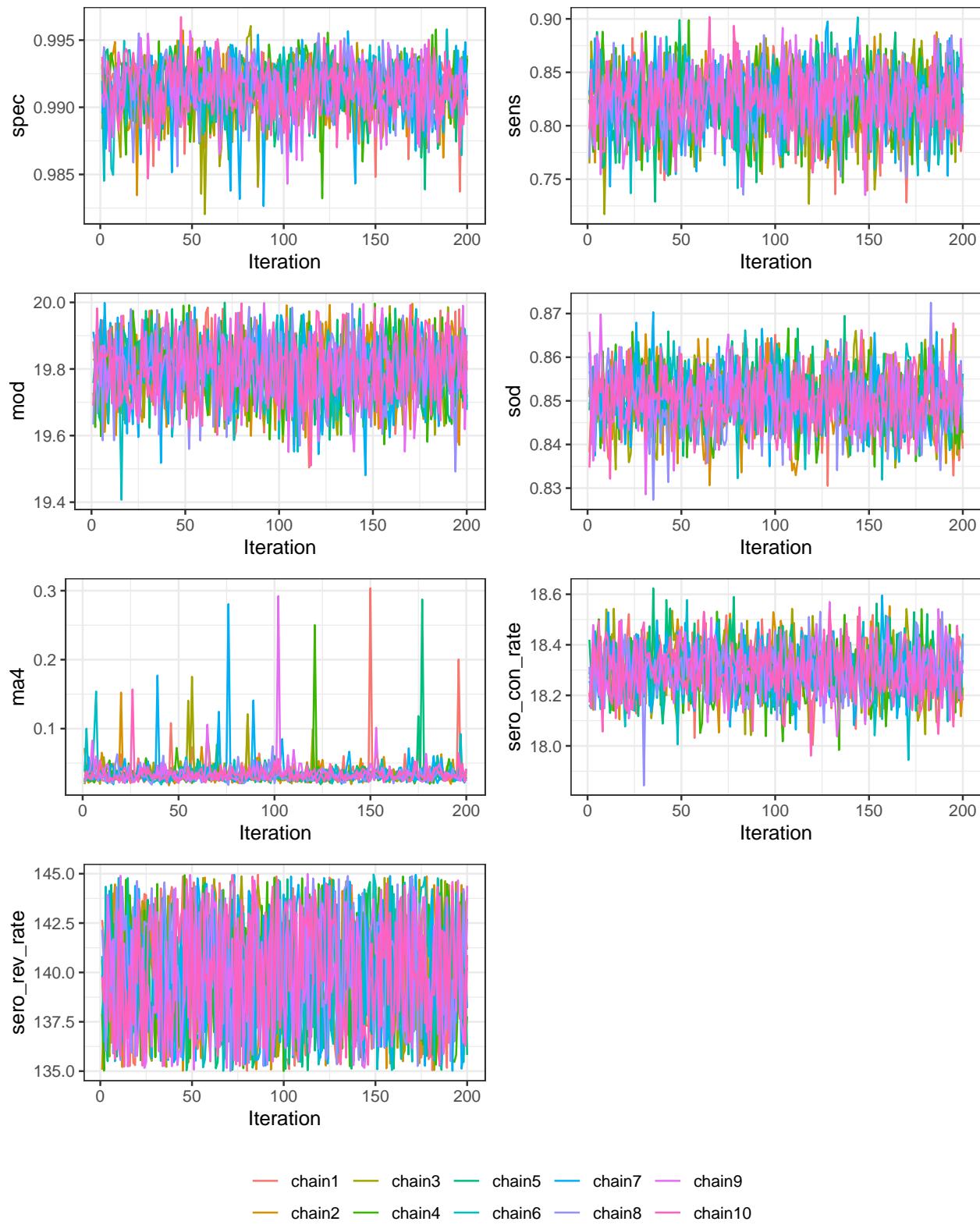
Log Likelihood & Prior Plot



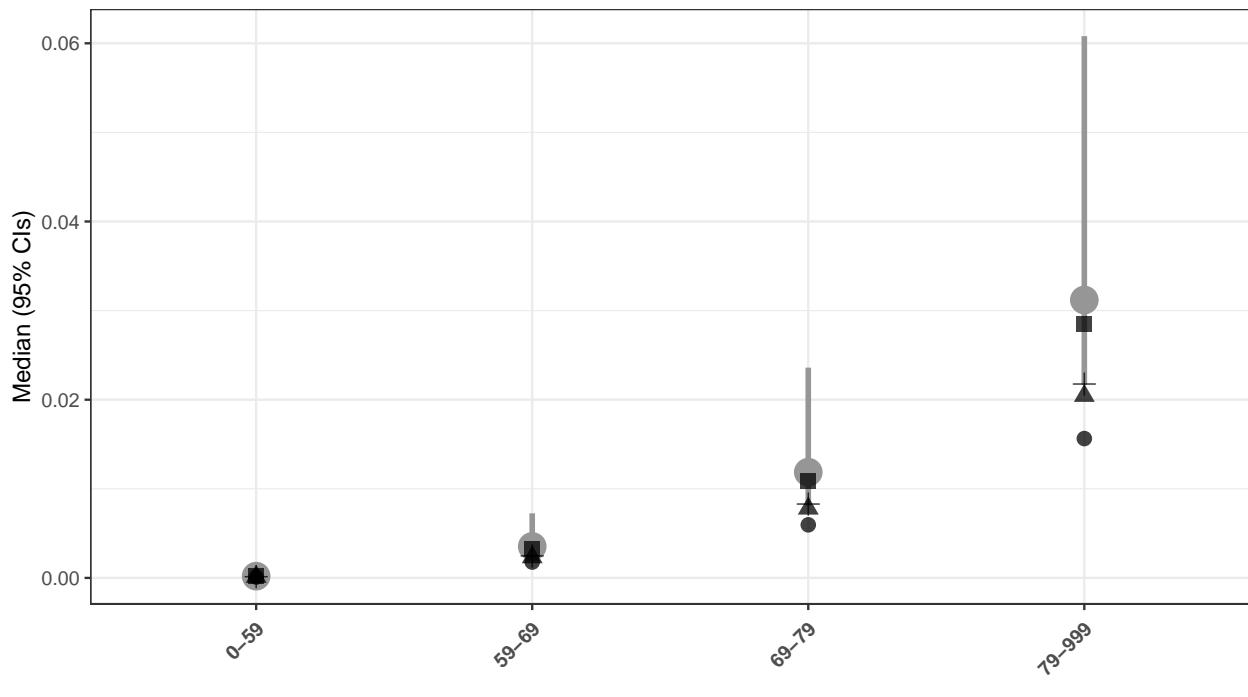
Metropolis Coupling Acceptance Plot



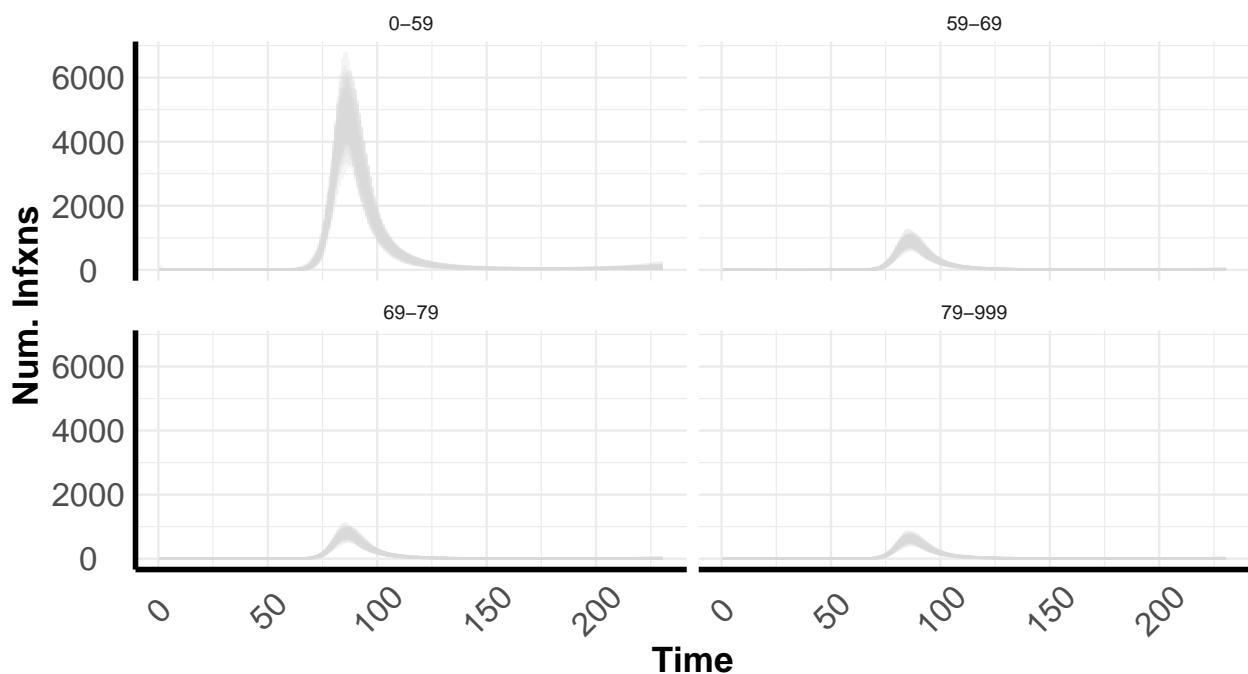
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



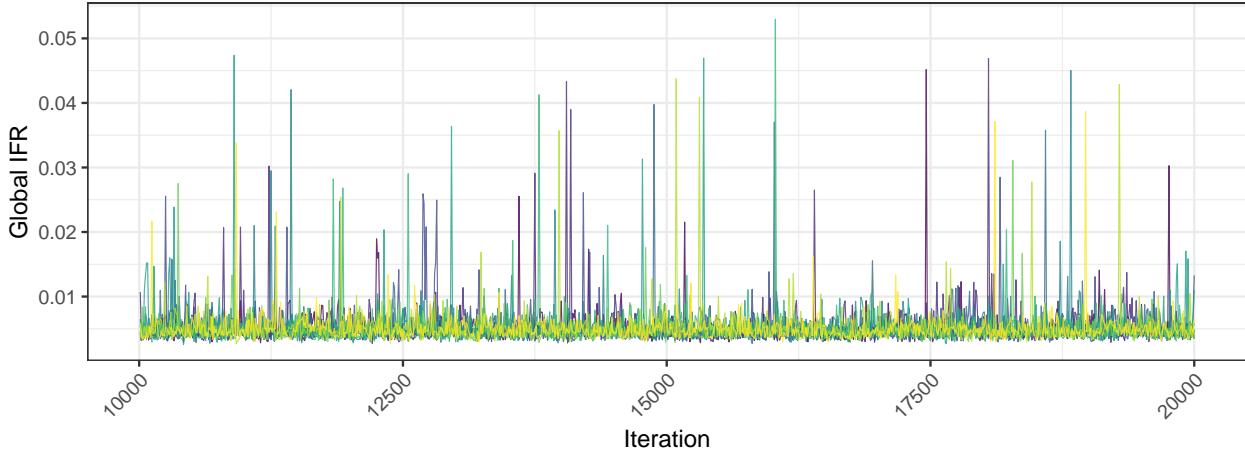
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-59	ma1	0.0001	0.0001	0.0002	0.0002	0.0004	0.0029	7811.229	-0.6937	0.3136
59-69	ma2	0.0015	0.0022	0.0035	0.0039	0.0072	0.0495	6537.698	-0.4665	0.3578
69-79	ma3	0.0060	0.0081	0.0119	0.0130	0.0236	0.1368	6390.492	-0.6504	0.3229
79-999	ma4	0.0170	0.0217	0.0312	0.0343	0.0608	0.3430	7336.051	-0.8961	0.2670

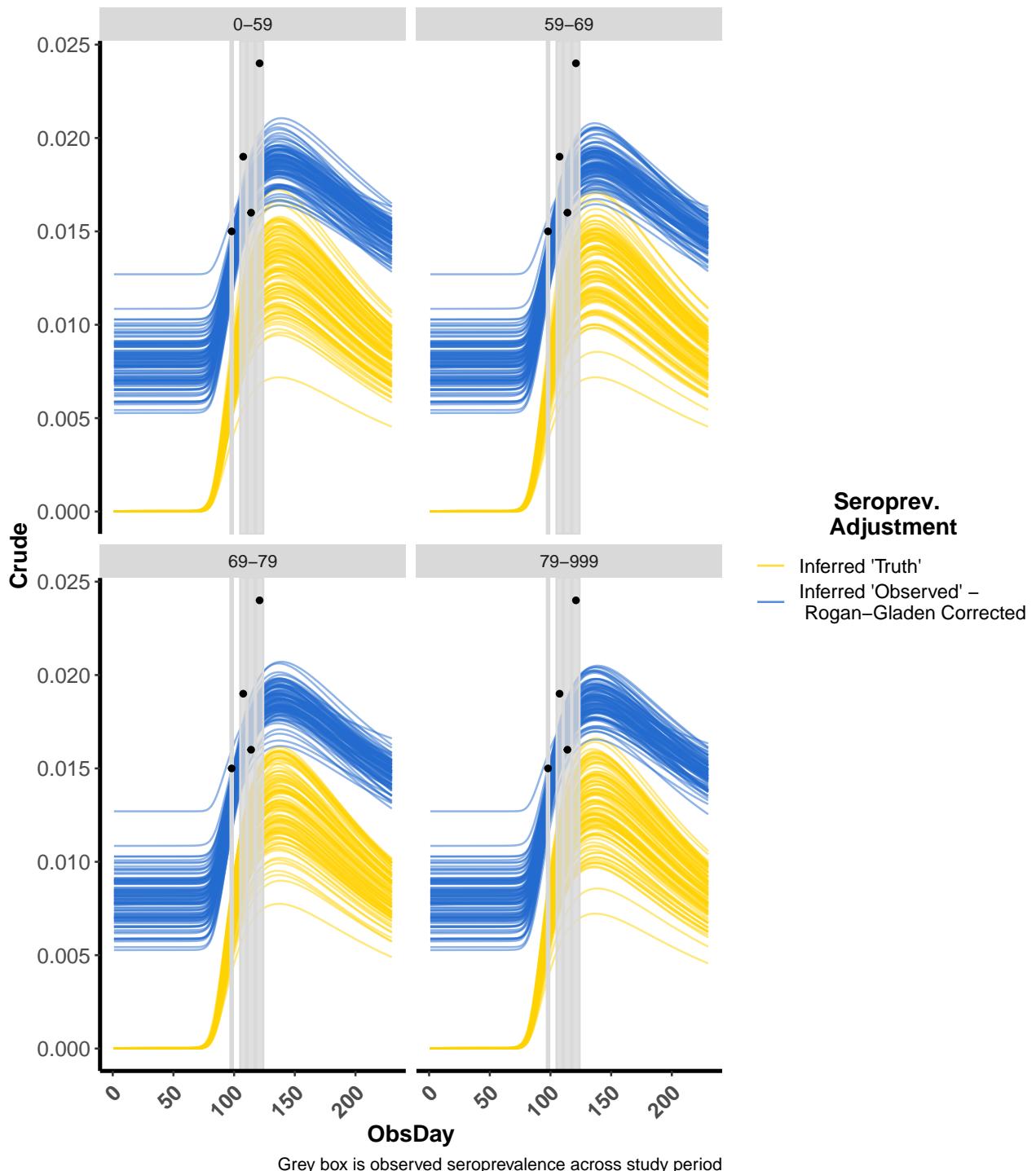
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0026	0.0033	0.0046	0.0051	0.009	0.053	9153.498	1.7054	0.0932

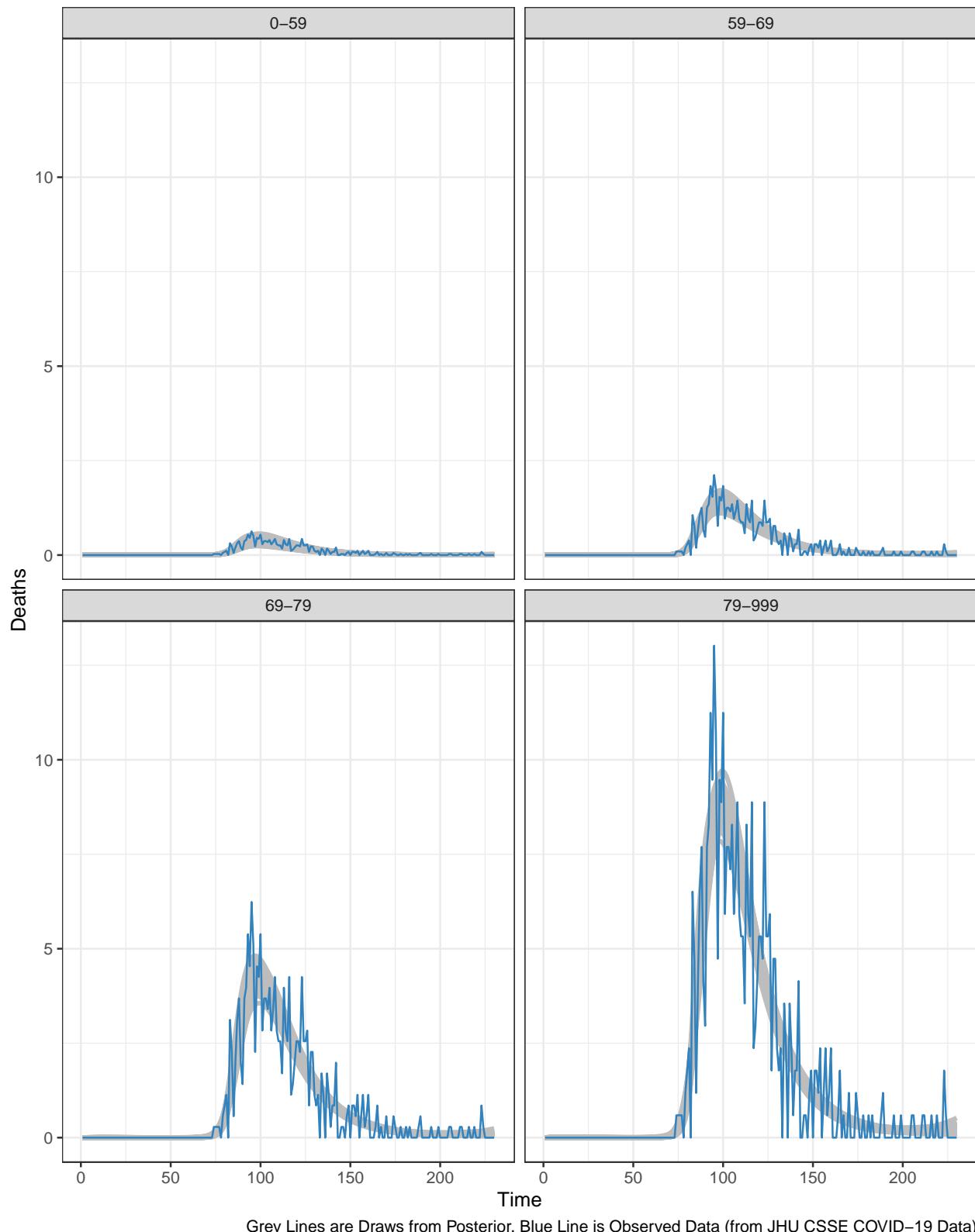
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0028	0.0033	0.0046	0.0050	0.0089	0.0452	754.0188	-1.1439	0.2074
chain2	0.0027	0.0032	0.0046	0.0052	0.0099	0.0469	545.6113	0.0750	0.3978
chain3	0.0030	0.0032	0.0046	0.0051	0.0089	0.0285	216.8305	1.6869	0.0962
chain4	0.0027	0.0033	0.0046	0.0050	0.0084	0.0398	1000.0000	0.5864	0.3359
chain5	0.0026	0.0033	0.0046	0.0051	0.0088	0.0450	451.0919	-0.2960	0.3818
chain6	0.0027	0.0032	0.0046	0.0052	0.0098	0.0474	883.4985	2.2706	0.0303
chain7	0.0029	0.0033	0.0047	0.0052	0.0090	0.0530	1000.0000	-2.2072	0.0349
chain8	0.0029	0.0033	0.0045	0.0048	0.0081	0.0311	1000.0000	1.5106	0.1275
chain9	0.0027	0.0033	0.0048	0.0053	0.0093	0.0437	1000.0000	-0.3680	0.3728
chain10	0.0027	0.0034	0.0046	0.0051	0.0084	0.0387	1000.0000	0.2838	0.3832



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



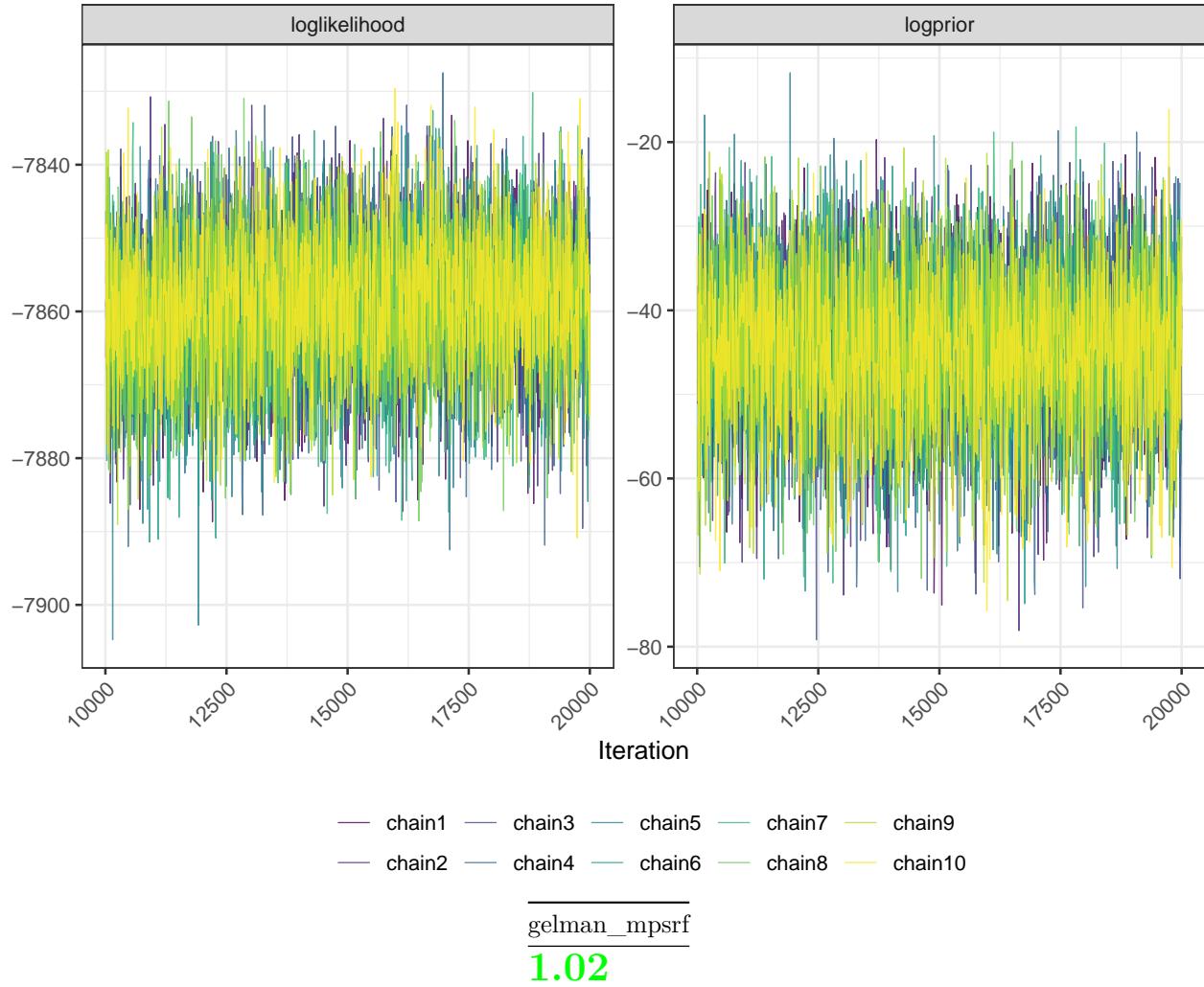
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.2124	2.5226	59.5584	54.3320	71.3810	80.1376	971.8942	-2.8471	0.0069
x2	66.8125	74.1052	81.0774	81.3562	89.4728	97.1403	2686.1582	1.5469	0.1206
x3	83.8038	89.3702	98.4860	99.0551	112.2612	137.7043	1400.7262	-0.4220	0.3650
x4	214.0003	214.4791	222.2739	222.1727	229.6115	229.9985	3496.5740	-1.0847	0.2215
y1	0.0001	0.0818	1.7668	1.9686	4.8623	6.6289	4102.7465	3.7737	0.0003
y2	0.0008	0.0679	1.7067	2.0682	5.7119	8.2561	2804.9009	-0.7742	0.2956
y3	5.0618	6.8443	8.4023	8.2886	9.0931	9.4305	1473.8844	1.3277	0.1652
y4	3.1867	6.0841	7.7488	7.6504	8.6766	9.1322	1146.3849	0.7208	0.3077
y5	0.3278	3.0251	4.4412	4.4117	5.6196	7.0842	8145.9091	-0.7998	0.2897
Ne1	0.7940	0.9046	1.0011	1.0012	1.0962	1.1906	9228.1042	0.7156	0.3088
Ne2	0.7820	0.9050	1.0011	1.0008	1.0976	1.1835	10000.0000	0.1058	0.3967
Ne3	0.8029	0.9030	1.0011	1.0005	1.0977	1.1786	10000.0000	-0.4336	0.3631
Ne4	0.8128	0.9042	0.9989	0.9992	1.0973	1.1850	9655.1038	0.9299	0.2589

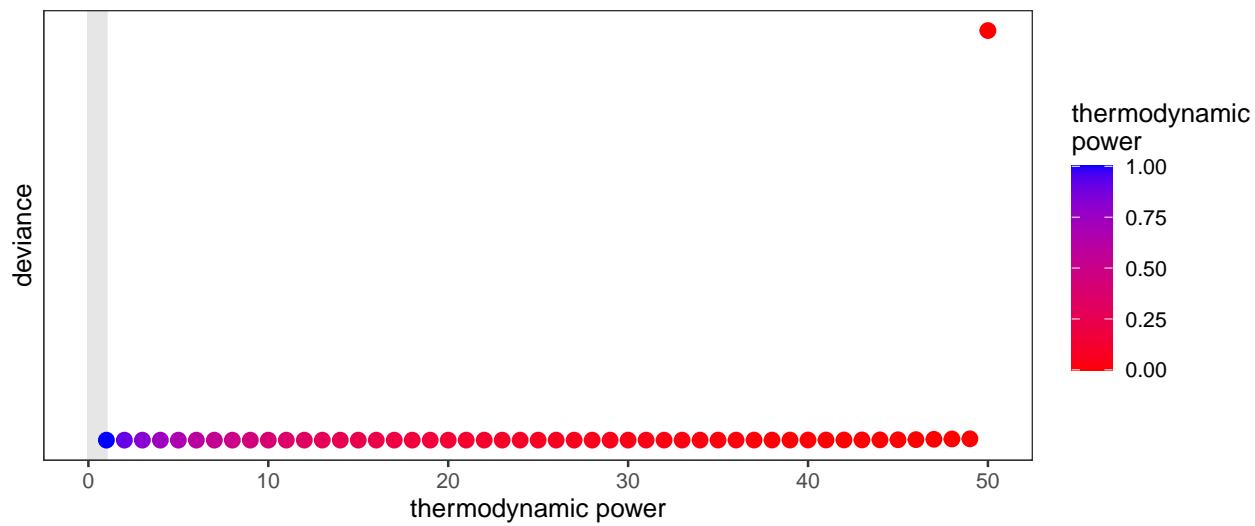
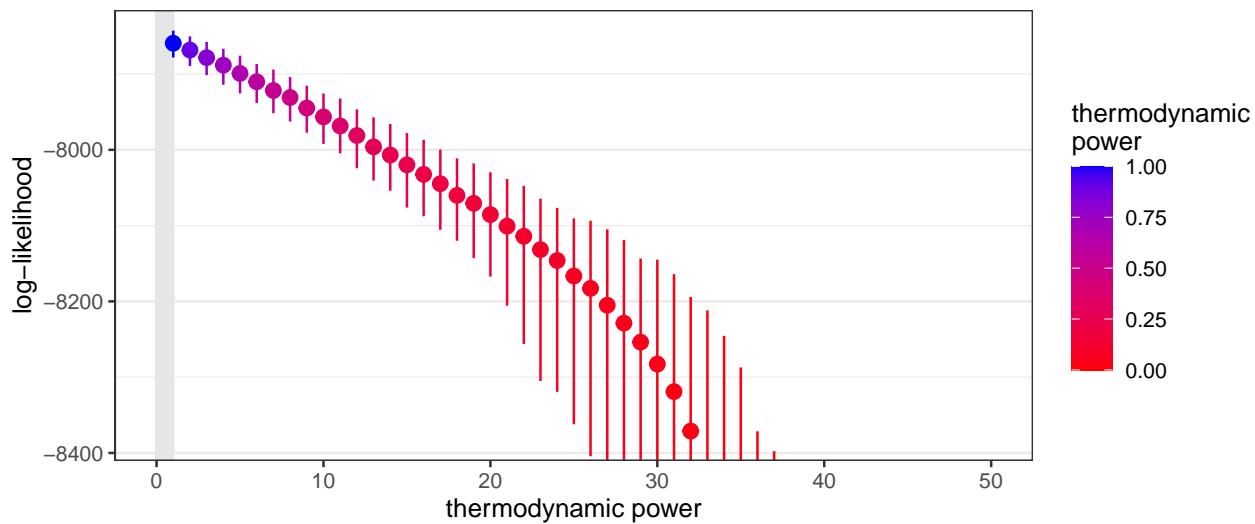
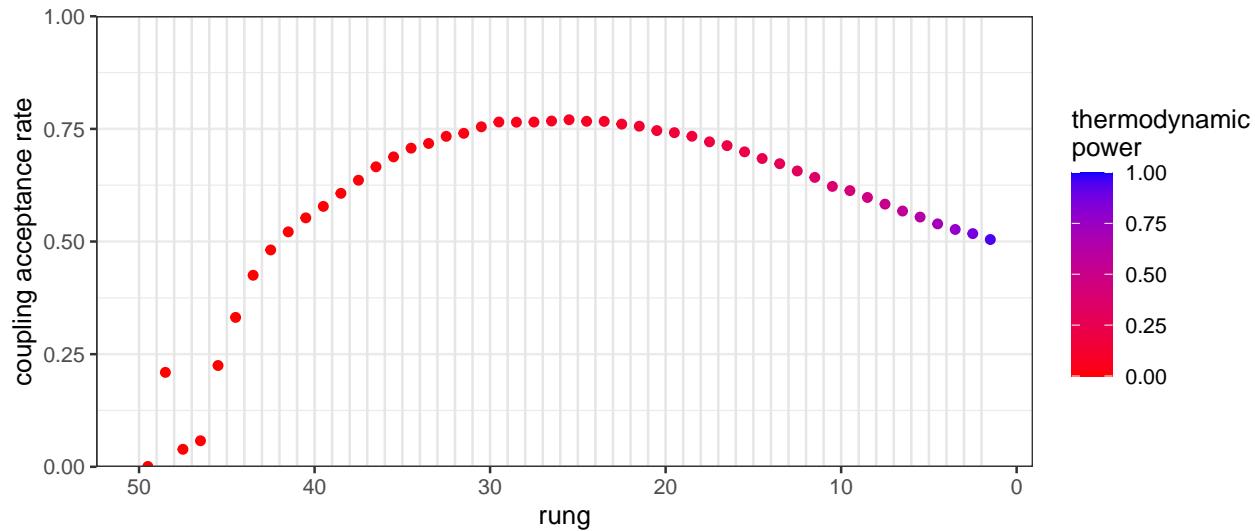
ESP1-2 with the Potential for Seroreversion Included

Fit Diagnostics

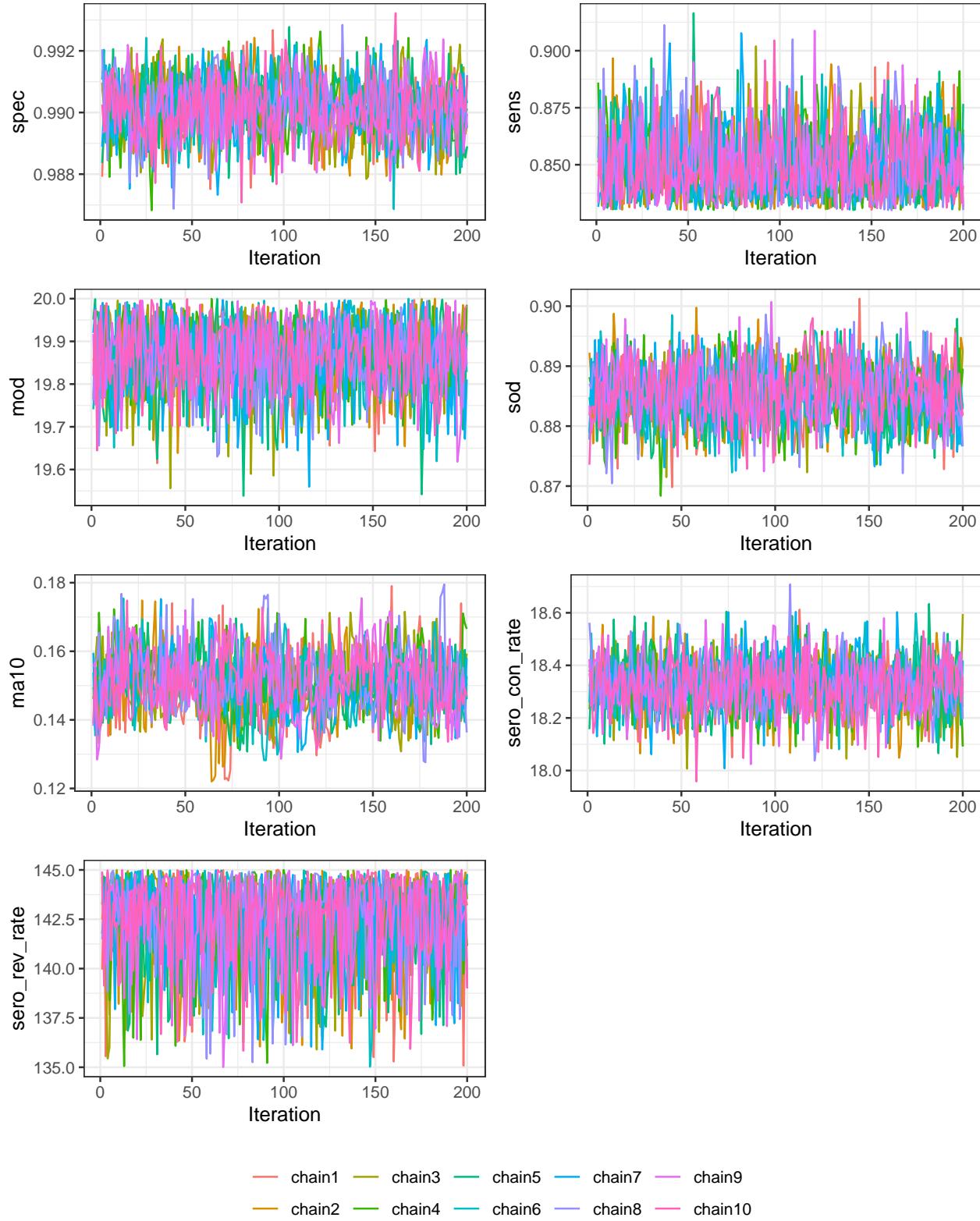
Log Likelihood & Prior Plot



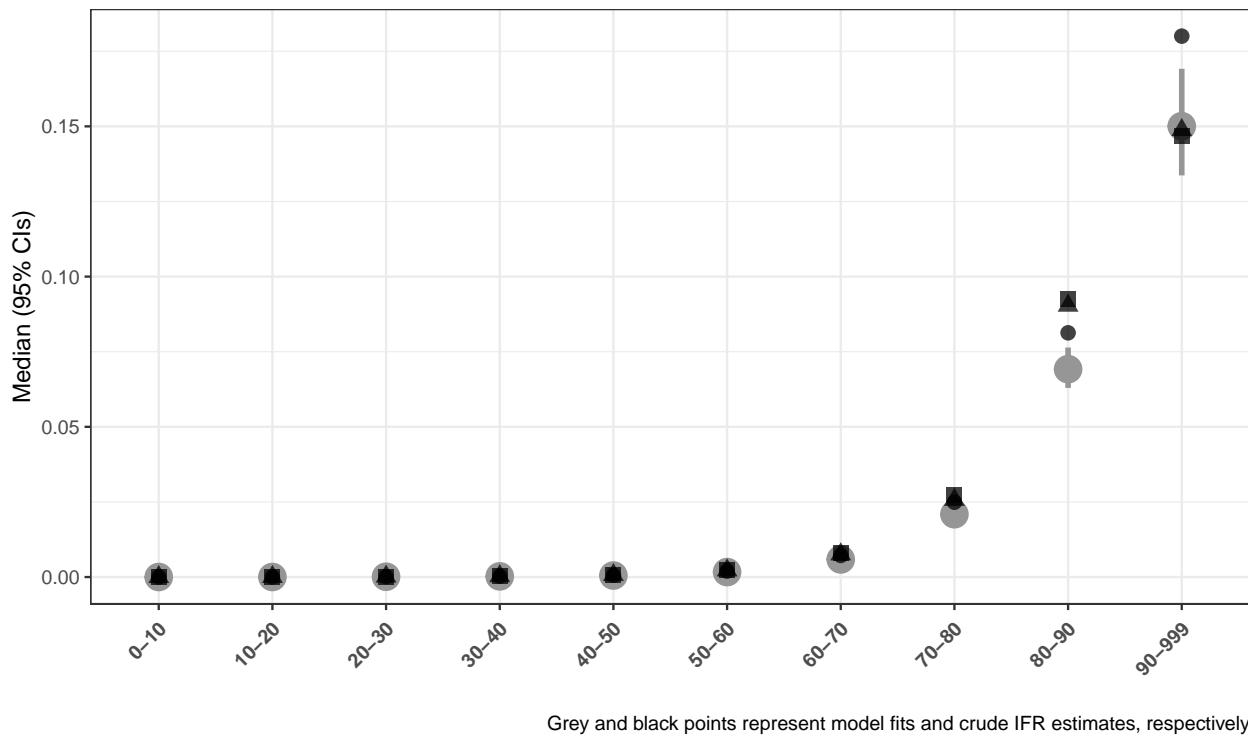
Metropolis Coupling Acceptance Plot



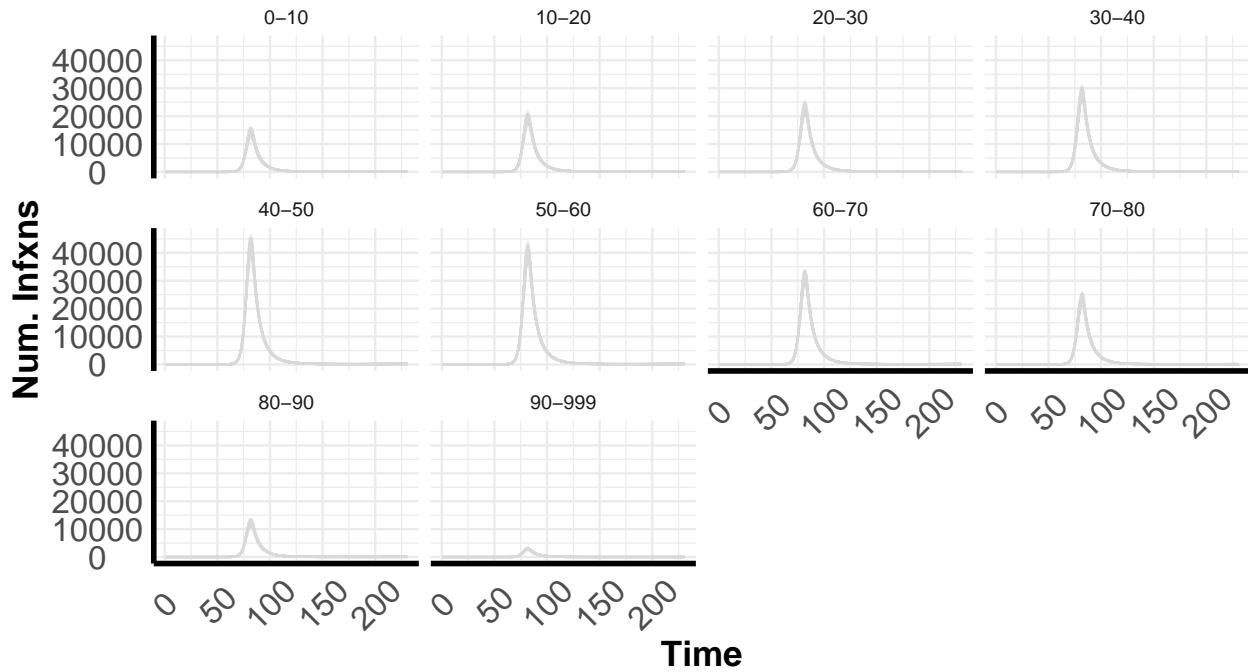
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



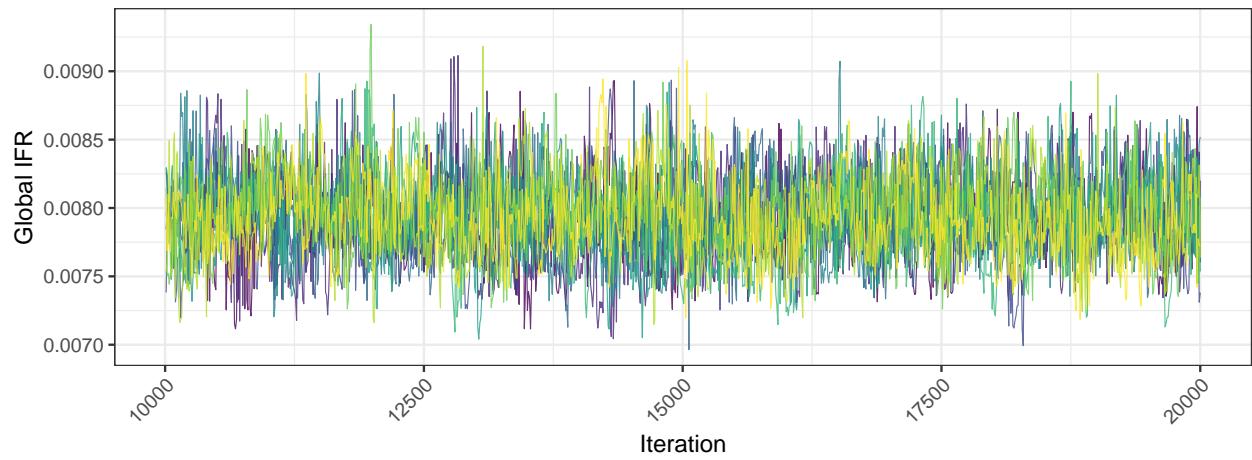
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-10	ma1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	9534.9668	-0.3084	0.3804
10-20	ma2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	9297.3035	1.2084	0.1922
20-30	ma3	0.0000	0.0001	0.0001	0.0001	0.0001	0.0002	9314.9832	-1.2247	0.1885
30-40	ma4	0.0001	0.0002	0.0002	0.0002	0.0003	0.0003	7416.9383	0.3247	0.3785
40-50	ma5	0.0004	0.0004	0.0005	0.0005	0.0006	0.0007	5919.2017	-0.6891	0.3146
50-60	ma6	0.0014	0.0015	0.0017	0.0017	0.0018	0.0020	3422.5561	-1.2053	0.1929
60-70	ma7	0.0051	0.0054	0.0059	0.0059	0.0064	0.0071	3053.1794	-1.1907	0.1964
70-80	ma8	0.0181	0.0193	0.0209	0.0210	0.0229	0.0243	2287.3840	-0.0927	0.3972
80-90	ma9	0.0576	0.0630	0.0692	0.0693	0.0764	0.0852	1467.4047	1.3379	0.1630
90-999	ma10	0.1207	0.1337	0.1501	0.1504	0.1692	0.1958	773.2841	-2.0759	0.0463

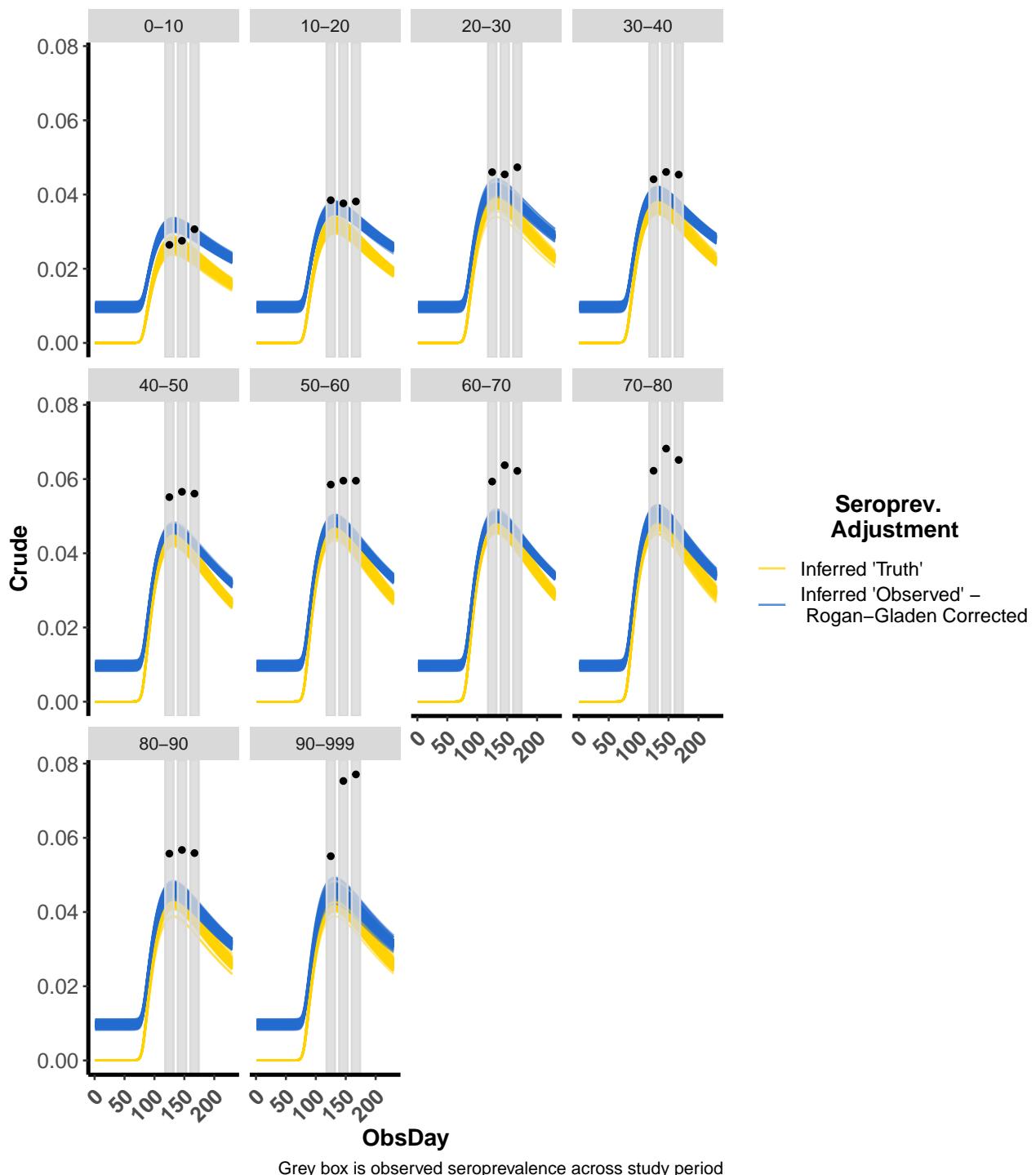
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.007	0.0074	0.0079	0.0079	0.0086	0.0093	2334.43	1.4476	0.1399

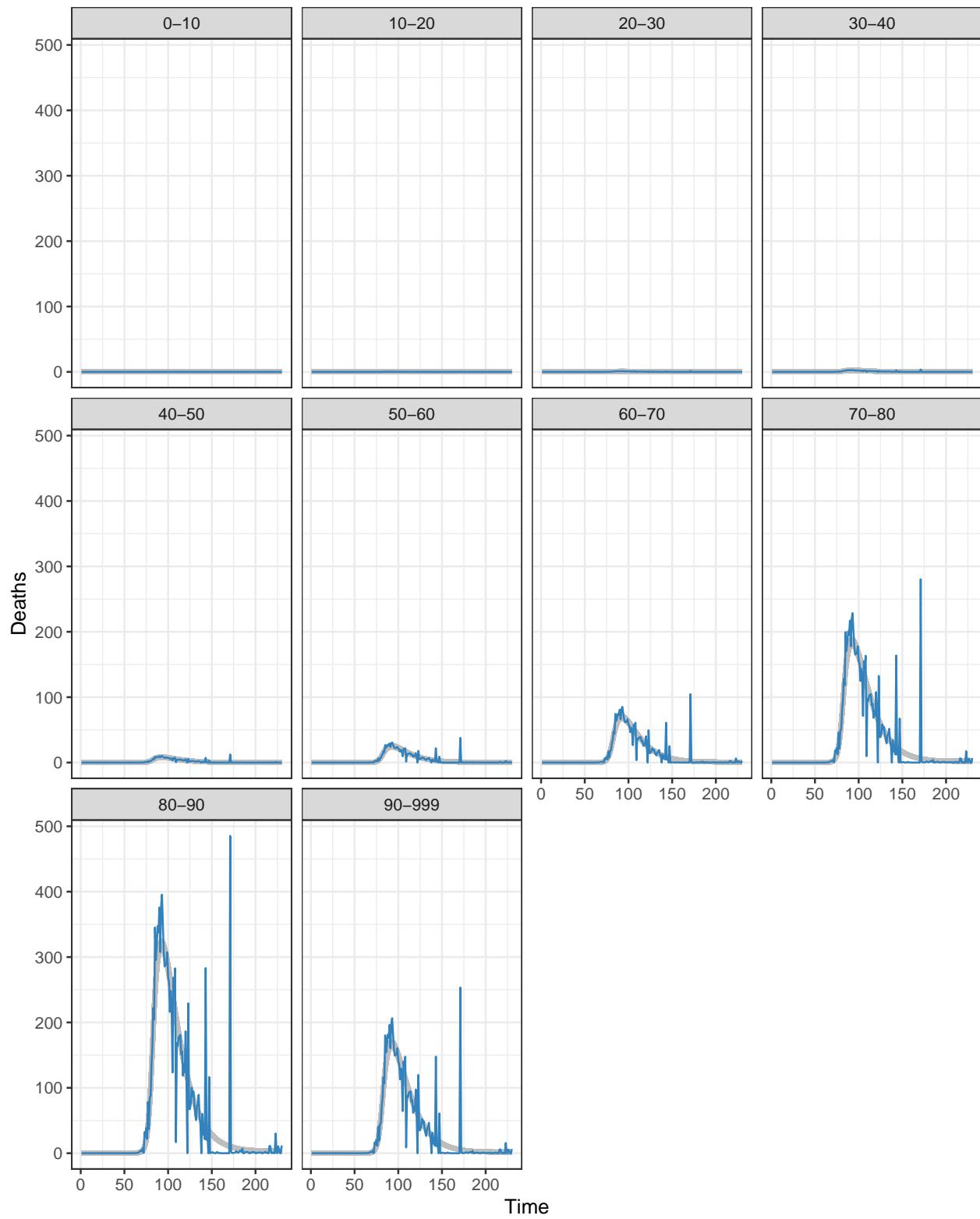
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0071	0.0074	0.0079	0.0079	0.0086	0.0089	159.5400	-1.0623	0.2269
chain2	0.0070	0.0073	0.0079	0.0079	0.0086	0.0091	174.7252	0.0201	0.3989
chain3	0.0070	0.0074	0.0079	0.0079	0.0085	0.0089	192.2093	0.3758	0.3717
chain4	0.0070	0.0074	0.0079	0.0079	0.0086	0.0089	226.7213	2.3072	0.0279
chain5	0.0072	0.0074	0.0079	0.0079	0.0086	0.0091	181.4024	1.2471	0.1833
chain6	0.0070	0.0074	0.0079	0.0079	0.0086	0.0089	161.5753	-0.2907	0.3824
chain7	0.0071	0.0073	0.0079	0.0079	0.0085	0.0089	146.4352	2.2848	0.0293
chain8	0.0073	0.0074	0.0079	0.0079	0.0086	0.0093	159.3315	1.3030	0.1707
chain9	0.0071	0.0074	0.0079	0.0080	0.0085	0.0092	199.7544	-0.3110	0.3801
chain10	0.0072	0.0074	0.0079	0.0079	0.0086	0.0091	187.9679	-0.5430	0.3443



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



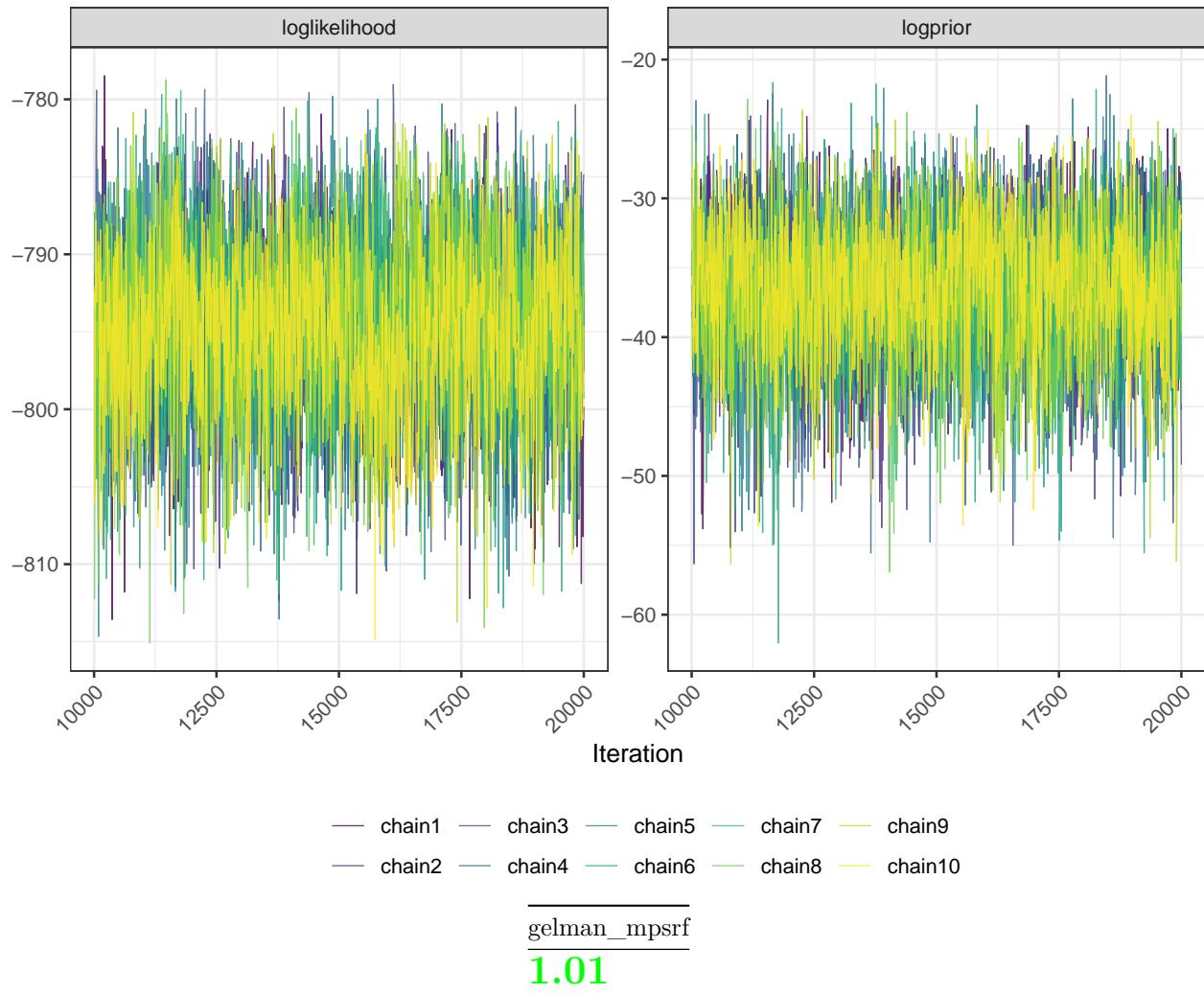
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	3.5579	54.3686	65.5102	64.9674	72.1423	76.1921	299.7654	-2.7530	0.0090
x2	78.3653	81.0755	82.9231	82.8455	84.1467	84.9879	344.8740	-1.1887	0.1968
x3	82.7719	84.0655	85.3117	85.3655	86.7434	88.7587	162.5852	2.0446	0.0493
x4	214.0001	214.0929	216.6448	218.1335	228.5969	229.9930	400.0931	1.3525	0.1598
y1	0.0003	0.0395	0.9467	1.1367	3.2510	4.9018	4077.7068	2.4759	0.0186
y2	0.0281	2.2015	7.5939	7.2608	10.0508	11.3739	269.9761	-2.4791	0.0185
y3	12.0527	12.2100	12.3241	12.3229	12.4266	12.5560	540.5972	0.8145	0.2863
y4	11.6601	11.8568	12.0445	12.0398	12.1959	12.3283	154.3762	-2.1676	0.0381
y5	6.5907	6.7879	6.9988	7.0135	7.3266	7.6145	912.3658	1.3621	0.1578
Ne1	0.5139	0.5628	0.6288	0.6290	0.6971	0.7560	8140.1627	0.0329	0.3987
Ne10	0.8402	0.9472	1.0413	1.0413	1.1386	1.2344	1136.1358	2.5288	0.0163
Ne2	0.6483	0.7012	0.7621	0.7622	0.8245	0.8788	7384.9003	0.4530	0.3600
Ne3	0.7814	0.8405	0.9062	0.9064	0.9732	1.0510	7746.8609	0.0504	0.3984
Ne4	0.7564	0.8188	0.8796	0.8798	0.9426	1.0104	6186.0300	-1.1161	0.2140
Ne5	0.9441	0.9988	1.0561	1.0562	1.1171	1.1706	5988.4124	-0.1230	0.3959
Ne6	0.9939	1.0534	1.1111	1.1115	1.1717	1.2307	6202.8659	0.1066	0.3967
Ne7	1.0274	1.0823	1.1442	1.1445	1.2078	1.2772	5005.3832	0.0088	0.3989
Ne8	1.0459	1.1002	1.1675	1.1675	1.2358	1.2890	3714.3028	-1.1336	0.2098
Ne9	0.8901	0.9538	1.0315	1.0318	1.1102	1.1747	1827.6657	-2.4537	0.0197

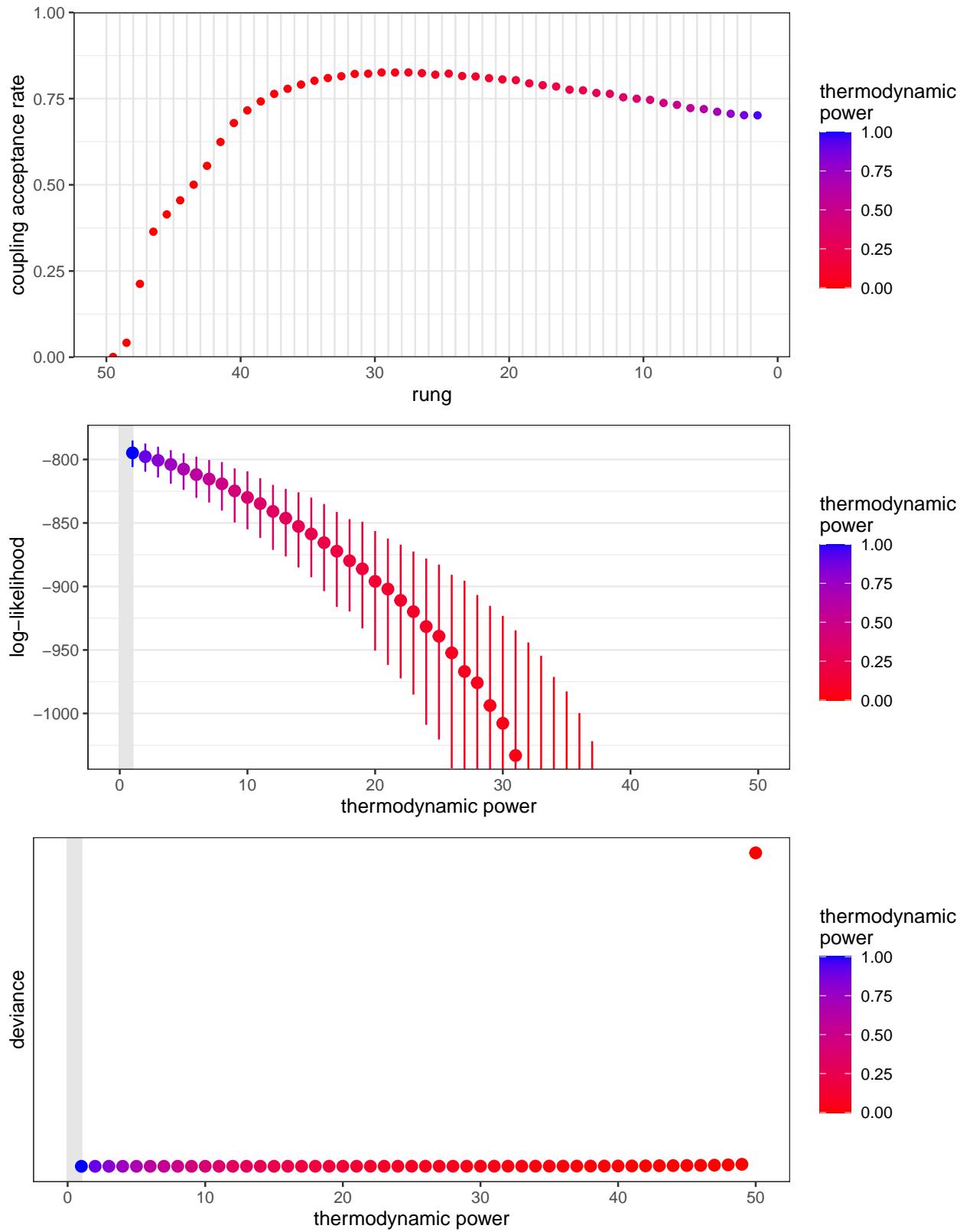
GBR3 with the Potential for Seroreversion Included

Fit Diagnostics

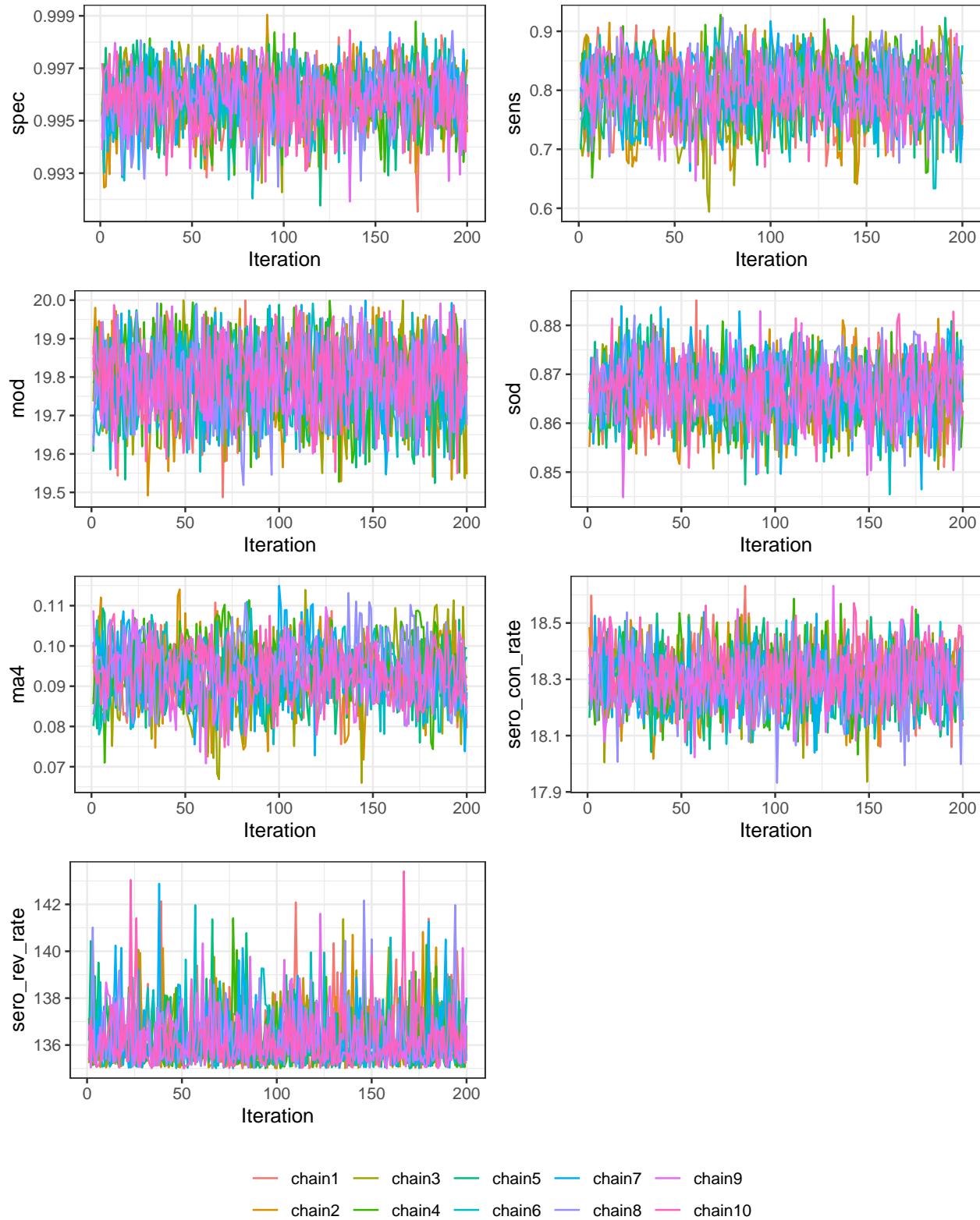
Log Likelihood & Prior Plot



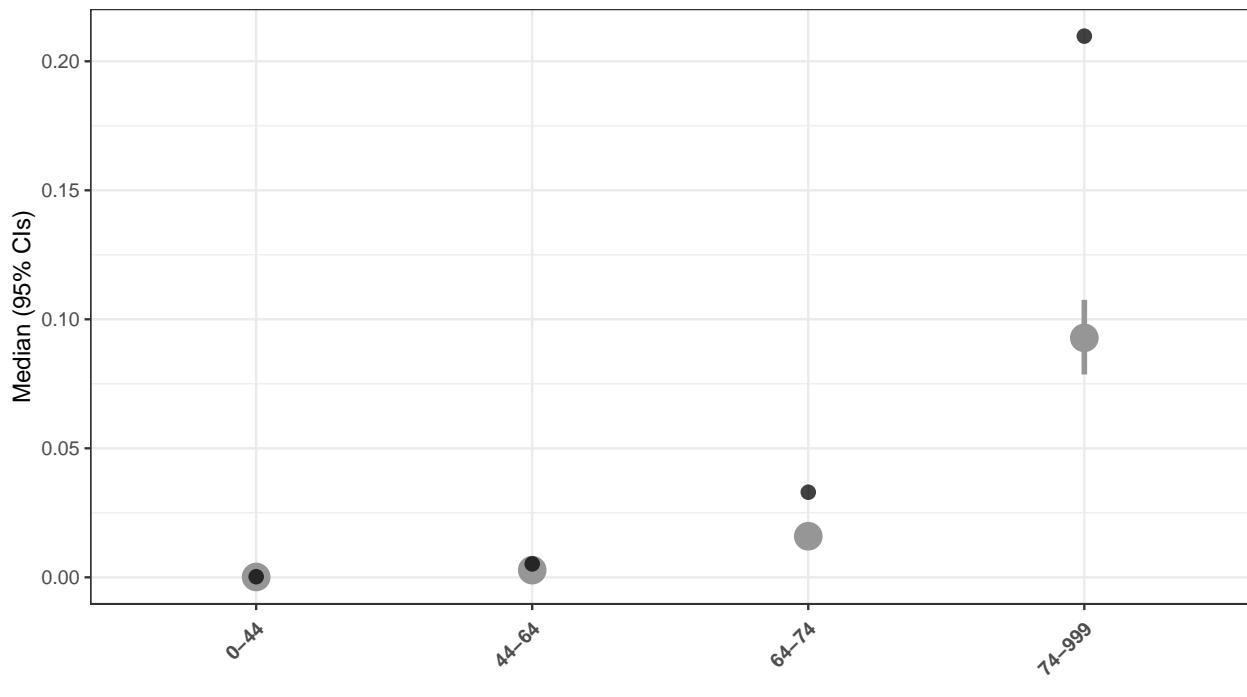
Metropolis Coupling Acceptance Plot



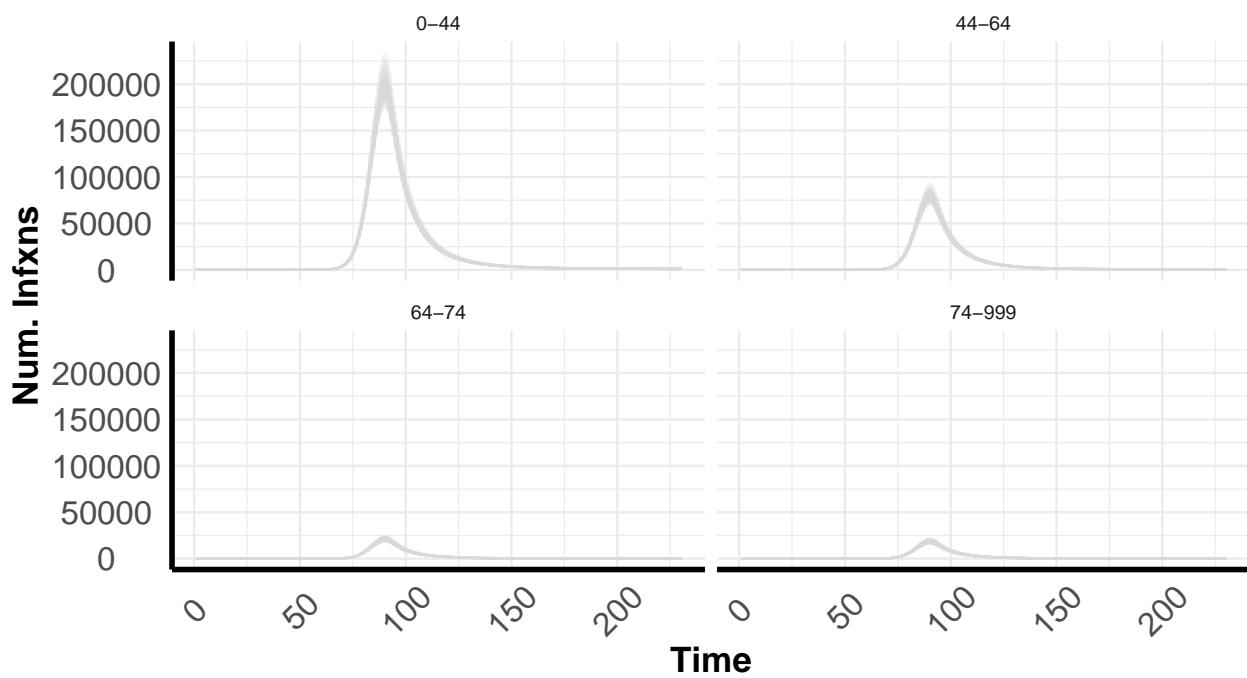
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



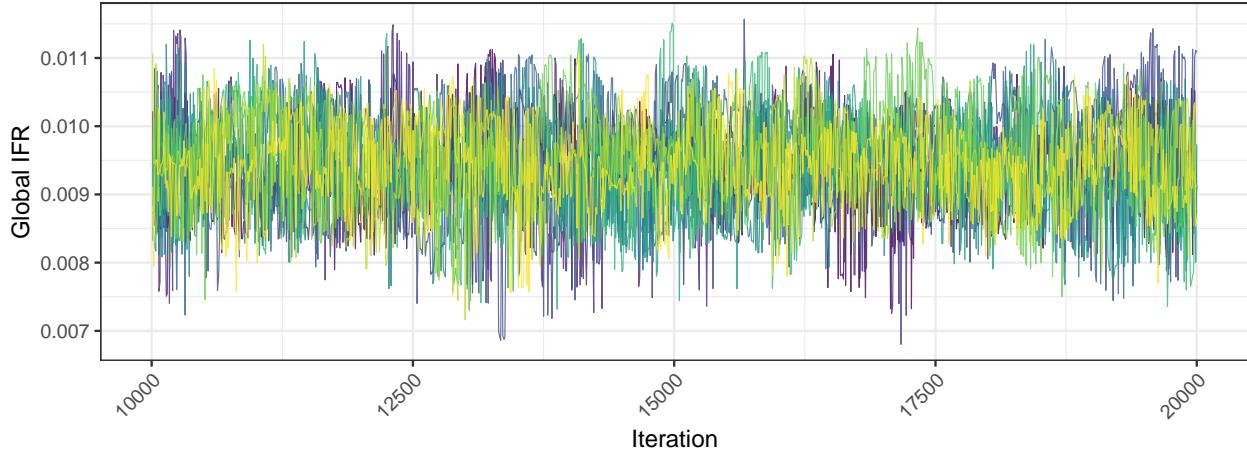
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-44	ma1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	911.4732	-0.3029	0.3811
44-64	ma2	0.0021	0.0024	0.0028	0.0028	0.0031	0.0034	575.8410	0.0245	0.3988
64-74	ma3	0.0115	0.0135	0.0159	0.0159	0.0182	0.0202	731.2081	0.2401	0.3876
74-999	ma4	0.0660	0.0786	0.0928	0.0929	0.1075	0.1162	580.1270	-1.0113	0.2392

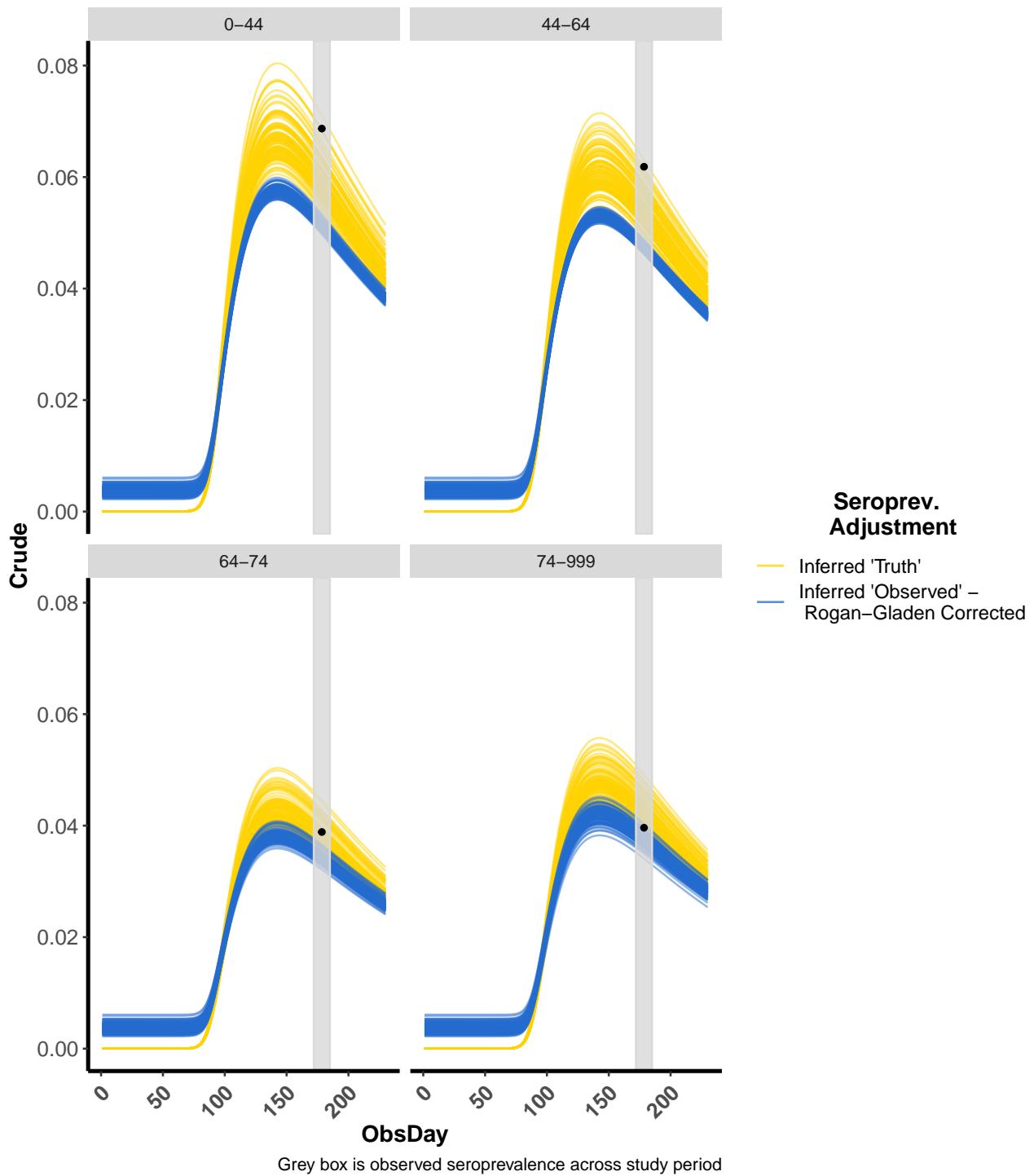
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0068	0.0081	0.0094	0.0094	0.0108	0.0116	4368.168	-1.0091	0.2398

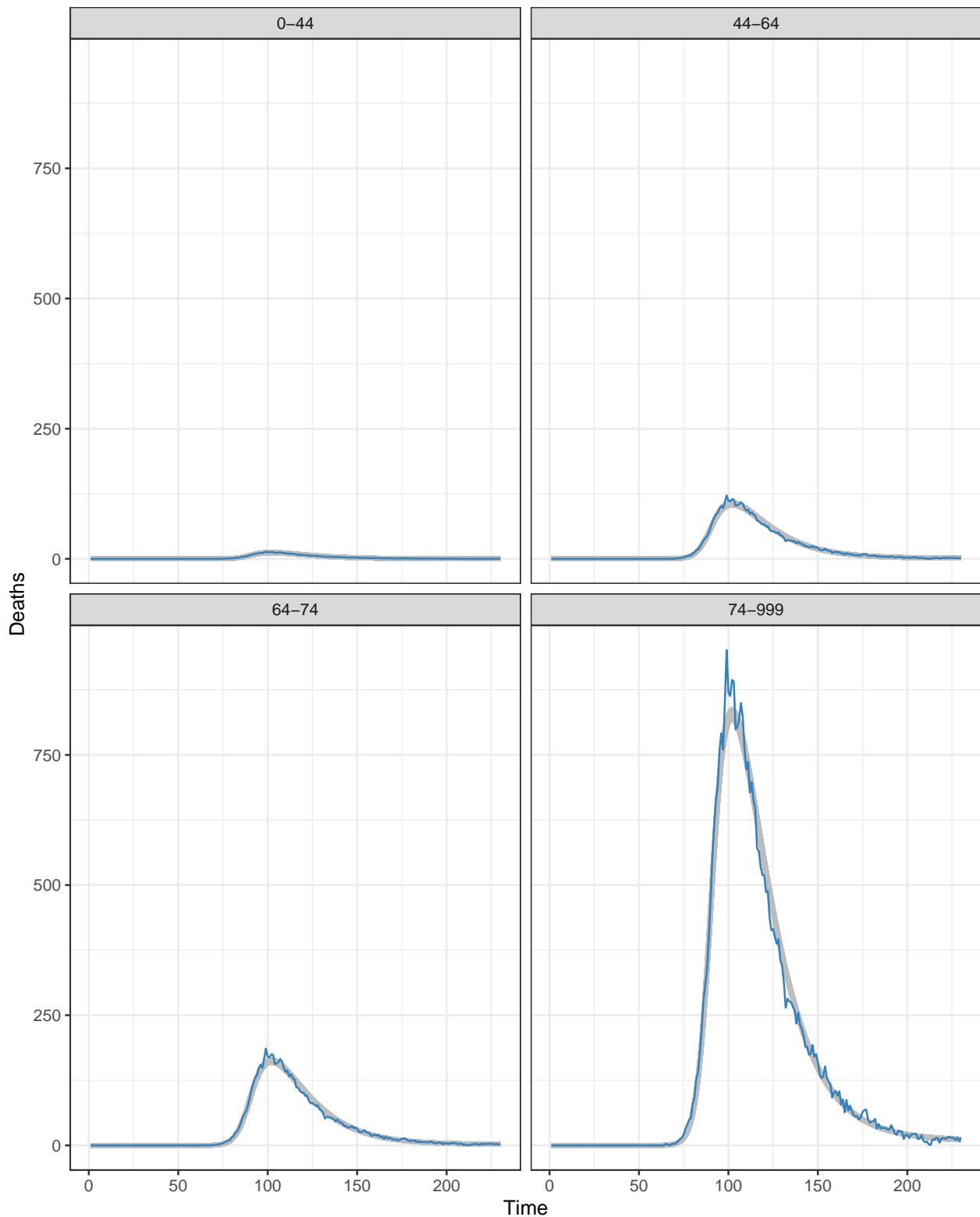
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0073	0.0082	0.0094	0.0094	0.0107	0.0111	146.3150	-0.5755	0.3380
chain2	0.0072	0.0077	0.0094	0.0094	0.0109	0.0115	270.9386	1.4873	0.1320
chain3	0.0068	0.0077	0.0094	0.0094	0.0109	0.0116	33.0330	-5.3885	0.0000
chain4	0.0072	0.0083	0.0098	0.0097	0.0109	0.0113	248.1915	-2.4171	0.0215
chain5	0.0076	0.0081	0.0093	0.0093	0.0105	0.0112	128.1075	0.1858	0.3921
chain6	0.0074	0.0080	0.0094	0.0094	0.0107	0.0113	105.1624	0.2508	0.3866
chain7	0.0073	0.0079	0.0093	0.0093	0.0109	0.0115	48.9079	2.9971	0.0045
chain8	0.0075	0.0083	0.0097	0.0096	0.0110	0.0114	163.7948	-0.8629	0.2749
chain9	0.0072	0.0082	0.0095	0.0095	0.0107	0.0112	71.1461	1.3937	0.1510
chain10	0.0076	0.0081	0.0094	0.0094	0.0106	0.0110	176.3460	-1.9312	0.0618



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



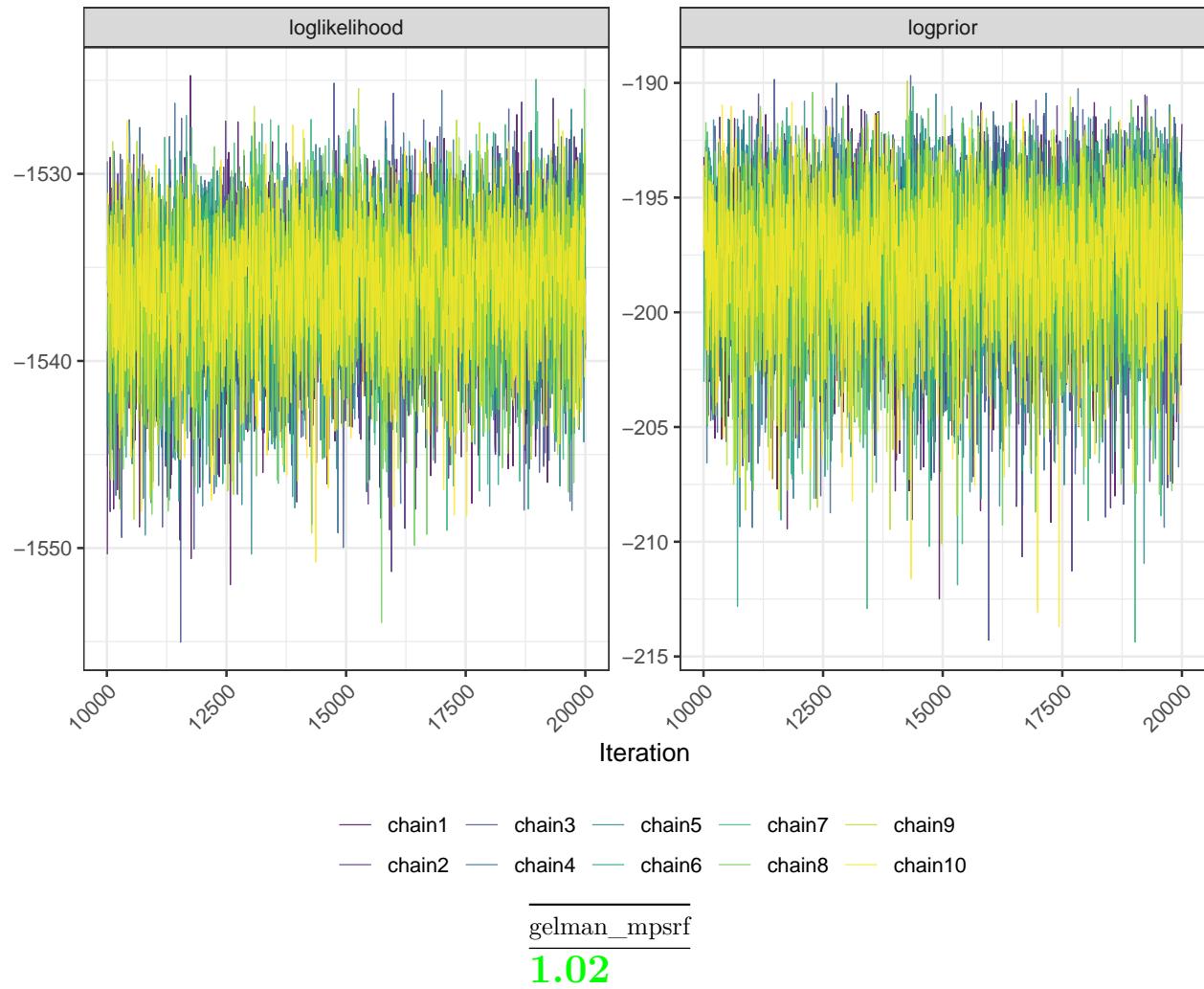
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.2690	4.0696	51.6540	50.6784	62.7258	67.5518	497.4740	-1.2024	0.1936
x2	88.1940	90.1453	92.0466	91.9694	93.3503	94.2628	904.2994	0.5008	0.3519
x3	93.6732	94.5318	95.8418	95.9083	97.7174	99.3601	424.4356	-1.3630	0.1576
x4	214.0015	214.1037	216.8379	217.8324	225.7923	229.9740	363.8457	-0.6236	0.3284
y1	0.0001	0.0592	1.3207	1.4780	3.7810	5.9840	4188.9558	-0.4394	0.3622
y2	0.0001	0.2074	2.9493	3.0504	6.5826	8.0911	499.9693	1.5588	0.1184
y3	12.3634	12.4575	12.5933	12.5978	12.7574	12.8790	536.0673	-0.1048	0.3968
y4	11.9082	12.0619	12.2667	12.2641	12.4655	12.6339	582.1021	1.2460	0.1836
y5	7.0900	7.2730	7.4726	7.4731	7.6810	7.8761	924.5816	0.0577	0.3983
Ne1	1.0362	1.1208	1.1891	1.1887	1.2556	1.3144	2283.6871	2.1751	0.0375
Ne2	0.9694	1.0229	1.0862	1.0861	1.1494	1.2124	2986.1934	2.4095	0.0219
Ne3	0.6385	0.6970	0.7595	0.7595	0.8244	0.8775	2343.0836	0.7695	0.2967
Ne4	0.7084	0.7646	0.8420	0.8429	0.9227	1.0064	1011.5156	2.8503	0.0069

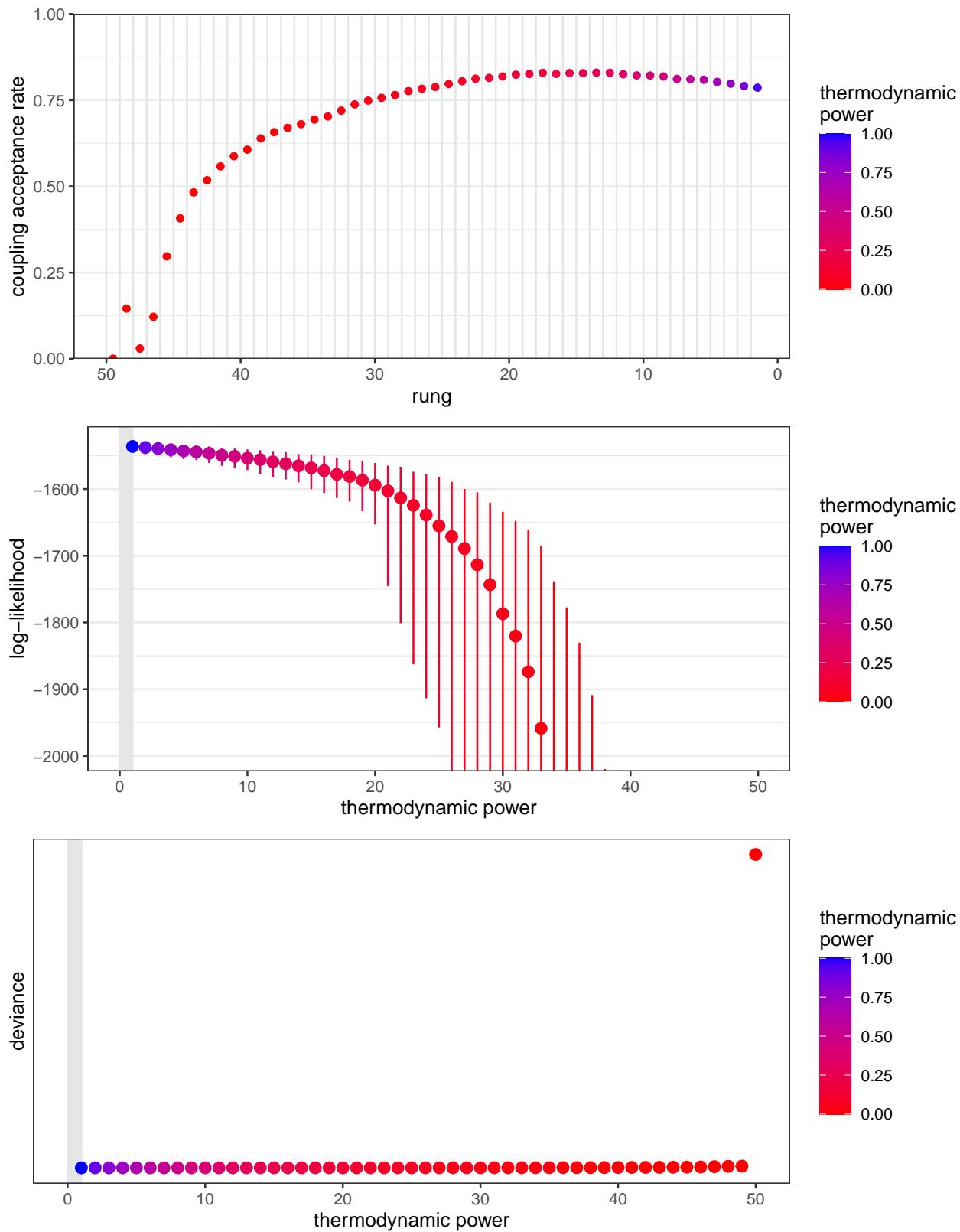
ITA1 with the Potential for Seroreversion Included

Fit Diagnostics

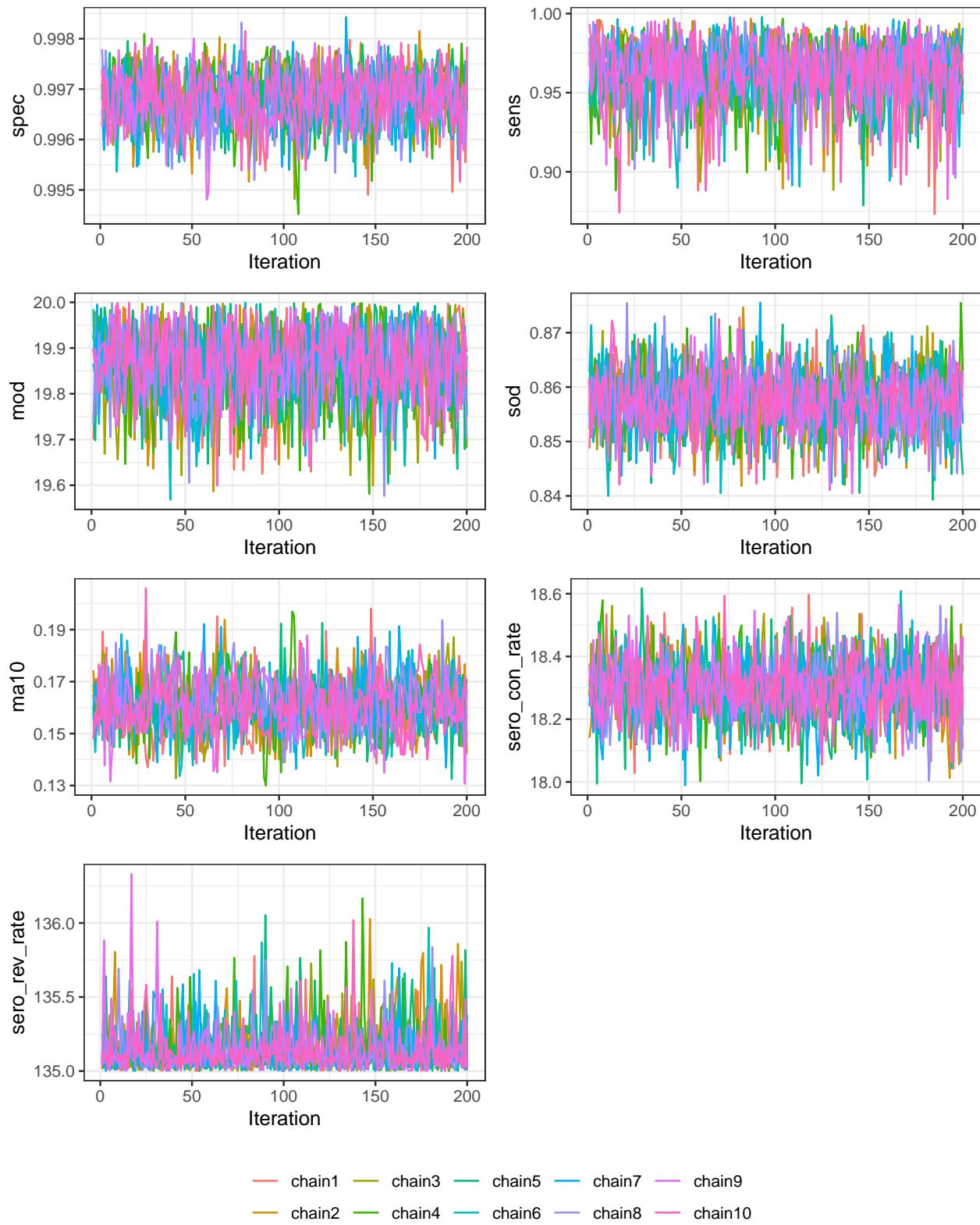
Log Likelihood & Prior Plot



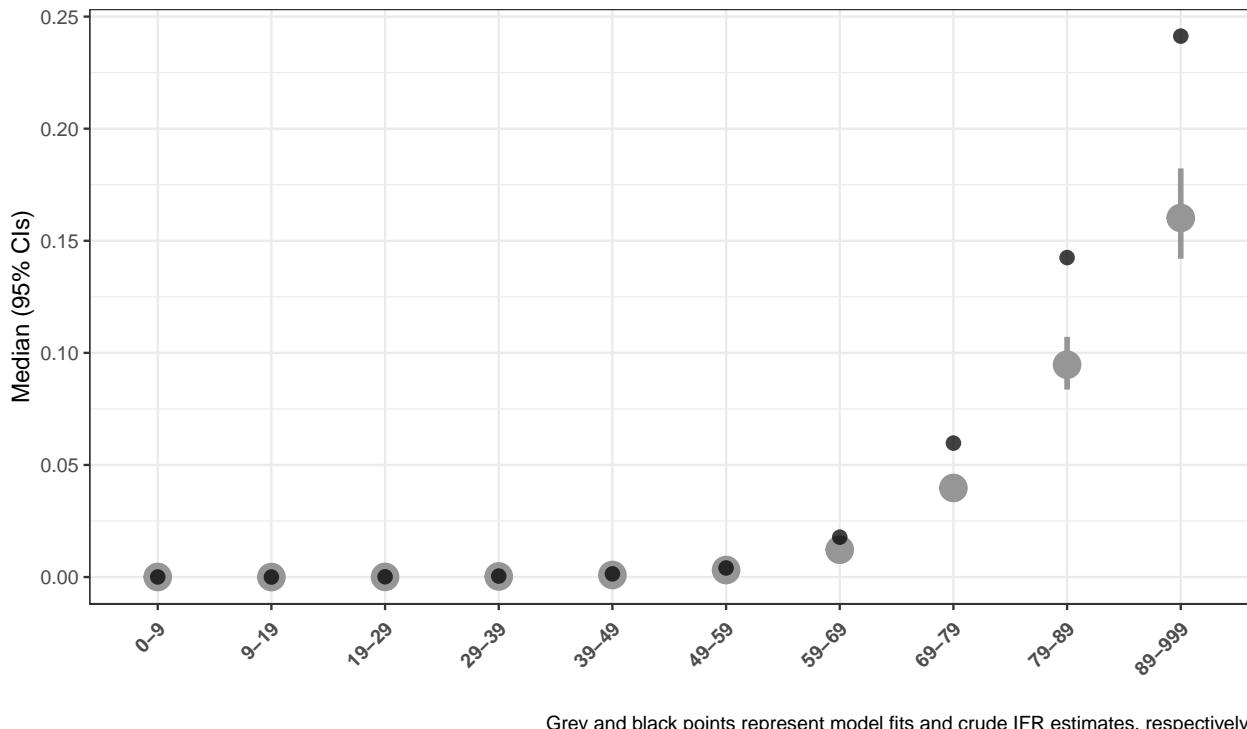
Metropolis Coupling Acceptance Plot



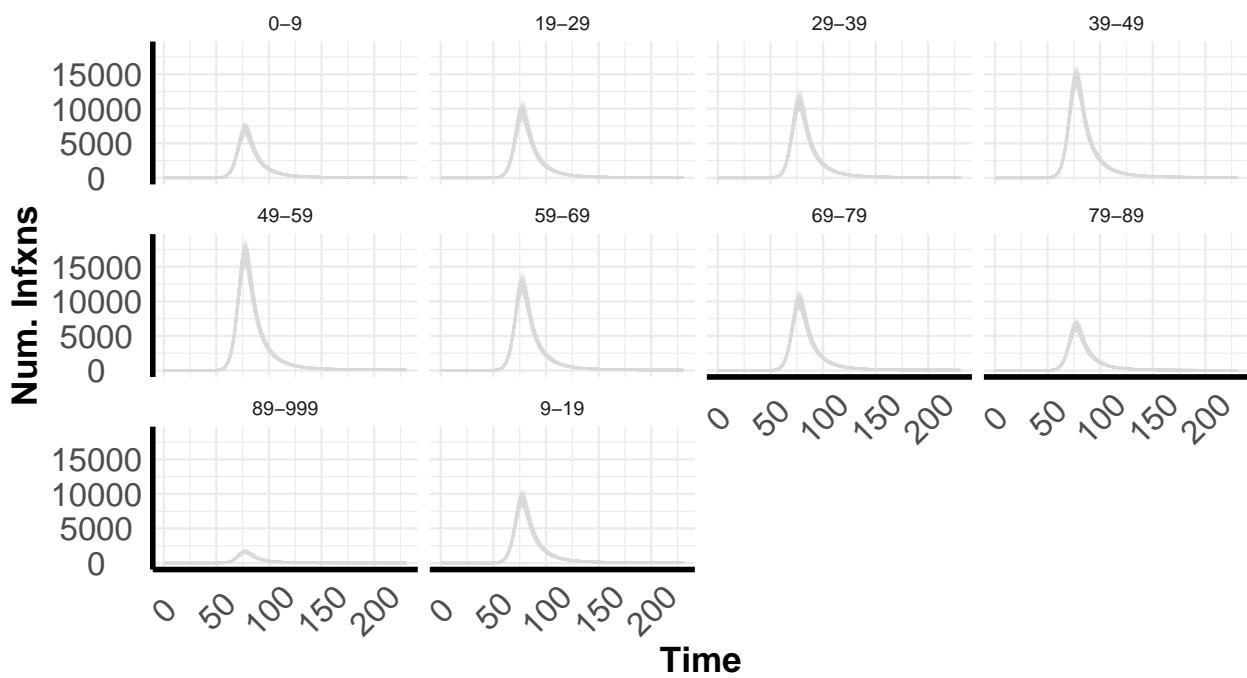
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



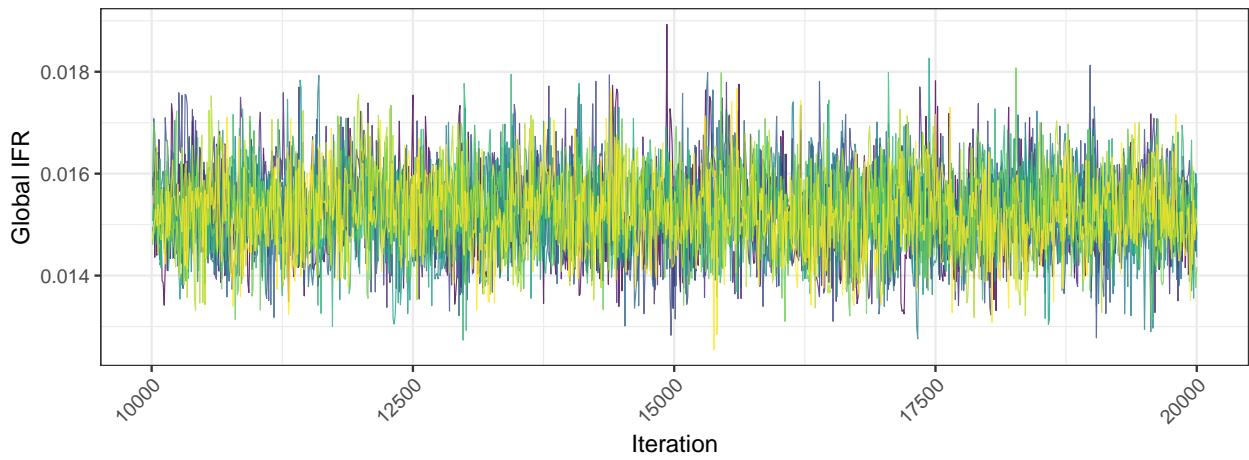
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-9	ma1	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	10000.000	-1.5497	0.1201
9-19	ma2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	9230.554	-1.4622	0.1370
19-29	ma3	0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	9240.421	-0.9231	0.2605
29-39	ma4	0.0001	0.0002	0.0003	0.0003	0.0003	0.0004	7387.110	-0.1231	0.3959
39-49	ma5	0.0007	0.0008	0.0009	0.0009	0.0011	0.0012	4507.214	-0.4467	0.3611
49-59	ma6	0.0025	0.0027	0.0031	0.0031	0.0035	0.0041	3105.344	-0.0140	0.3989
59-69	ma7	0.0095	0.0107	0.0122	0.0122	0.0138	0.0166	2718.064	-0.4378	0.3625
69-79	ma8	0.0305	0.0350	0.0397	0.0398	0.0449	0.0501	3126.411	-0.7796	0.2944
79-89	ma9	0.0750	0.0836	0.0947	0.0949	0.1071	0.1217	1964.934	-0.9315	0.2585
89-999	ma10	0.1293	0.1420	0.1602	0.1607	0.1823	0.2182	1635.021	-1.3270	0.1654

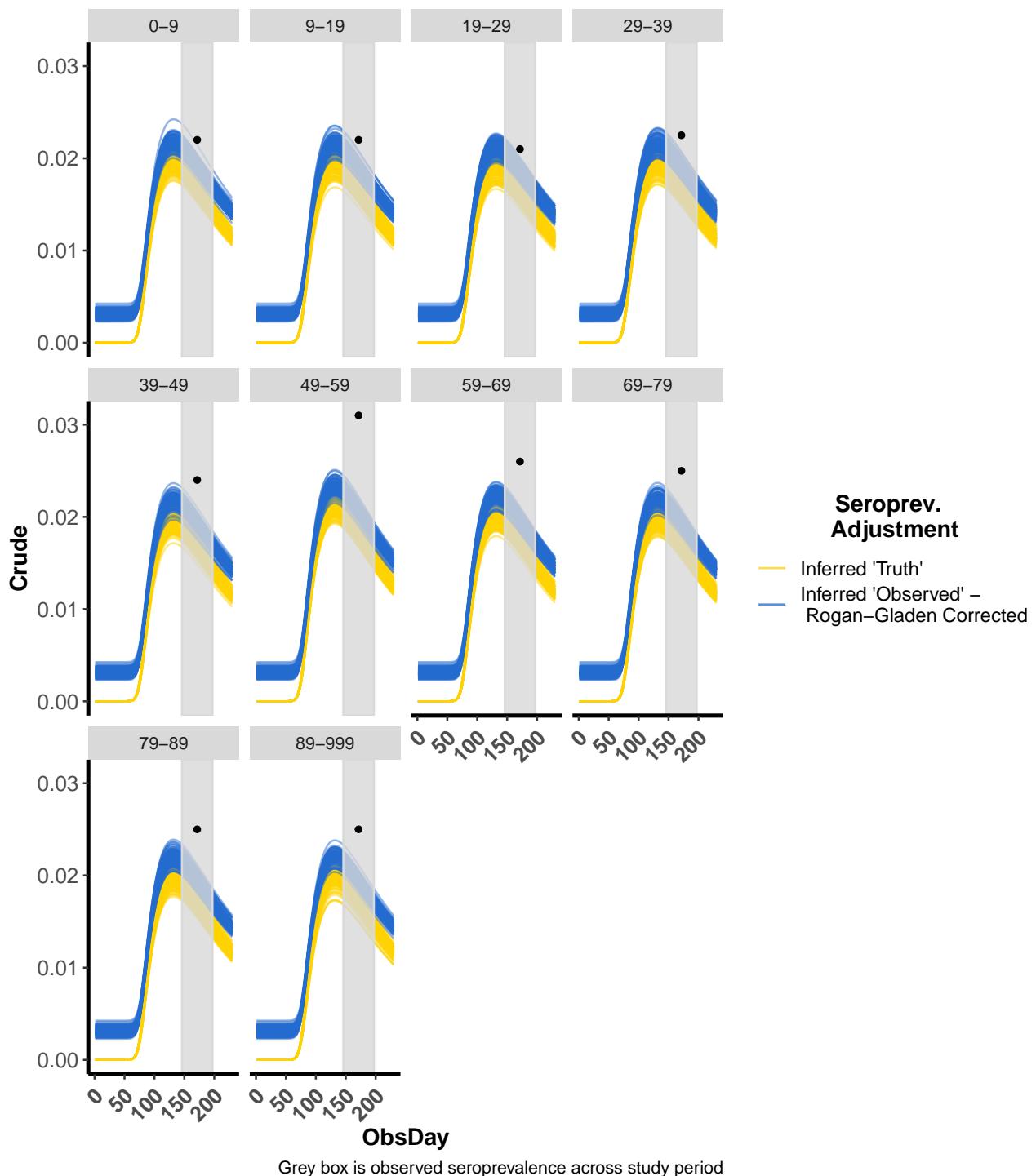
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0125	0.0138	0.0152	0.0153	0.0168	0.0189	3511.288	1.4739	0.1346

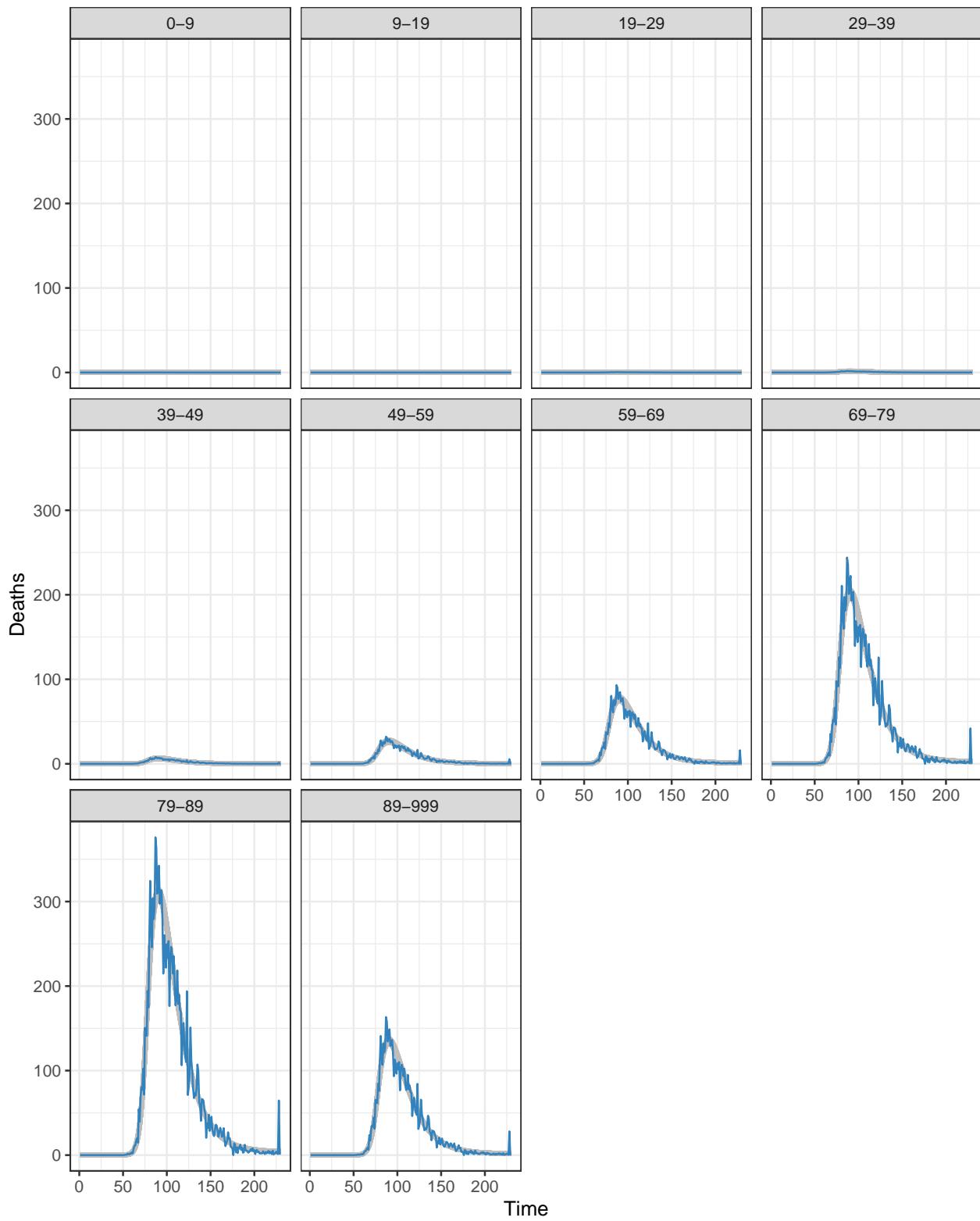
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0132	0.0138	0.0152	0.0152	0.0171	0.0189	234.1361	0.5732	0.3385
chain2	0.0133	0.0138	0.0153	0.0153	0.0169	0.0178	164.9305	4.2083	0.0001
chain3	0.0128	0.0137	0.0153	0.0153	0.0169	0.0181	107.6638	1.9993	0.0541
chain4	0.0130	0.0138	0.0152	0.0152	0.0167	0.0180	165.0336	-1.6091	0.1093
chain5	0.0128	0.0139	0.0153	0.0153	0.0167	0.0179	202.9742	-0.4743	0.3565
chain6	0.0130	0.0139	0.0152	0.0152	0.0165	0.0183	372.1503	1.4566	0.1381
chain7	0.0127	0.0139	0.0152	0.0152	0.0168	0.0180	446.2594	-1.6432	0.1034
chain8	0.0131	0.0137	0.0153	0.0153	0.0169	0.0181	626.9370	0.3079	0.3805
chain9	0.0132	0.0138	0.0153	0.0153	0.0168	0.0176	189.7829	0.3492	0.3753
chain10	0.0125	0.0137	0.0152	0.0152	0.0167	0.0177	378.8572	0.6393	0.3252



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



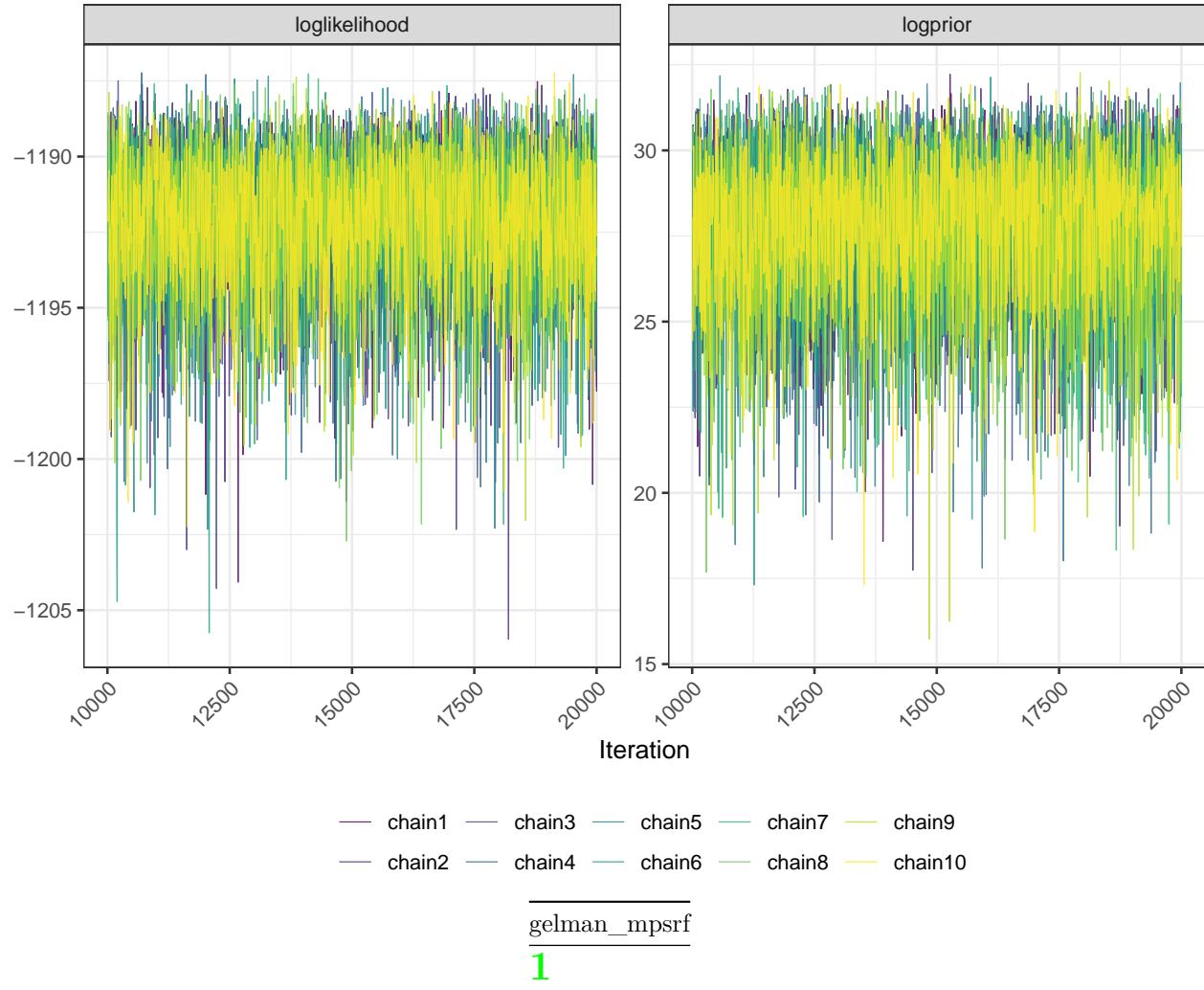
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.3819	2.6180	33.1045	28.6749	44.5319	52.6531	355.0869	-1.7453	0.0870
x2	67.5511	71.0705	76.9811	76.5617	79.8736	81.1436	356.8080	-0.2584	0.3858
x3	81.0977	82.4959	85.1547	85.3546	89.0616	91.7128	311.0399	0.4229	0.3648
x4	214.0099	221.0673	228.1682	227.4362	229.9183	230.0000	1307.3239	-0.2488	0.3868
y1	0.0001	0.0510	1.3218	1.5491	3.9386	5.2096	990.4700	4.0335	0.0001
y2	0.0001	0.0249	0.8889	1.1839	3.8733	6.1874	1668.0356	0.1404	0.3950
y3	10.4934	11.0785	11.4621	11.4353	11.5720	11.6510	612.3802	0.3356	0.3771
y4	10.4257	10.6853	11.0034	10.9906	11.2353	11.3804	329.5234	-0.2591	0.3858
y5	5.8646	6.1038	6.3322	6.3316	6.5465	6.7597	3810.5938	-0.4241	0.3646
Ne1	0.7795	0.8898	0.9837	0.9839	1.0773	1.1556	9662.7584	0.4420	0.3618
Ne10	0.8420	0.9145	1.0025	1.0025	1.0866	1.1722	2116.5297	1.1823	0.1983
Ne2	0.8047	0.8920	0.9849	0.9847	1.0792	1.1734	9283.9150	0.3667	0.3730
Ne3	0.7968	0.8737	0.9614	0.9618	1.0511	1.1528	9408.6505	1.6834	0.0967
Ne4	0.8020	0.8872	0.9749	0.9747	1.0617	1.1460	8996.9277	0.0341	0.3987
Ne5	0.8360	0.9048	0.9913	0.9914	1.0785	1.1581	8177.0531	-1.8137	0.0770
Ne6	0.9237	0.9936	1.0761	1.0765	1.1594	1.2307	6659.0496	-2.4246	0.0211
Ne7	0.8266	0.9274	1.0127	1.0133	1.1028	1.1731	5246.8617	-0.7200	0.3078
Ne8	0.8075	0.9139	1.0017	1.0028	1.0920	1.1702	3842.7633	-0.0536	0.3984
Ne9	0.8495	0.9149	1.0024	1.0025	1.0928	1.1672	3041.9165	-0.0506	0.3984

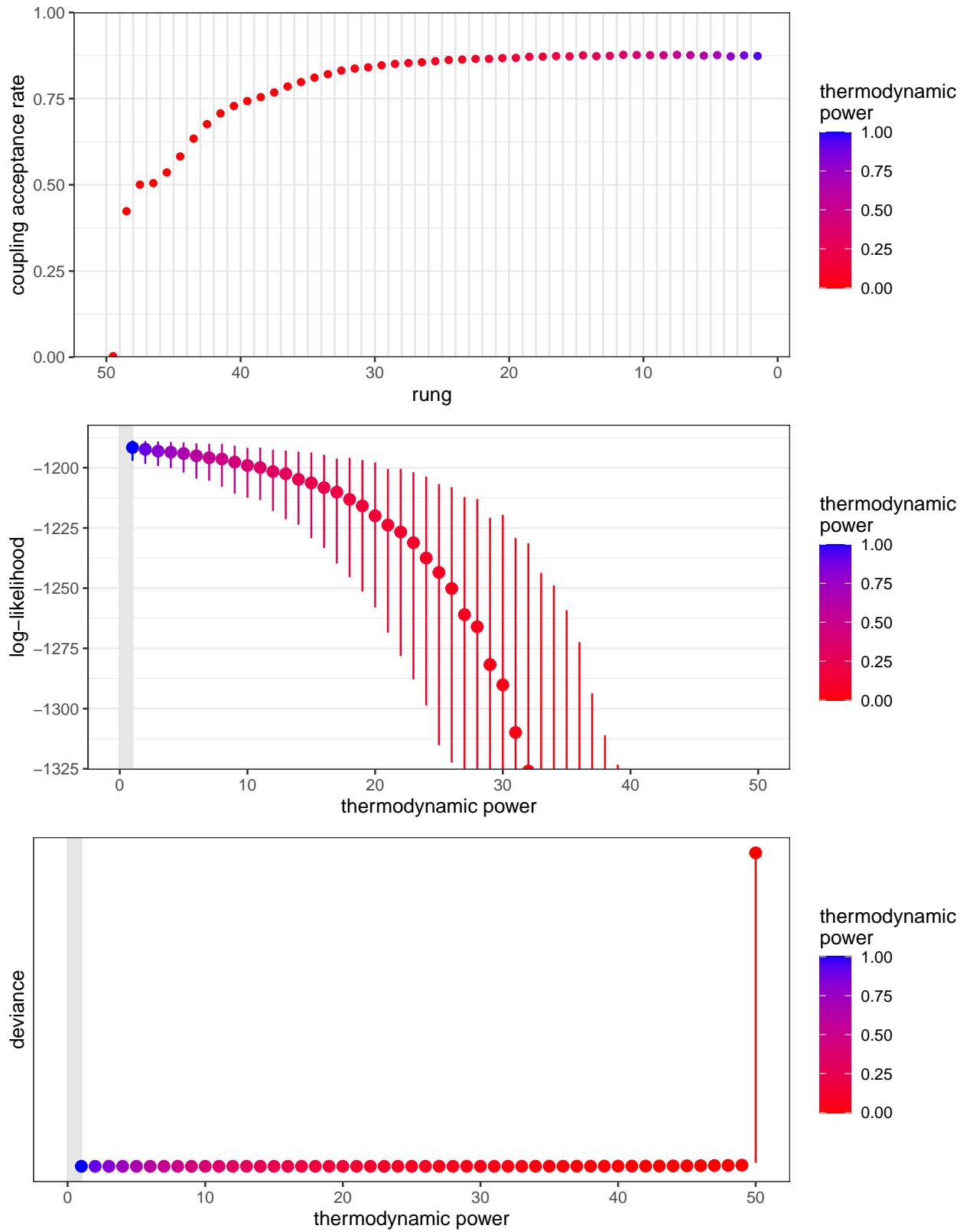
LA_CA1 with the Potential for Seroreversion Included

Fit Diagnostics

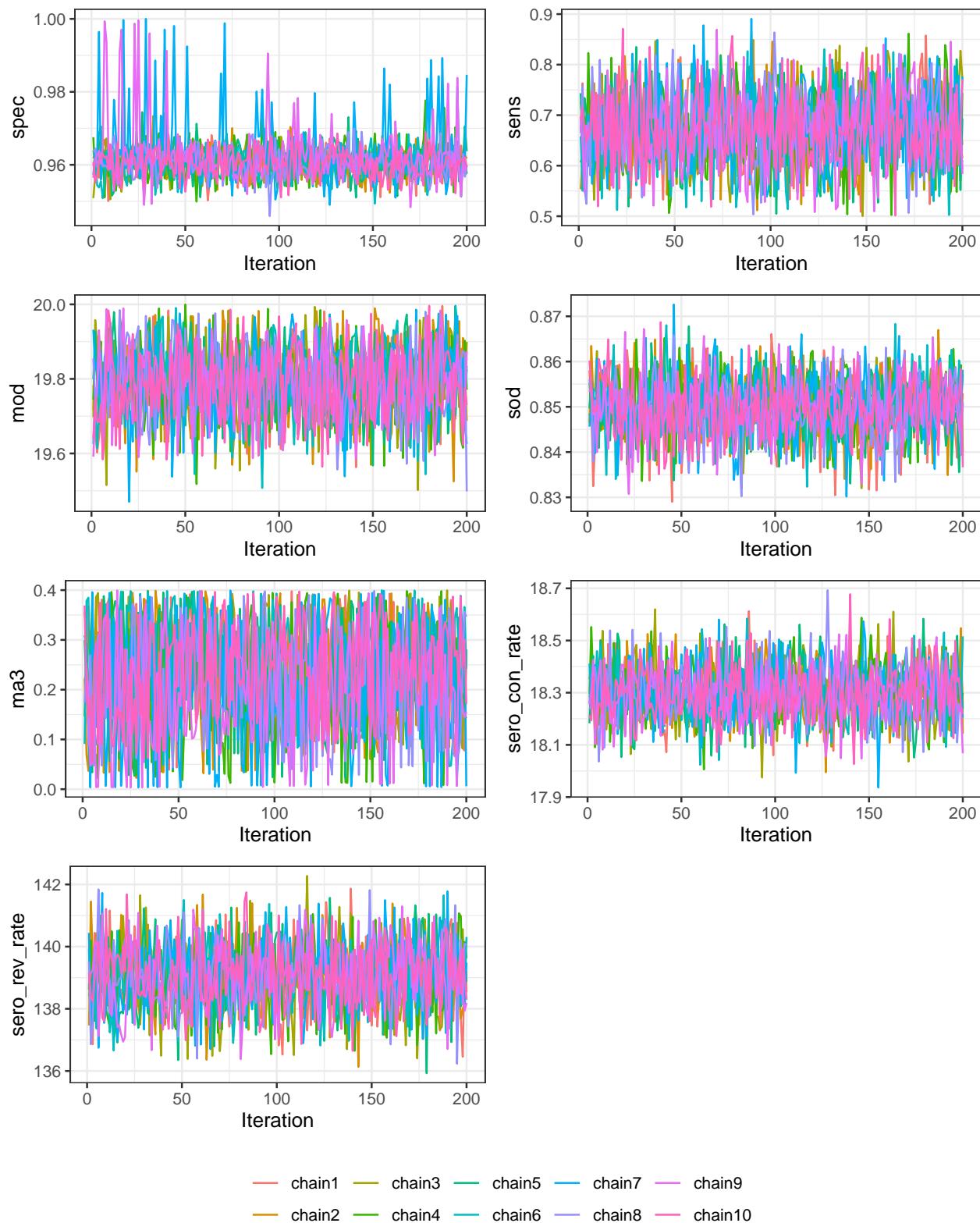
Log Likelihood & Prior Plot



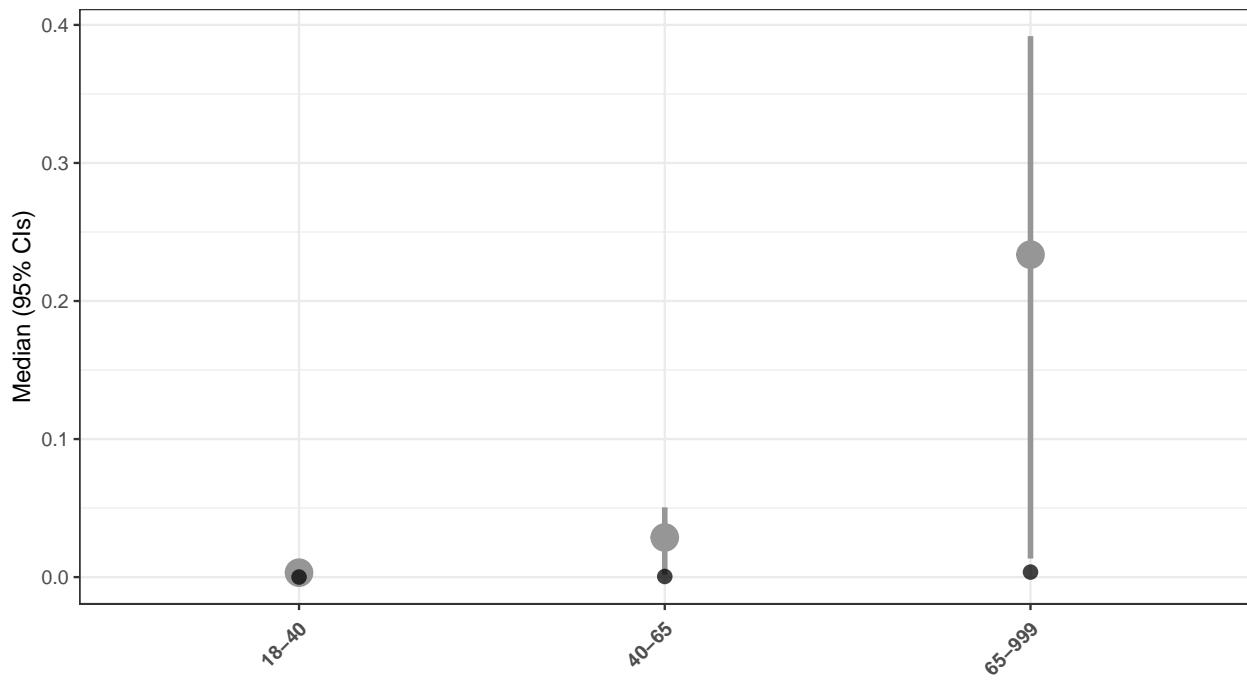
Metropolis Coupling Acceptance Plot



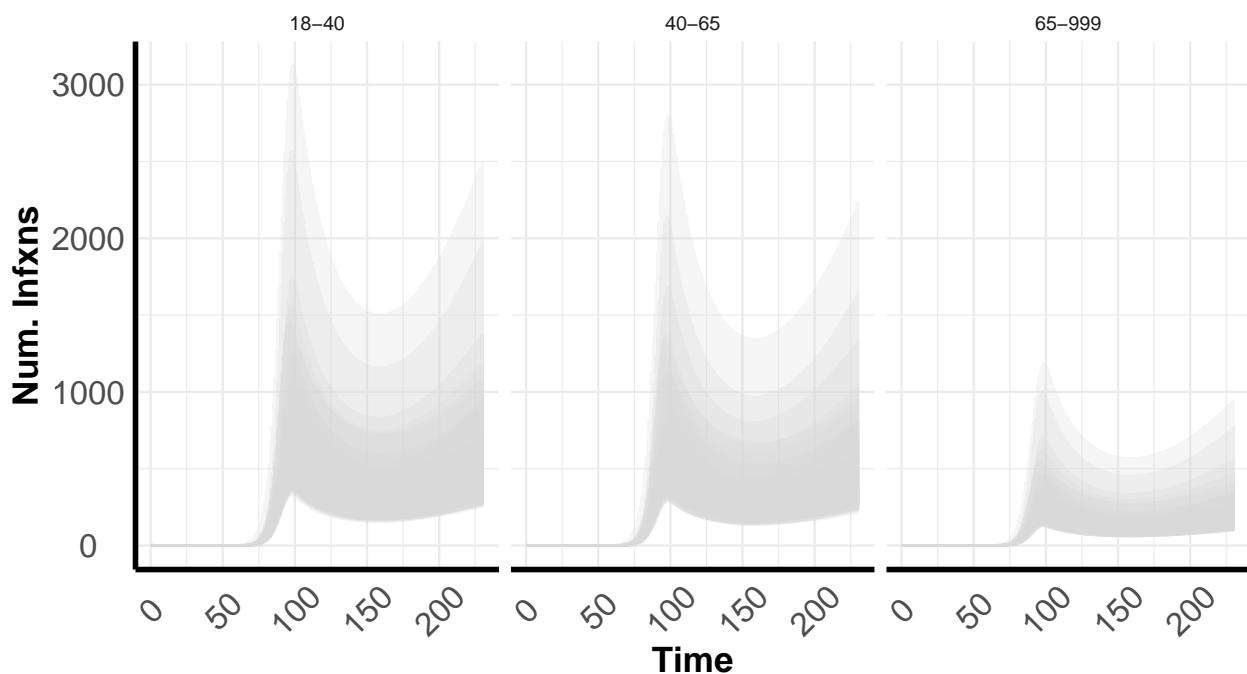
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



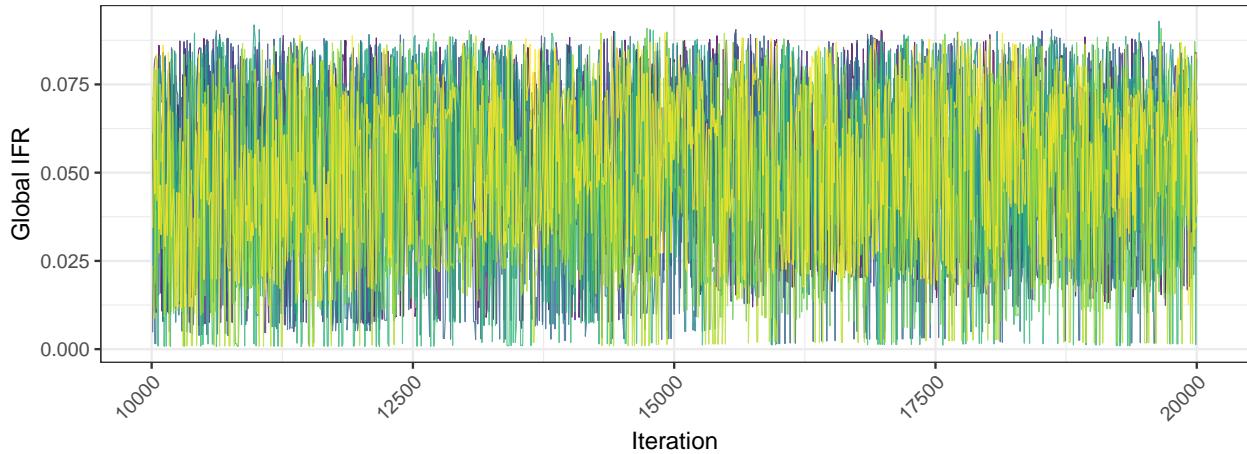
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
18-40	ma1	0.0000	0.0002	0.0032	0.0031	0.0058	0.0074	1899.285	2.0421	0.0496
40-65	ma2	0.0004	0.0017	0.0287	0.0279	0.0505	0.0613	1805.352	2.2199	0.0339
65-999	ma3	0.0034	0.0134	0.2336	0.2254	0.3919	0.3999	1705.410	2.1695	0.0379

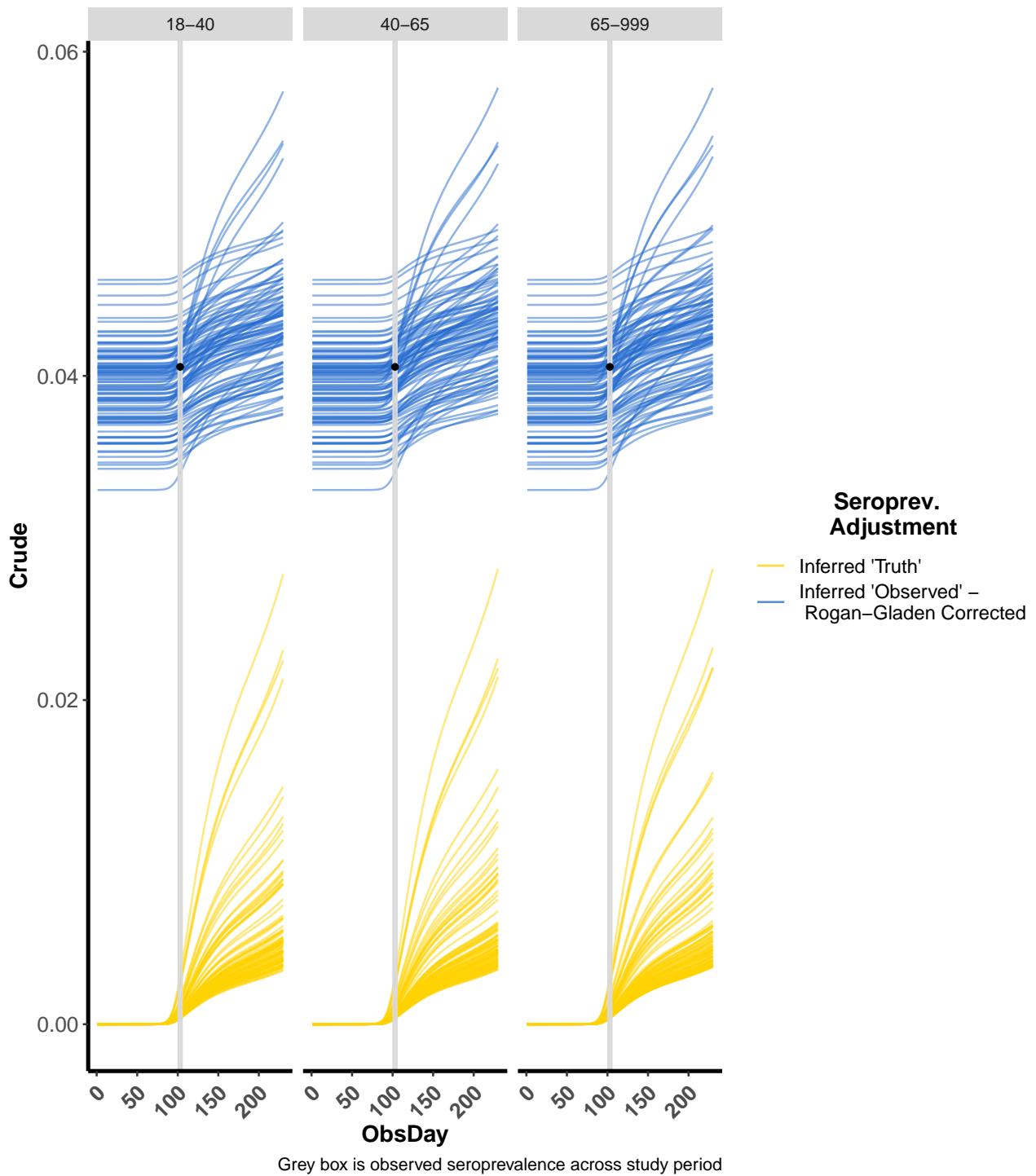
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
7e-04	0.003	0.0516	0.0497	0.0865	0.0929	5532.051	-3.0024	0.0044

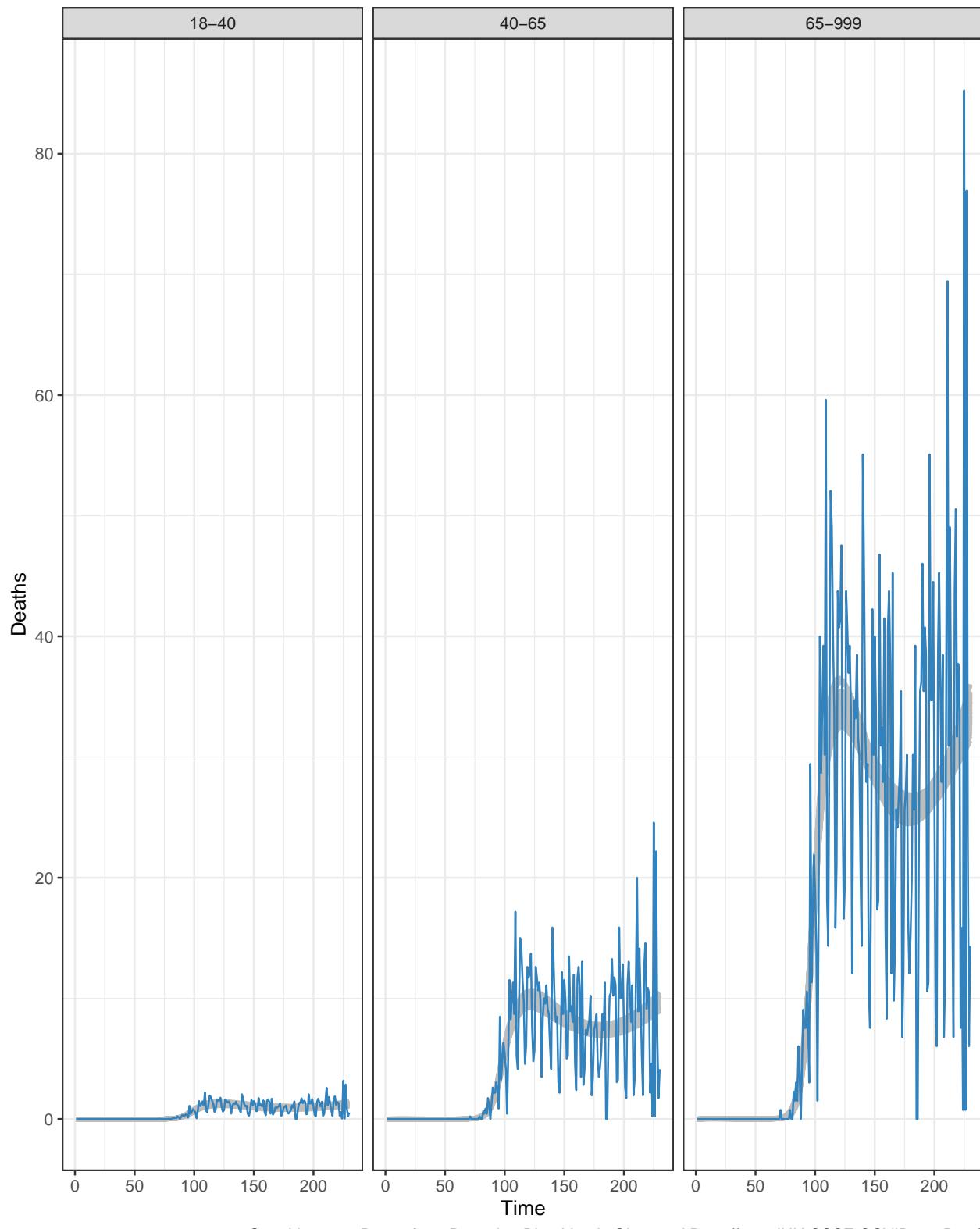
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0081	0.0119	0.0539	0.0519	0.0867	0.0903	665.8605	3.6502	0.0005
chain2	0.0047	0.0076	0.0501	0.0487	0.0866	0.0905	225.7228	0.2356	0.3880
chain3	0.0048	0.0145	0.0570	0.0536	0.0866	0.0901	669.8400	0.9047	0.2650
chain4	0.0014	0.0025	0.0453	0.0449	0.0867	0.0905	279.7534	-3.5751	0.0007
chain5	0.0038	0.0064	0.0529	0.0505	0.0864	0.0905	331.1458	-0.5325	0.3462
chain6	0.0082	0.0177	0.0568	0.0552	0.0872	0.0929	506.7540	-0.8650	0.2744
chain7	0.0007	0.0009	0.0491	0.0460	0.0861	0.0902	590.7052	-2.0333	0.0505
chain8	0.0058	0.0090	0.0500	0.0480	0.0866	0.0909	857.8265	-0.8965	0.2669
chain9	0.0008	0.0010	0.0450	0.0441	0.0851	0.0895	386.9933	-2.4877	0.0181
chain10	0.0117	0.0176	0.0572	0.0540	0.0862	0.0899	344.7627	-5.0917	0.0000



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



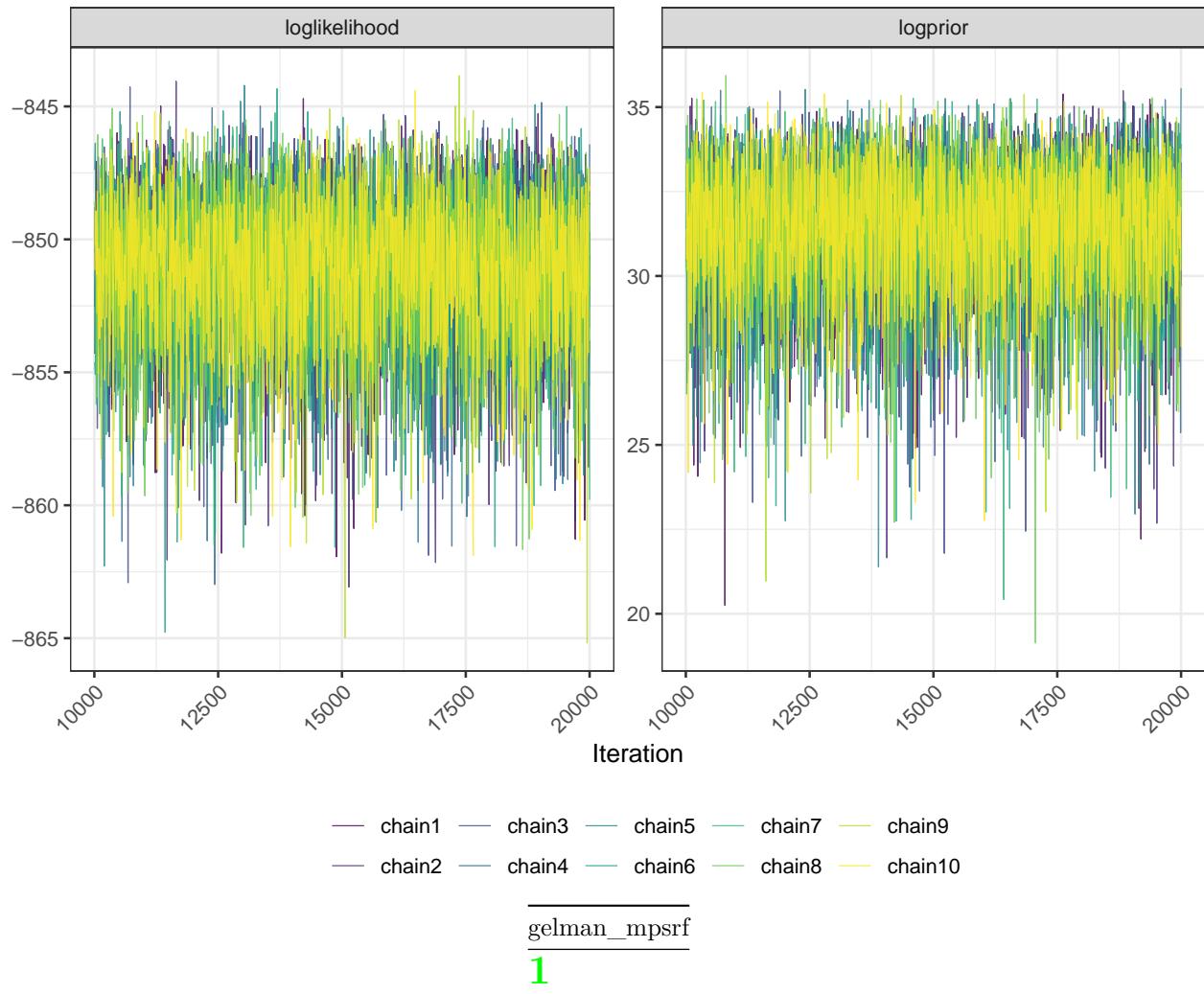
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.0571	1.7648	61.1437	49.3417	73.1205	84.8587	1476.486	-1.1259	0.2117
x2	92.0982	93.8301	96.0348	96.3047	100.0328	103.5837	6705.179	-0.4615	0.3586
x3	94.4412	97.7827	102.5145	102.5900	107.8265	112.5095	7265.875	-0.9576	0.2522
x4	214.0005	214.2012	219.1532	220.0568	229.1779	229.9988	5643.211	0.0829	0.3976
y1	0.0000	0.0302	0.8189	1.0872	3.3457	6.3477	4030.479	-1.4281	0.1439
y2	0.0001	0.0321	0.7695	1.0296	3.4140	7.9477	4232.920	-1.5030	0.1289
y3	6.4355	6.6035	7.1617	7.3947	9.9835	11.4354	1274.163	-3.8159	0.0003
y4	6.4256	6.5654	7.1192	7.3526	9.9385	11.3670	1279.998	-3.8062	0.0003
y5	6.0836	6.2877	6.8554	7.0840	9.7153	11.2953	1289.632	-3.8511	0.0002
Ne1	0.8186	0.9026	0.9986	0.9996	1.0978	1.2193	8628.697	0.4840	0.3548
Ne2	0.8089	0.9018	0.9986	0.9990	1.0980	1.1632	8545.366	0.4163	0.3658
Ne3	0.8113	0.9048	1.0021	1.0021	1.1006	1.1840	7063.284	-0.4813	0.3553

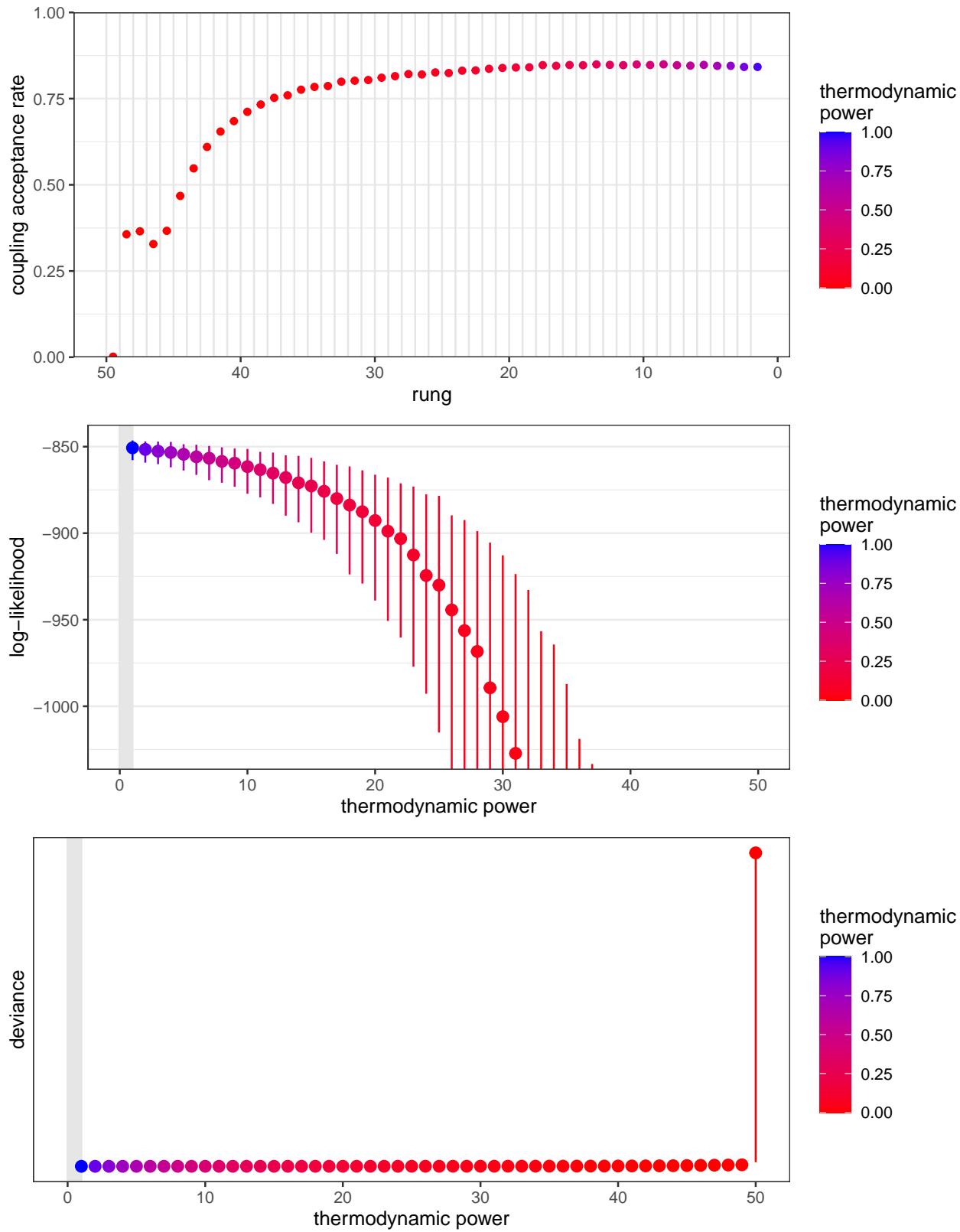
NLD1 with the Potential for Seroreversion Included

Fit Diagnostics

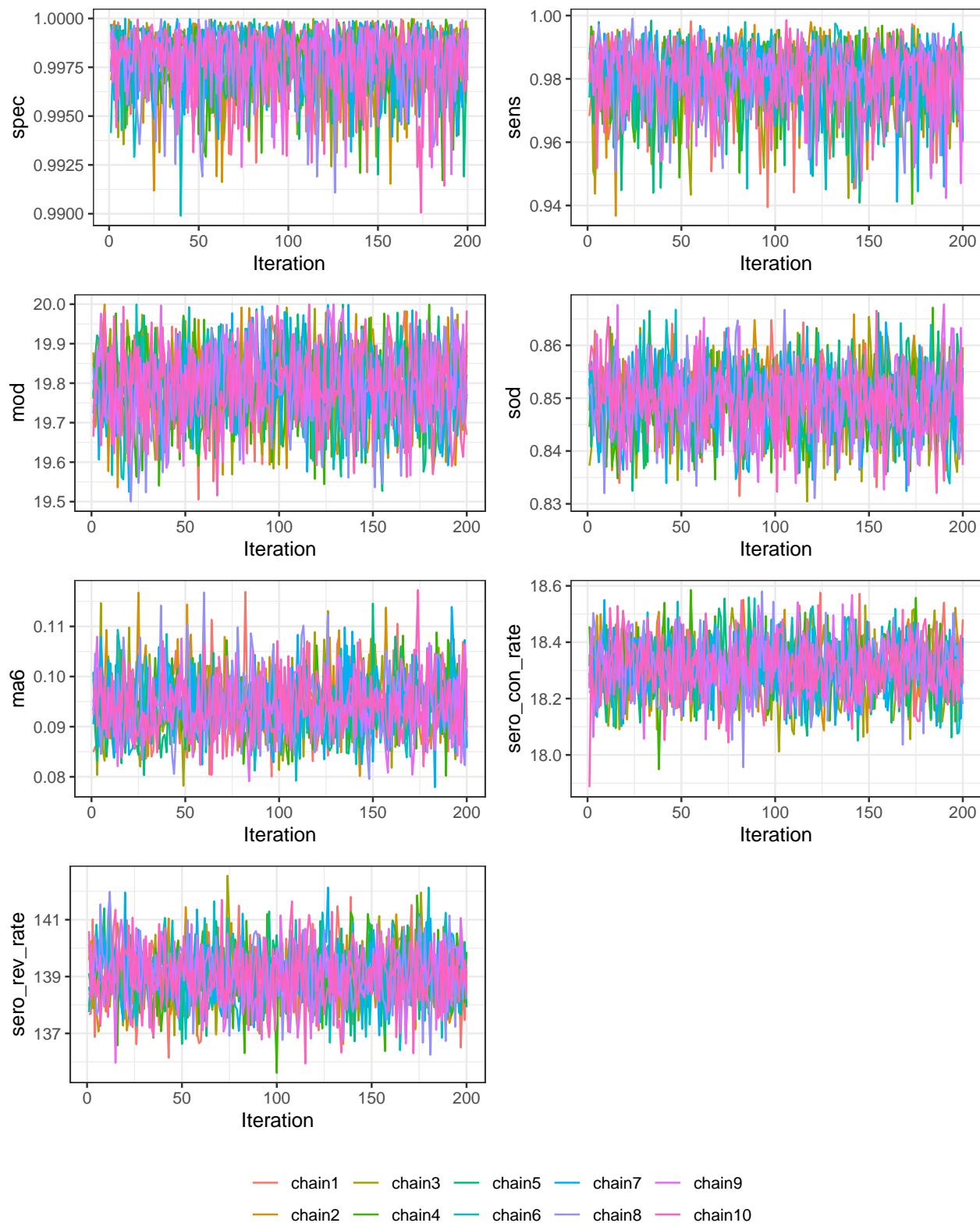
Log Likelihood & Prior Plot



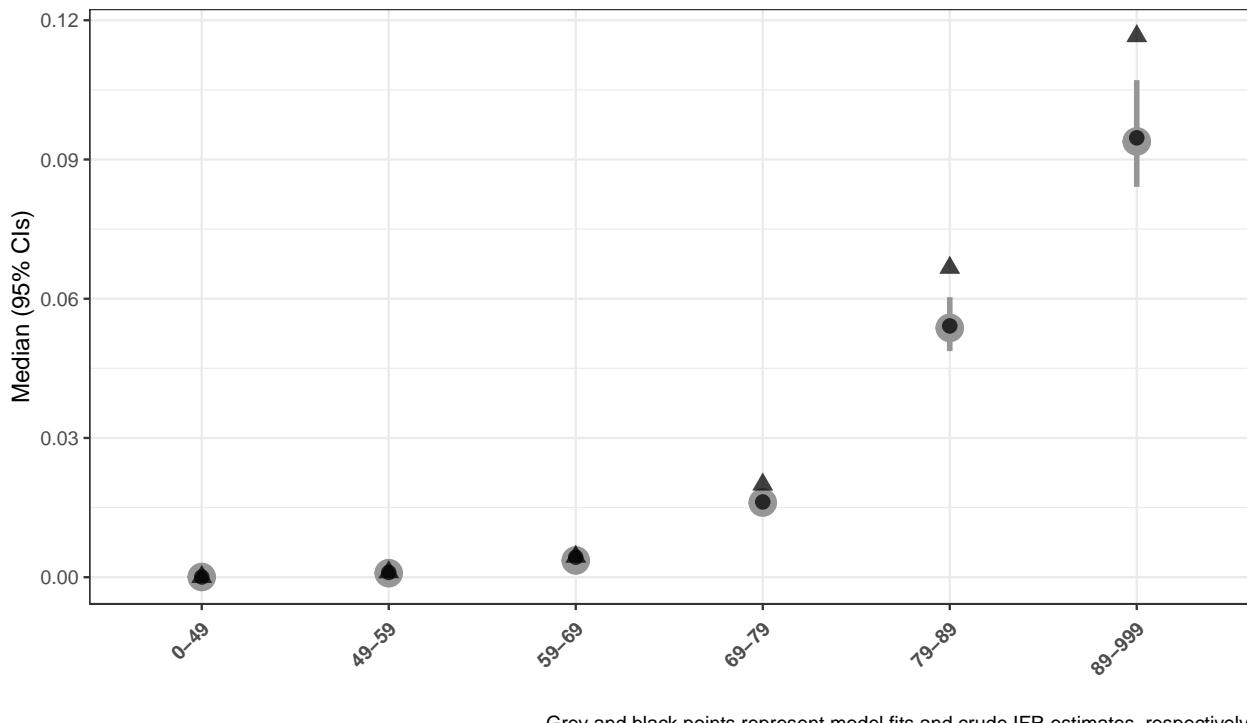
Metropolis Coupling Acceptance Plot



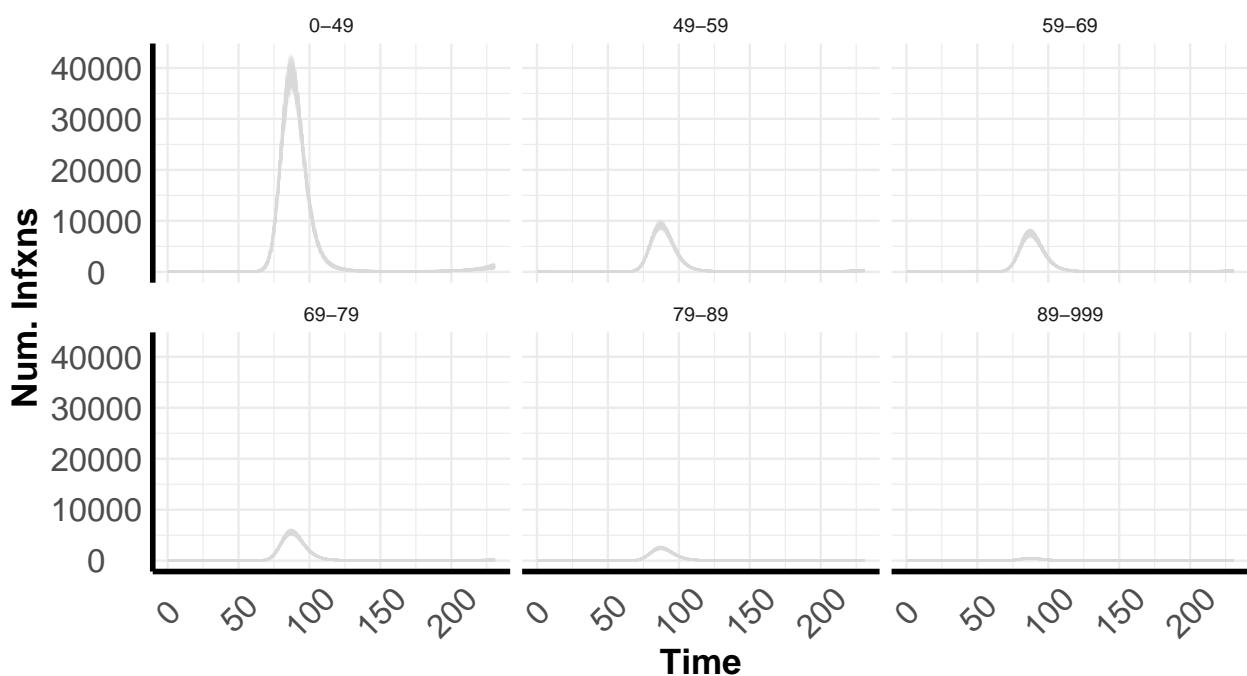
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



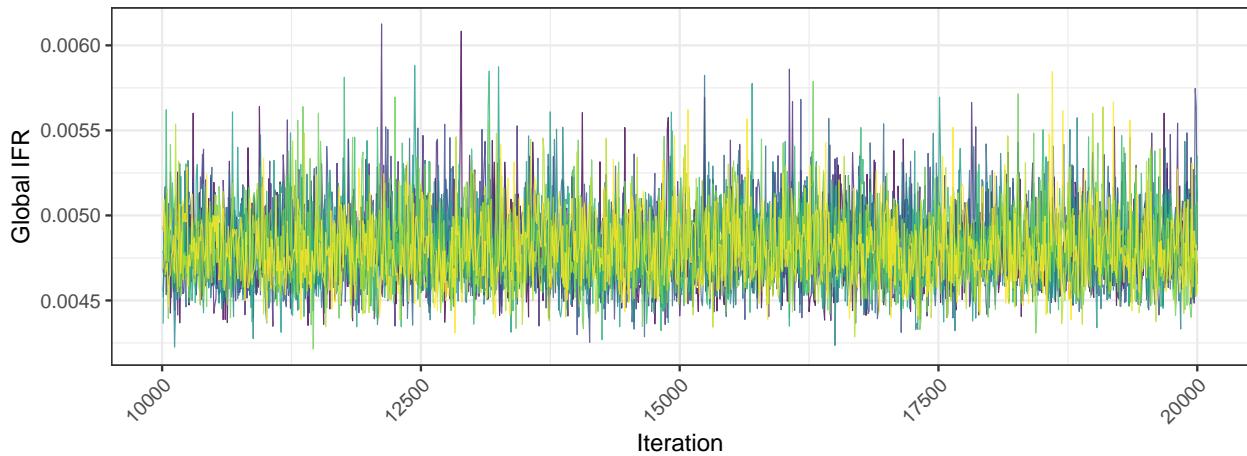
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-49	ma1	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	10000.000	-0.7008	0.3121
49-59	ma2	0.0006	0.0007	0.0009	0.0009	0.0010	0.0012	10000.000	-0.3802	0.3711
59-69	ma3	0.0029	0.0032	0.0036	0.0036	0.0042	0.0049	8453.324	-0.7418	0.3030
69-79	ma4	0.0133	0.0146	0.0161	0.0162	0.0182	0.0213	8123.481	-0.2232	0.3891
79-89	ma5	0.0444	0.0487	0.0537	0.0539	0.0603	0.0709	7032.483	-1.2793	0.1760
89-999	ma6	0.0772	0.0841	0.0939	0.0943	0.1071	0.1245	5334.899	-2.2735	0.0301

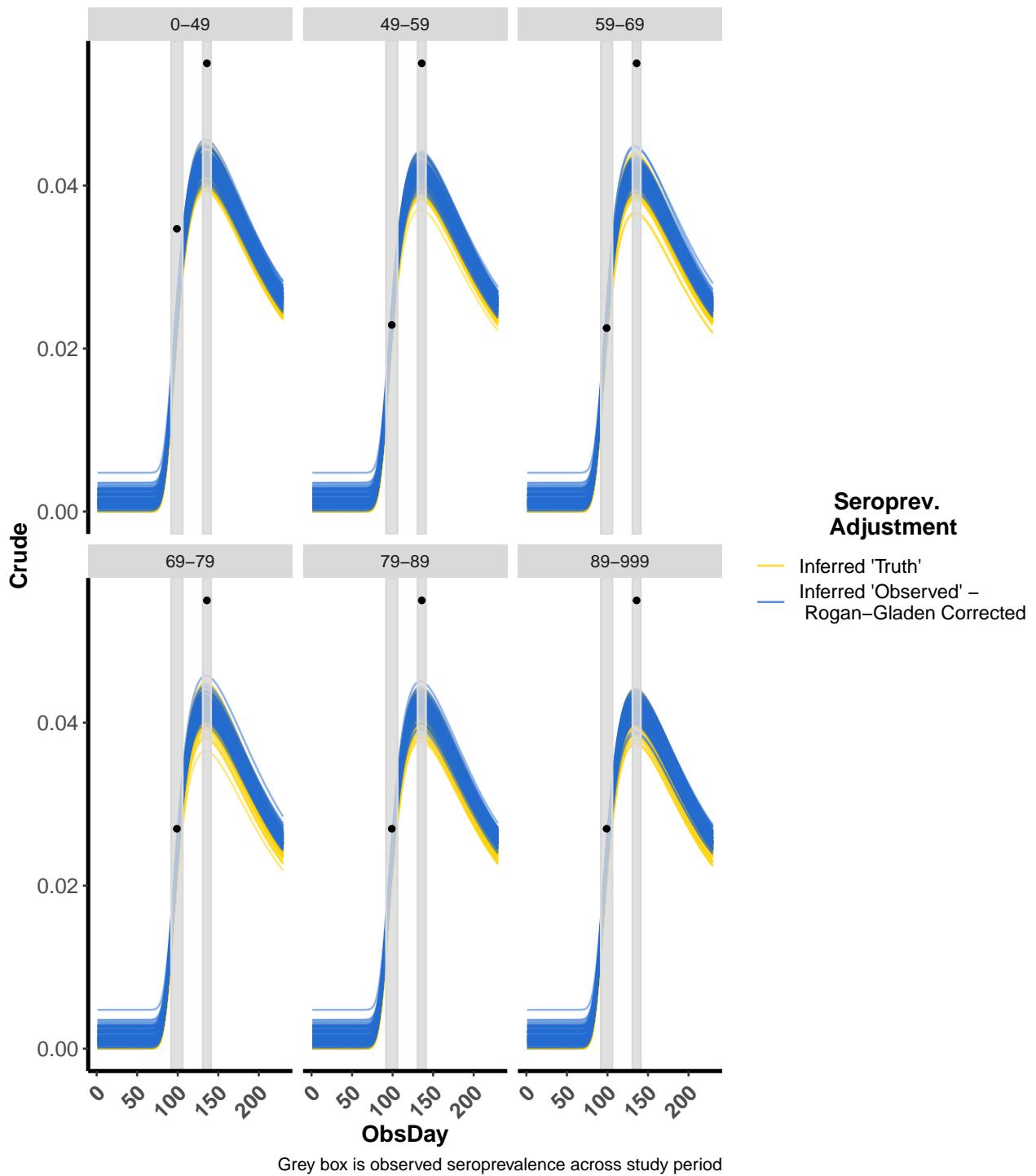
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0042	0.0045	0.0048	0.0048	0.0053	0.0061	7814.798	-0.2911	0.3824

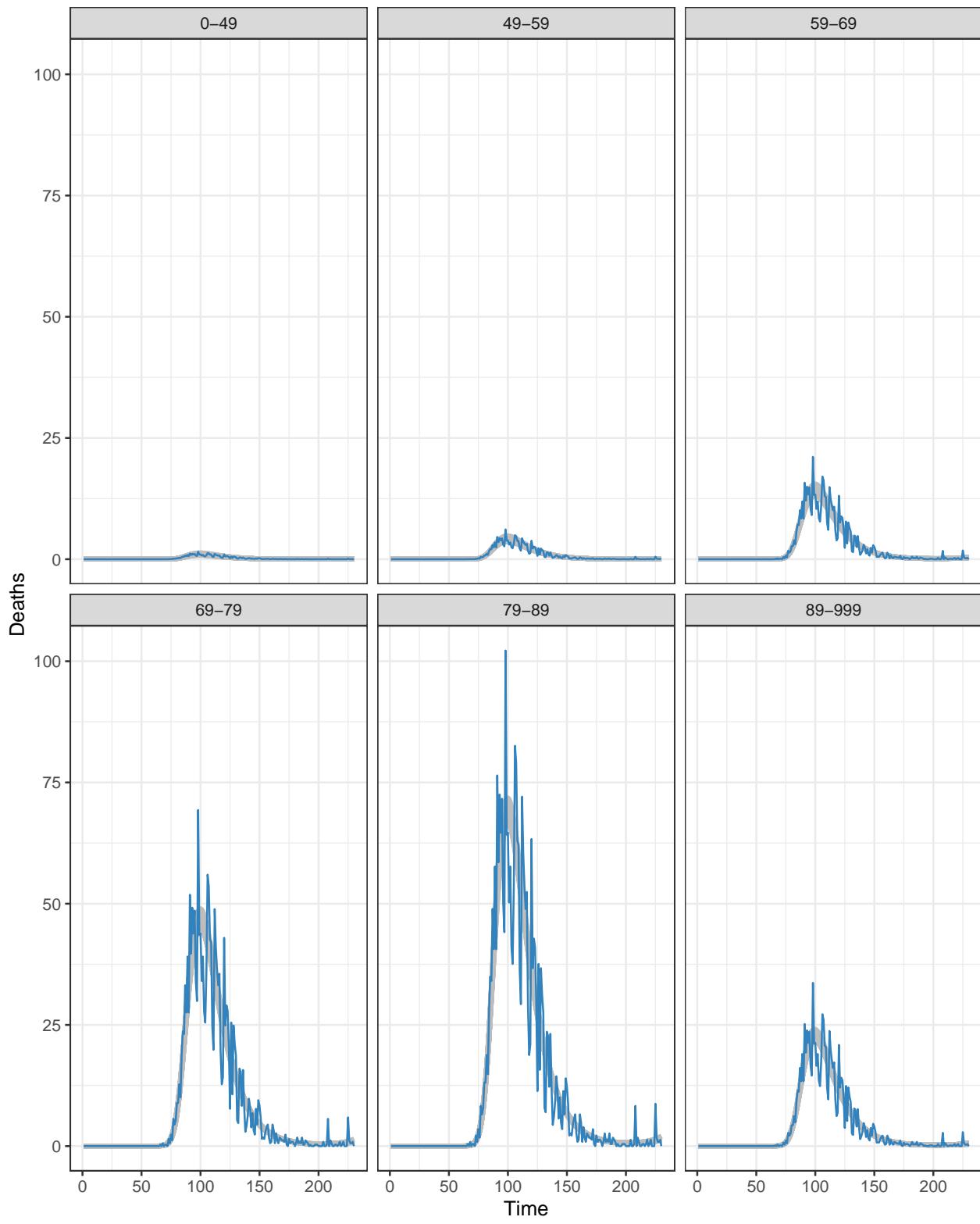
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0044	0.0045	0.0048	0.0048	0.0053	0.0061	891.8367	0.7831	0.2936
chain2	0.0043	0.0045	0.0048	0.0048	0.0053	0.0061	1000.0000	0.1945	0.3915
chain3	0.0043	0.0045	0.0048	0.0048	0.0053	0.0057	737.8049	-0.1294	0.3956
chain4	0.0043	0.0045	0.0048	0.0048	0.0053	0.0058	680.9045	-0.1710	0.3931
chain5	0.0042	0.0044	0.0048	0.0048	0.0053	0.0056	776.7163	-2.1372	0.0406
chain6	0.0043	0.0045	0.0048	0.0048	0.0052	0.0059	793.5360	0.0114	0.3989
chain7	0.0043	0.0045	0.0048	0.0048	0.0053	0.0058	763.8725	0.6846	0.3156
chain8	0.0042	0.0044	0.0048	0.0048	0.0053	0.0058	770.9527	-1.0927	0.2196
chain9	0.0043	0.0044	0.0048	0.0048	0.0053	0.0056	784.4370	0.7942	0.2910
chain10	0.0043	0.0045	0.0048	0.0048	0.0053	0.0058	822.9316	0.0038	0.3989



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



Grey Lines are Draws from Posterior, Blue Line is Observed Data (from JHU CSSE COVID-19 Data)

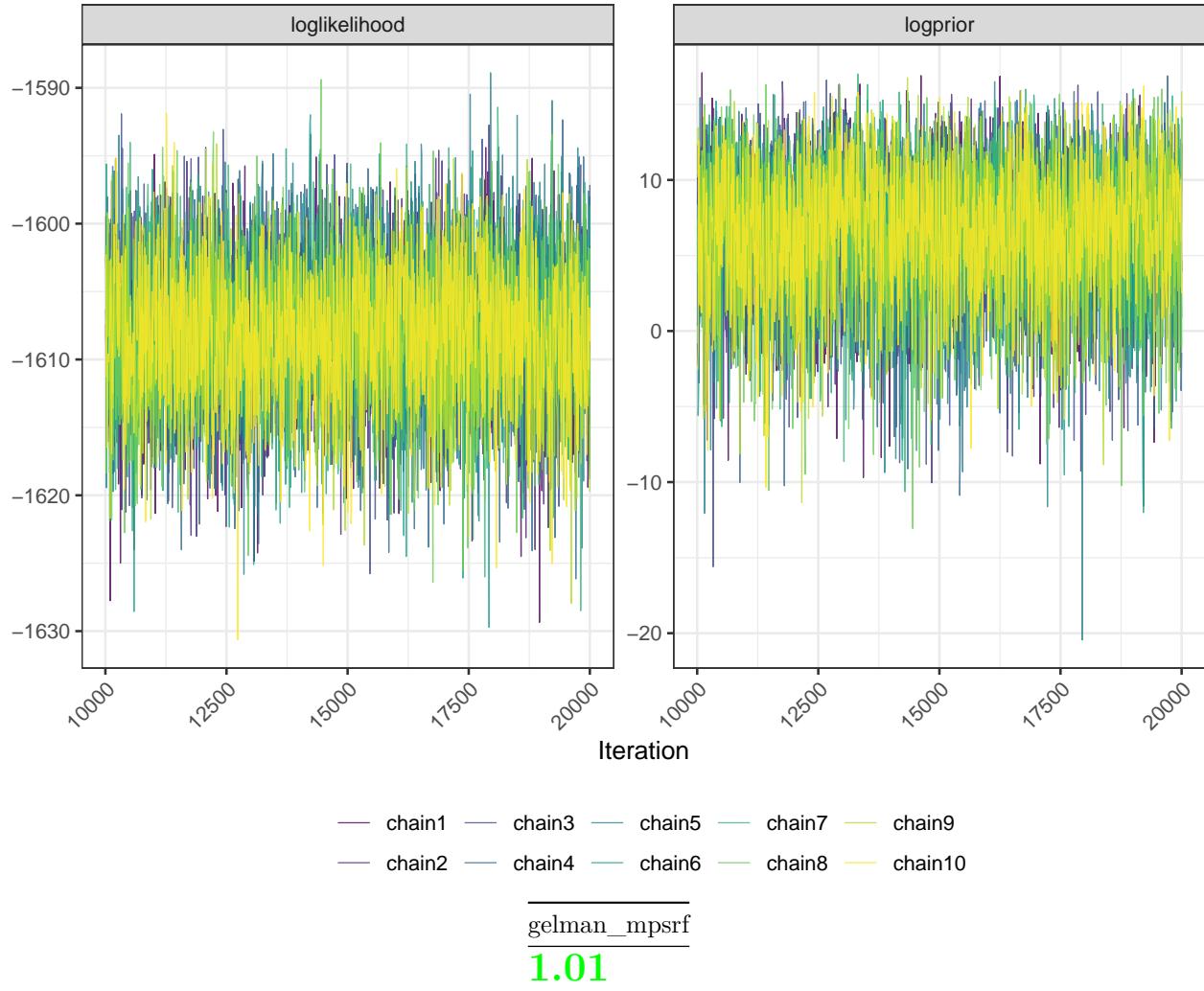
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.1671	2.2271	54.6158	47.9945	66.0799	72.2115	627.1024	6.6533	0.0000
x2	67.1399	70.1866	75.3196	75.4900	81.8455	88.8424	655.8057	-4.6662	0.0000
x3	98.9912	104.1687	110.1268	110.1941	116.6342	129.0648	1393.4167	2.7147	0.0100
x4	214.0014	214.4359	222.6876	222.3944	229.6662	229.9970	1263.2030	0.8908	0.2683
y1	0.0001	0.1043	1.9854	2.0738	4.8163	6.9147	3299.6536	-4.7210	0.0000
y2	0.0001	0.0702	1.7166	2.1935	6.3362	8.5172	594.8149	0.6446	0.3241
y3	6.6081	8.0671	9.6005	9.5415	10.7830	11.2613	541.3125	-5.1313	0.0000
y4	4.8100	7.4042	8.4485	8.4179	9.2832	9.8546	1383.3164	-2.4830	0.0183
y5	6.0458	6.3618	6.9726	6.9913	7.7059	8.3681	1553.4601	2.1598	0.0387
Ne1	0.8873	0.9468	1.0190	1.0192	1.0952	1.1594	7336.1724	-0.8013	0.2894
Ne2	0.8621	0.9227	0.9958	0.9966	1.0723	1.1784	10000.0000	-0.7776	0.2949
Ne3	0.8503	0.9170	0.9881	0.9883	1.0624	1.1523	8886.1296	0.1014	0.3969
Ne4	0.8700	0.9265	1.0005	1.0007	1.0766	1.1513	8105.7044	0.1112	0.3965
Ne5	0.8584	0.9271	1.0007	1.0010	1.0776	1.1524	7697.2090	0.8638	0.2747
Ne6	0.8637	0.9273	1.0009	1.0008	1.0764	1.1720	8129.9628	2.6229	0.0128

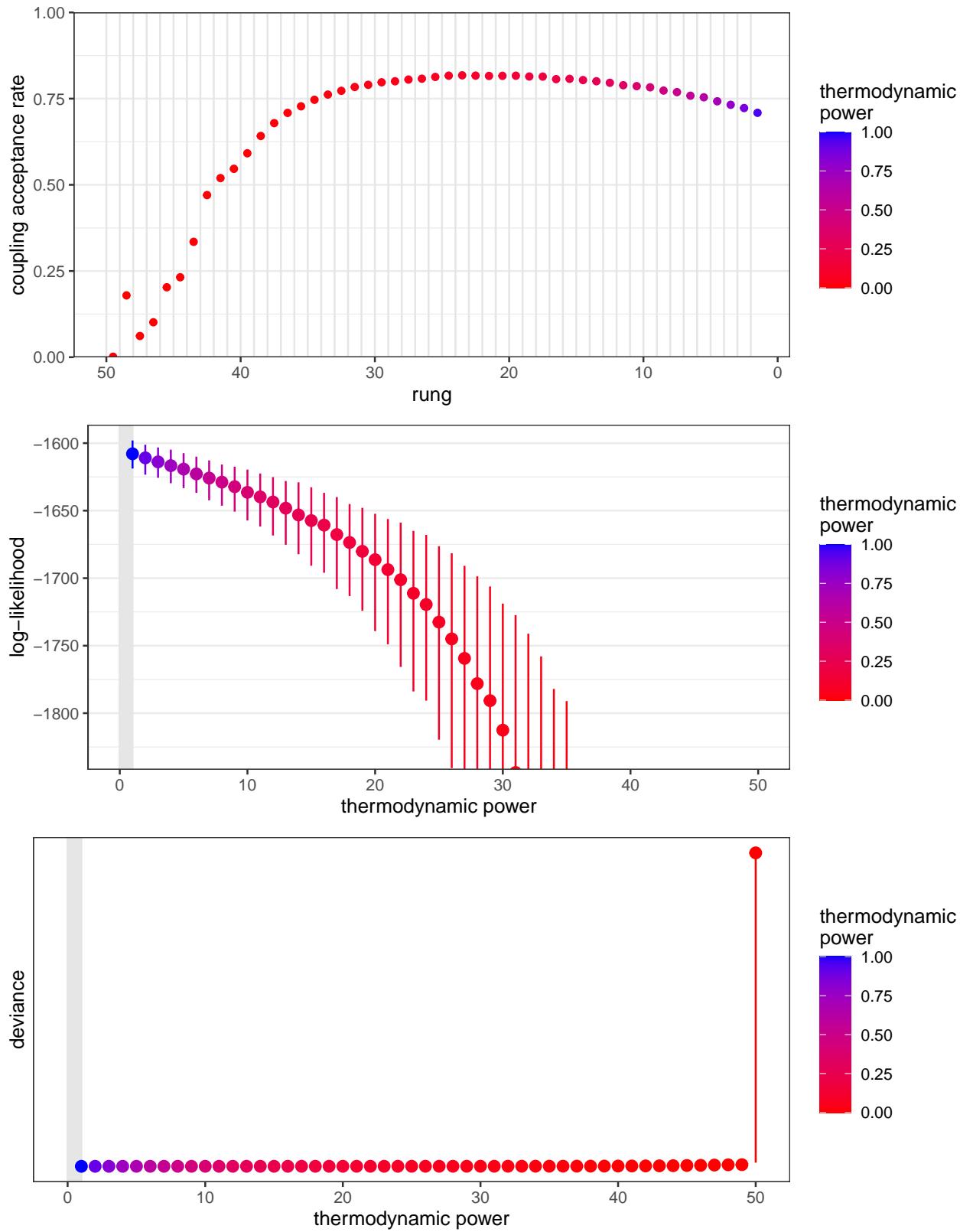
NYS1 with the Potential for Seroreversion Included

Fit Diagnostics

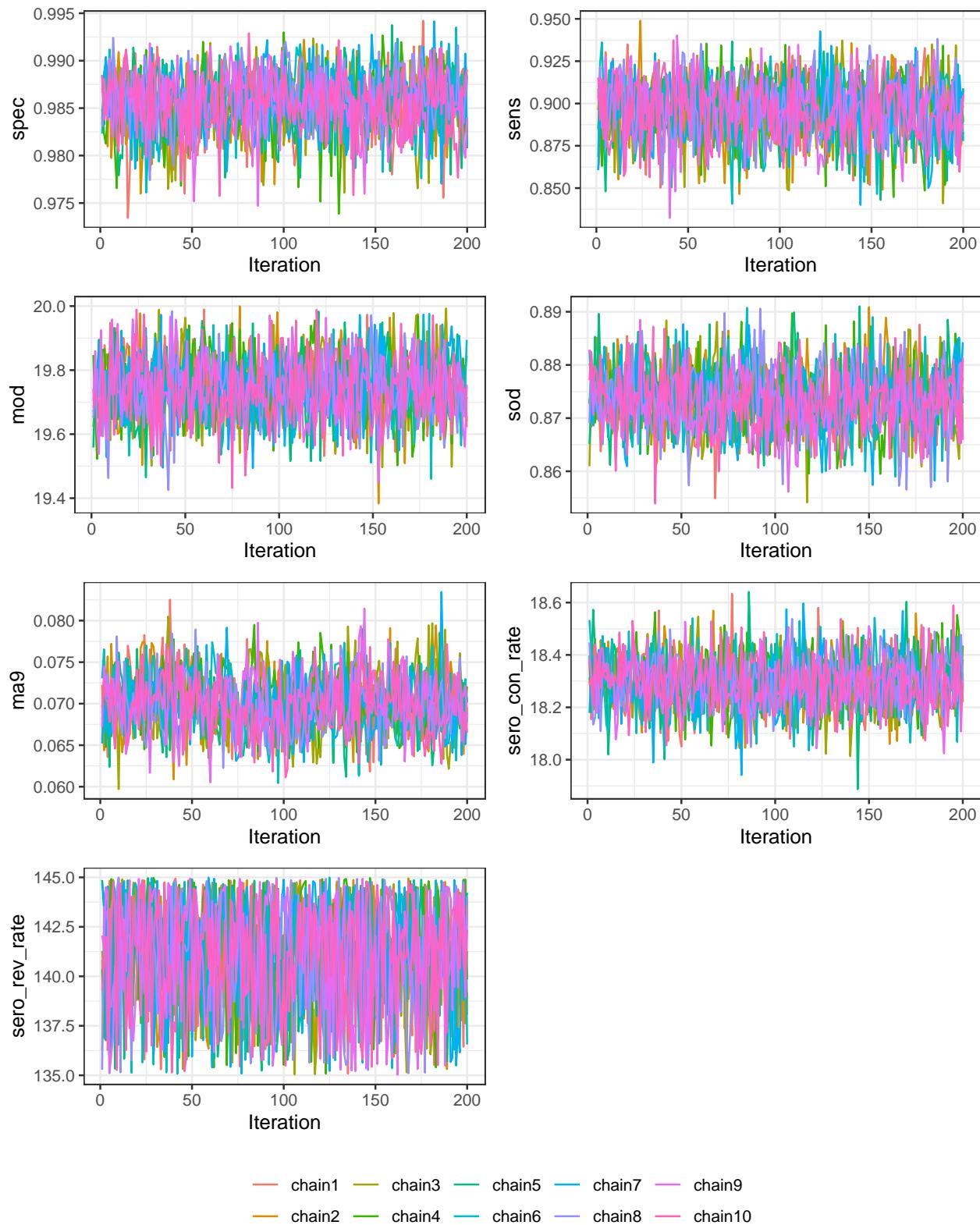
Log Likelihood & Prior Plot



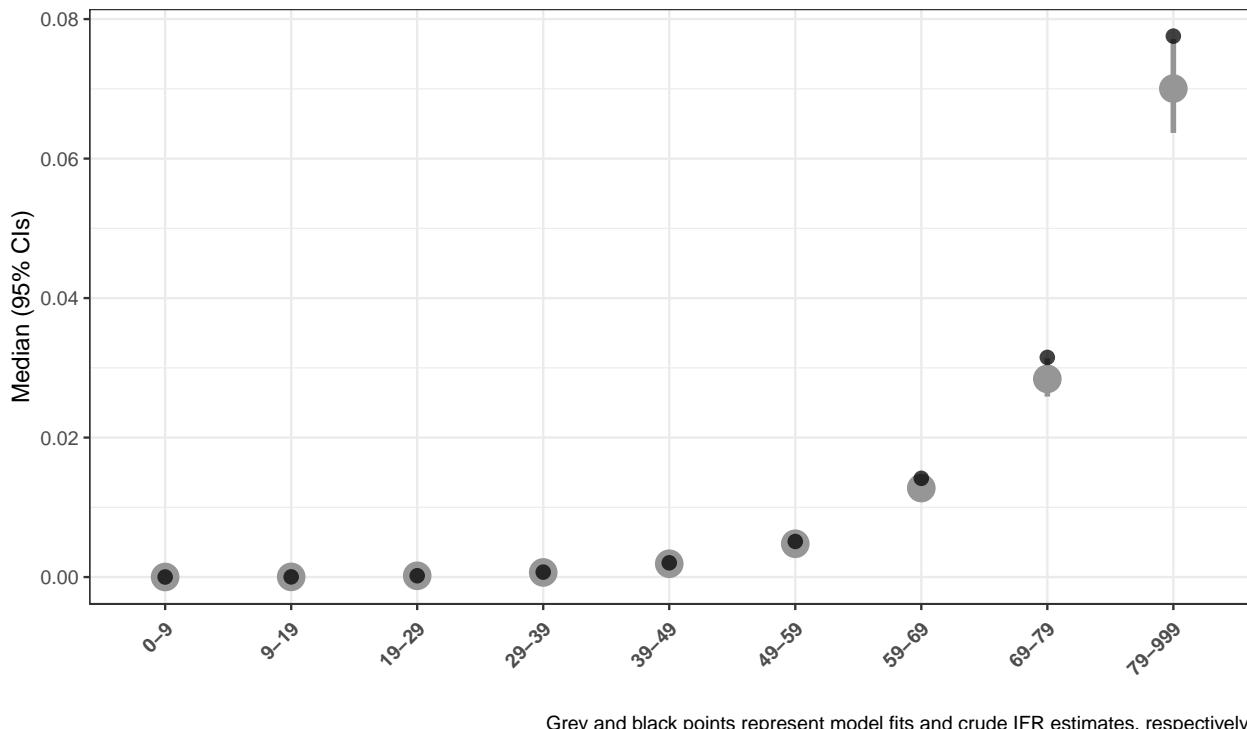
Metropolis Coupling Acceptance Plot



Serological Diagnostics

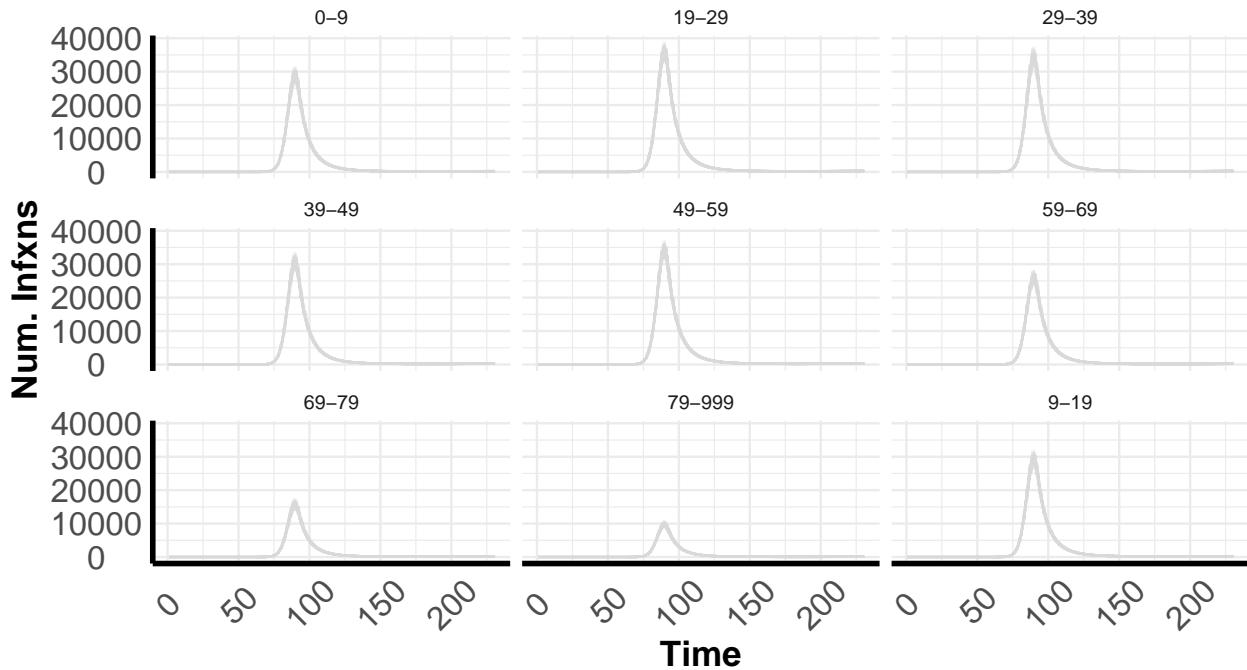


IFRs & Incidence Curve



Grey and black points represent model fits and crude IFR estimates, respectively

Posterior Draws of the Infection Curve



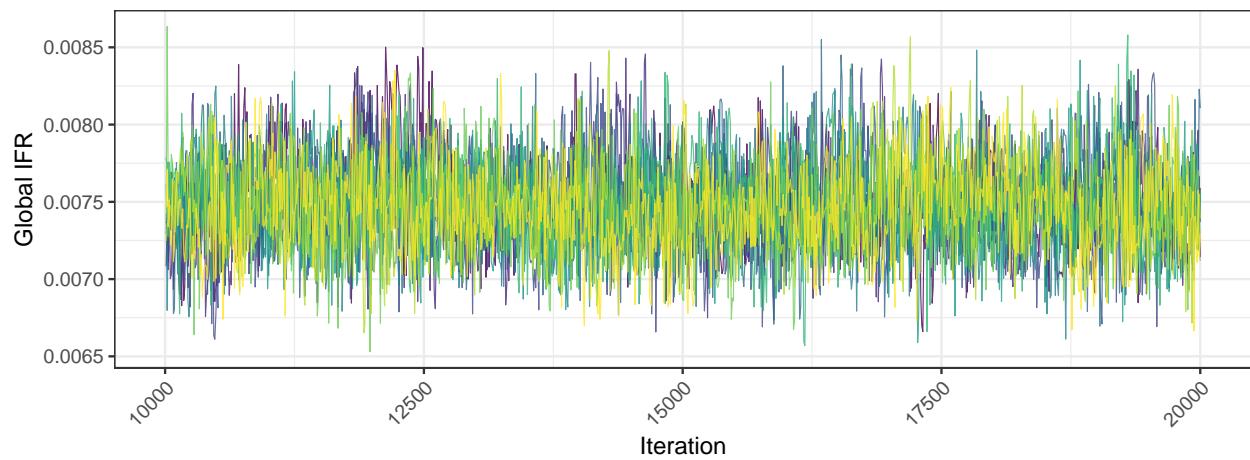
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-9	ma1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	9089.491	-0.0058	0.3989
9-19	ma2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	10000.000	-1.1541	0.2050
19-29	ma3	0.0001	0.0001	0.0002	0.0002	0.0002	0.0003	7710.350	2.6904	0.0107
29-39	ma4	0.0005	0.0006	0.0007	0.0007	0.0008	0.0008	4794.221	1.5713	0.1161
39-49	ma5	0.0016	0.0017	0.0019	0.0019	0.0021	0.0024	4542.784	1.4492	0.1396
49-59	ma6	0.0040	0.0044	0.0048	0.0048	0.0052	0.0060	3231.282	1.8384	0.0736
59-69	ma7	0.0106	0.0116	0.0128	0.0128	0.0141	0.0152	2569.412	2.2969	0.0285
69-79	ma8	0.0239	0.0259	0.0284	0.0285	0.0313	0.0341	2366.462	3.5968	0.0006
79-999	ma9	0.0596	0.0637	0.0700	0.0701	0.0771	0.0838	1494.790	0.0960	0.3971

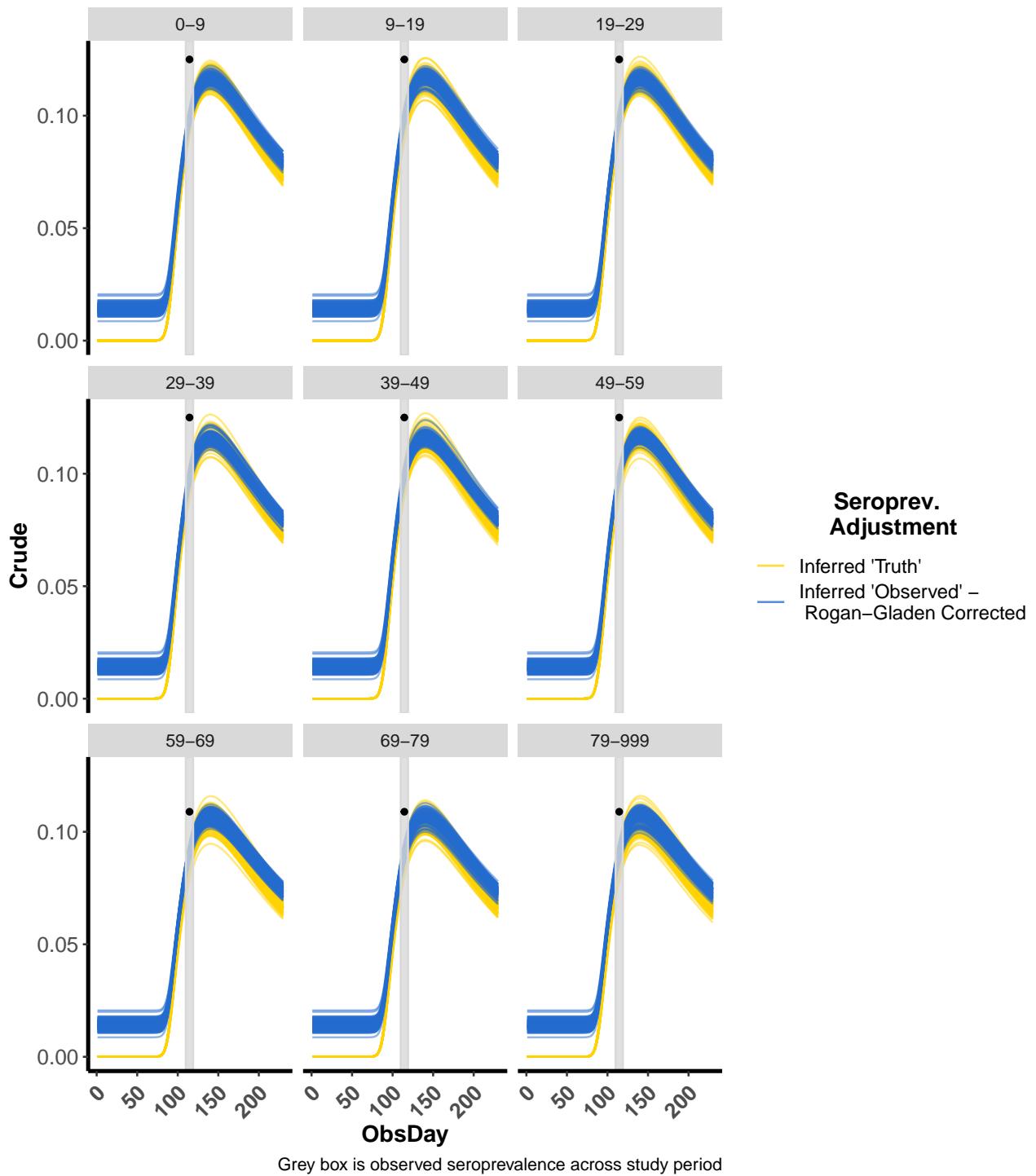
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0065	0.0069	0.0075	0.0075	0.0081	0.0086	4285.019	-0.4045	0.3676

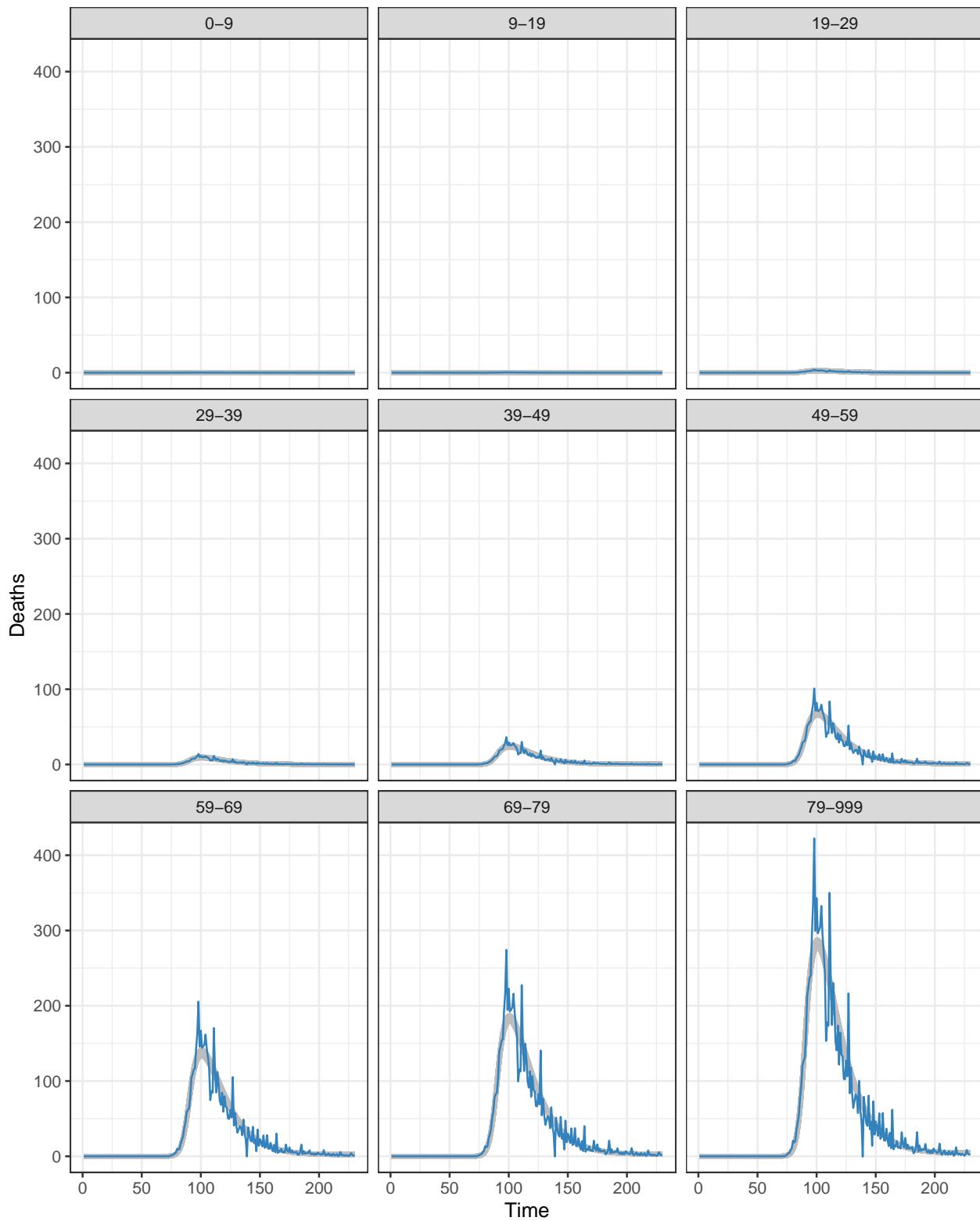
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0067	0.0070	0.0075	0.0075	0.0082	0.0085	102.8959	-0.1640	0.3936
chain2	0.0067	0.0069	0.0075	0.0075	0.0081	0.0085	180.9318	-2.4950	0.0177
chain3	0.0066	0.0069	0.0074	0.0075	0.0081	0.0084	170.1975	-3.6354	0.0005
chain4	0.0067	0.0069	0.0075	0.0075	0.0081	0.0086	500.4264	2.0954	0.0444
chain5	0.0066	0.0070	0.0075	0.0075	0.0080	0.0085	229.4793	1.5588	0.1184
chain6	0.0066	0.0069	0.0075	0.0075	0.0081	0.0084	229.7313	0.6099	0.3312
chain7	0.0066	0.0069	0.0075	0.0075	0.0081	0.0086	391.3186	1.2691	0.1783
chain8	0.0065	0.0069	0.0075	0.0075	0.0080	0.0086	491.5846	1.7516	0.0860
chain9	0.0067	0.0070	0.0075	0.0075	0.0081	0.0086	232.2911	0.6659	0.3196
chain10	0.0067	0.0069	0.0075	0.0075	0.0081	0.0084	161.8244	-1.0597	0.2276



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



Grey Lines are Draws from Posterior, Blue Line is Observed Data (from JHU CSSE COVID-19 Data)

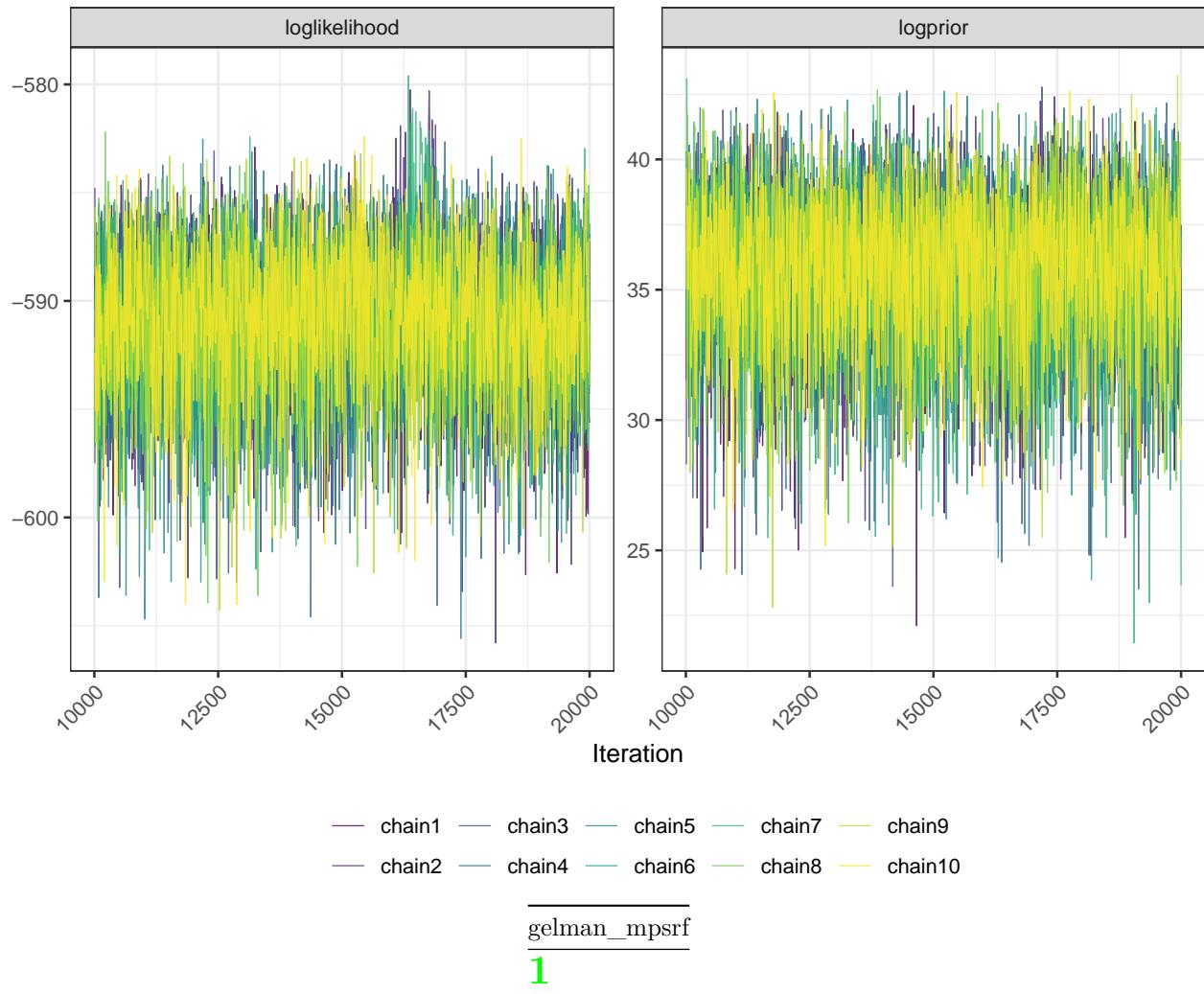
Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.0820	1.7787	60.3692	56.1397	69.5825	78.8883	442.4110	-7.2833	0.0000
x2	87.7121	89.4371	91.3045	91.2266	92.5839	93.6085	570.4887	1.3810	0.1537
x3	91.7500	92.9495	94.1921	94.2456	95.7900	97.3142	723.6405	1.9400	0.0608
x4	214.0003	214.0365	214.8857	215.2797	218.7527	228.9630	2131.3543	-0.0492	0.3985
y1	0.0000	0.0751	1.5638	1.7483	4.5143	6.0018	2256.2197	0.4055	0.3675
y2	0.0006	0.1175	2.6534	2.9239	6.7827	10.1352	627.9095	-1.6474	0.1027
y3	12.1066	12.2221	12.3403	12.3375	12.4397	12.5041	716.1520	-3.1567	0.0027
y4	11.6399	11.8140	12.0122	12.0073	12.1659	12.2739	592.7493	-2.2114	0.0346
y5	7.1239	7.2728	7.4495	7.4485	7.6182	7.8140	6907.6021	-2.3154	0.0273
Ne1	0.9253	0.9708	1.0310	1.0316	1.0926	1.1493	8124.7050	-0.4259	0.3644
Ne2	0.9136	0.9734	1.0324	1.0324	1.0926	1.1607	8465.3799	1.9255	0.0625
Ne3	0.9294	0.9731	1.0322	1.0322	1.0934	1.1397	7561.3670	0.4730	0.3567
Ne4	0.9083	0.9723	1.0317	1.0321	1.0932	1.1631	7738.8078	-0.1548	0.3942
Ne5	0.9034	0.9717	1.0325	1.0324	1.0927	1.1409	7215.7006	1.2533	0.1819
Ne6	0.8965	0.9721	1.0320	1.0323	1.0940	1.1571	6482.9331	-0.6684	0.3191
Ne7	0.8120	0.8689	0.9332	0.9335	0.9991	1.0510	4306.0277	-0.6918	0.3140
Ne8	0.8081	0.8691	0.9325	0.9330	0.9988	1.0486	4228.1200	-2.8878	0.0062
Ne9	0.8271	0.8690	0.9324	0.9330	0.9986	1.0771	3135.3099	2.4684	0.0190

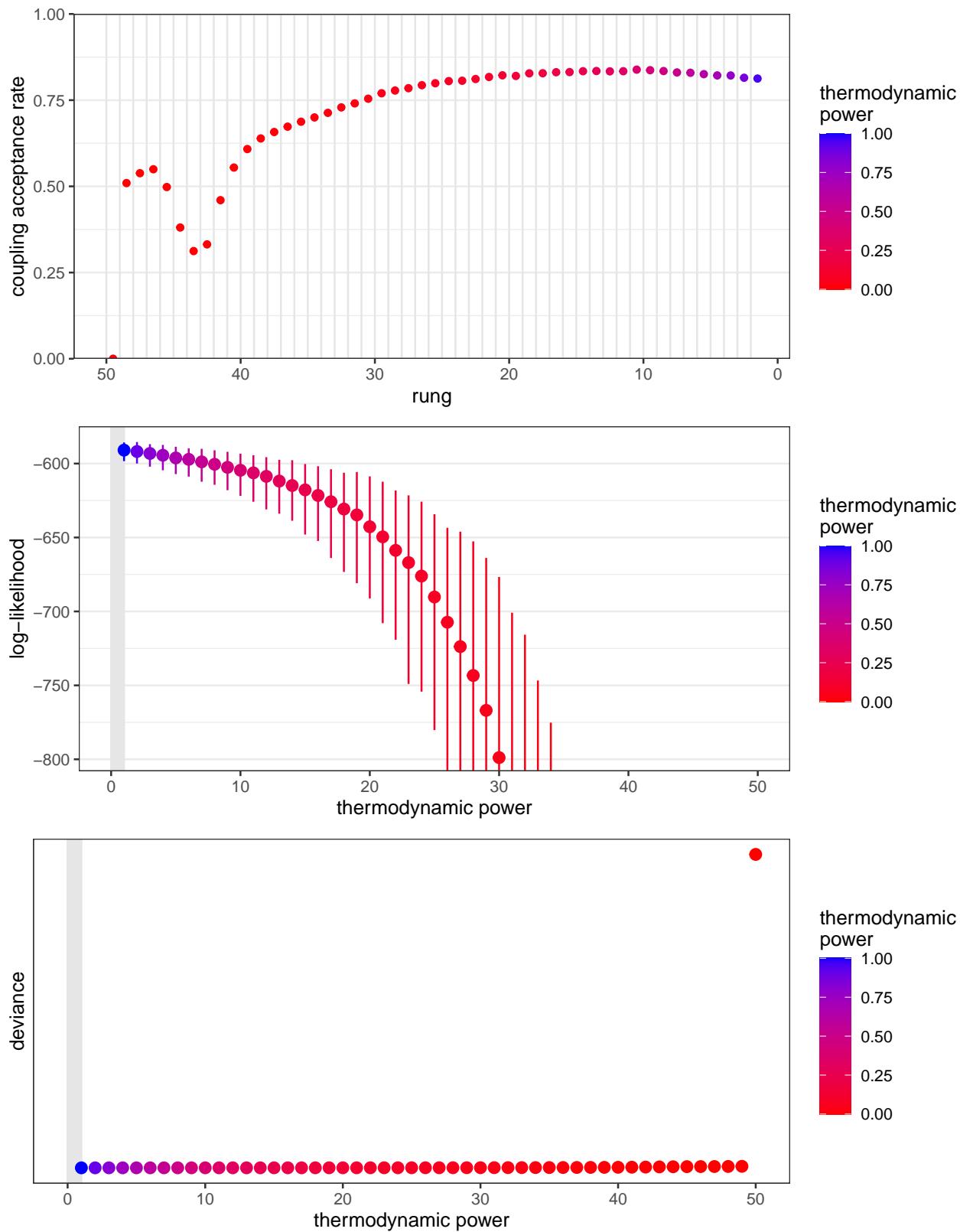
SWE1 with the Potential for Seroreversion Included

Fit Diagnostics

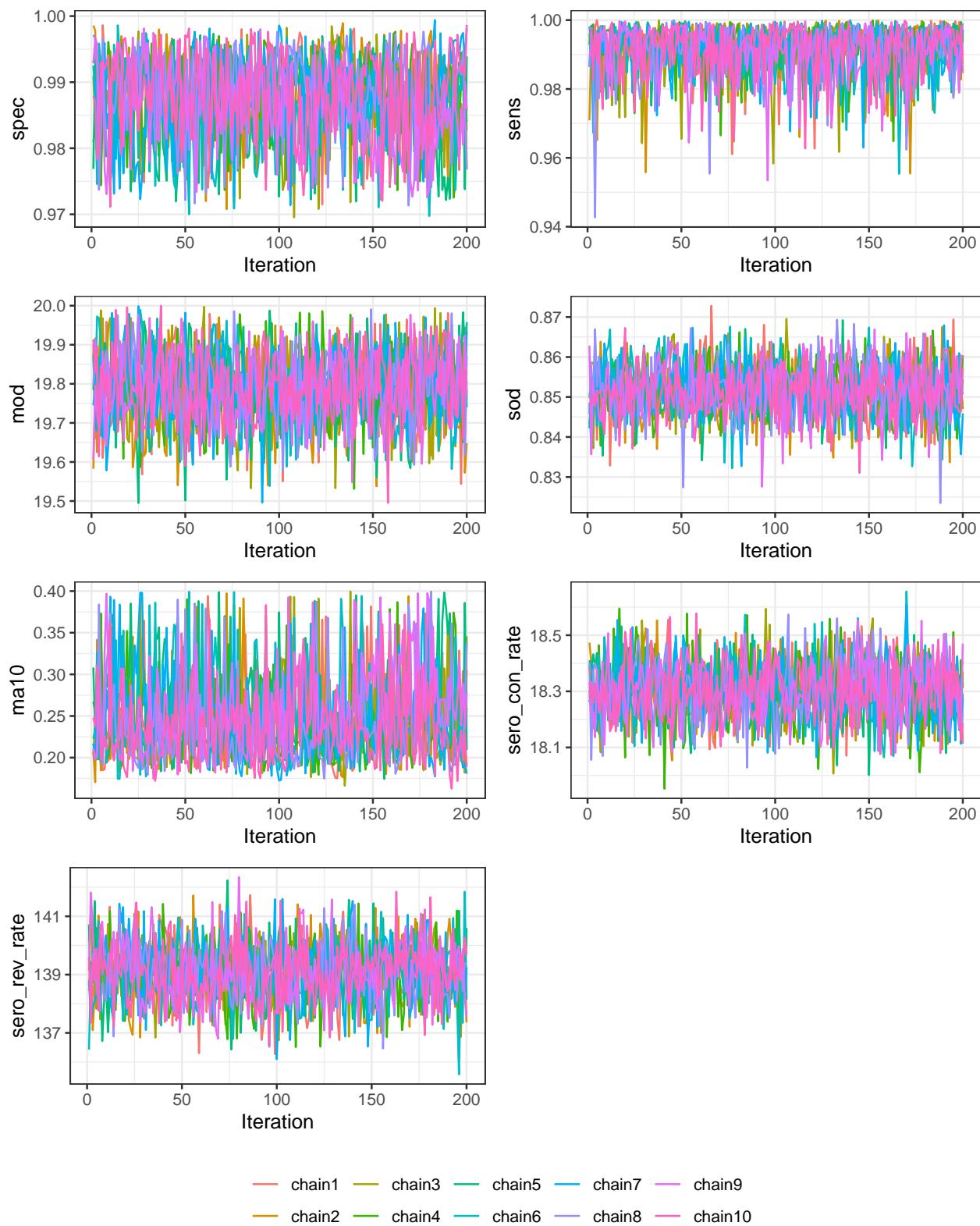
Log Likelihood & Prior Plot



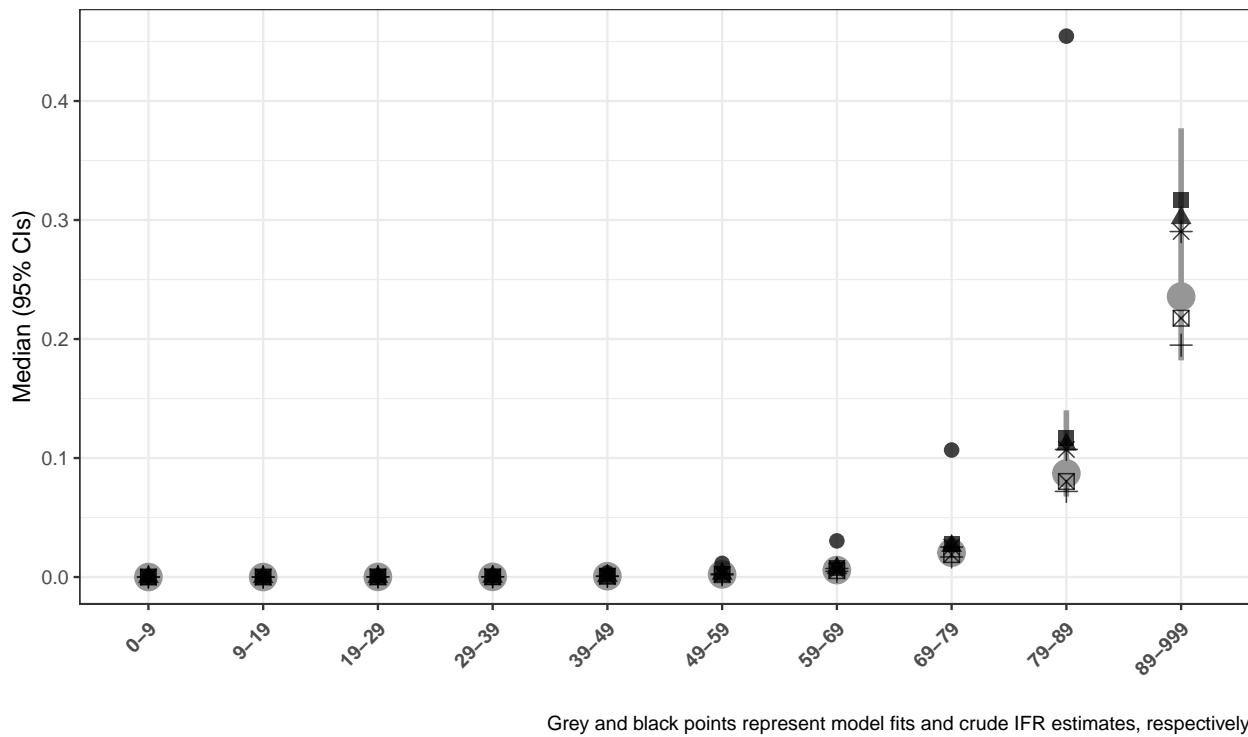
Metropolis Coupling Acceptance Plot



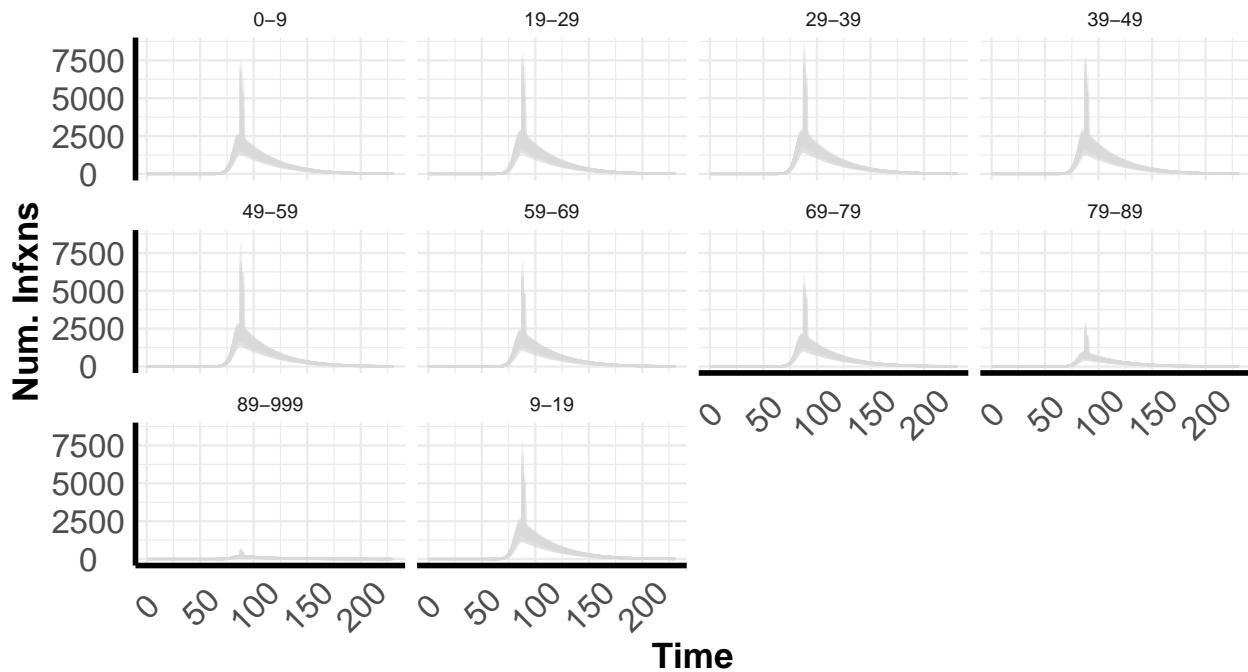
Serological Diagnostics



IFRs & Incidence Curve



Posterior Draws of the Infection Curve



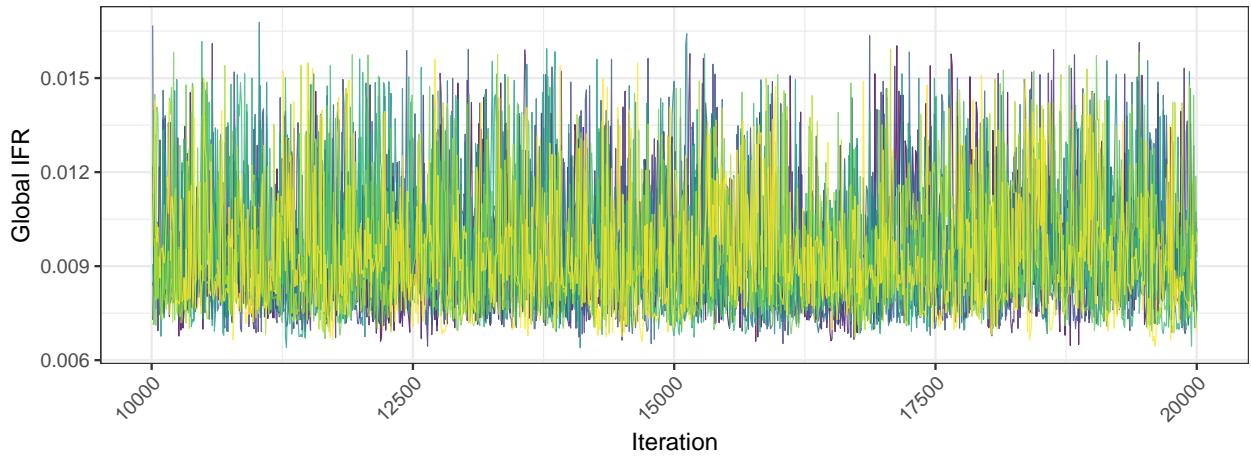
Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0-9	ma1	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	9695.269	0.2496	0.3867
9-19	ma2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8503.528	-0.5330	0.3461
19-29	ma3	0.0000	0.0001	0.0001	0.0001	0.0003	0.0004	3548.560	-1.9312	0.0618
29-39	ma4	0.0000	0.0001	0.0002	0.0002	0.0004	0.0006	3297.987	-0.3880	0.3700
39-49	ma5	0.0003	0.0004	0.0007	0.0007	0.0011	0.0018	2494.782	-0.4724	0.3568
49-59	ma6	0.0014	0.0016	0.0022	0.0023	0.0036	0.0050	1511.788	-0.7885	0.2923
59-69	ma7	0.0037	0.0044	0.0058	0.0061	0.0095	0.0124	1618.755	-0.8782	0.2713
69-79	ma8	0.0130	0.0158	0.0204	0.0216	0.0330	0.0407	1453.464	-1.1088	0.2157
79-89	ma9	0.0590	0.0676	0.0871	0.0918	0.1401	0.1738	1653.543	-0.7148	0.3090
89-999	ma10	0.1582	0.1821	0.2357	0.2479	0.3771	0.3999	1353.921	-0.9175	0.2619

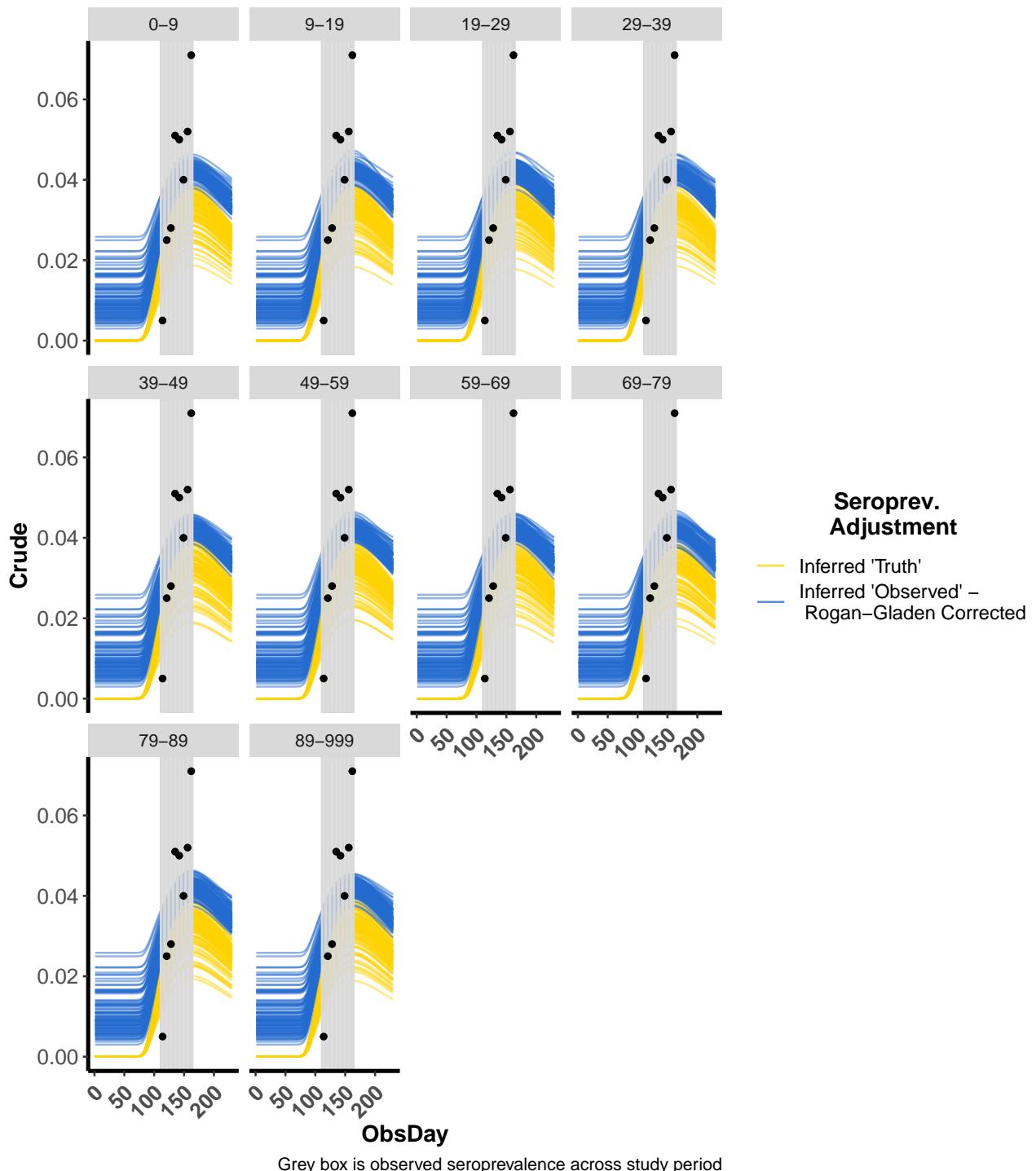
Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0064	0.0071	0.0089	0.0094	0.0143	0.0168	3376.37	1.7015	0.0938

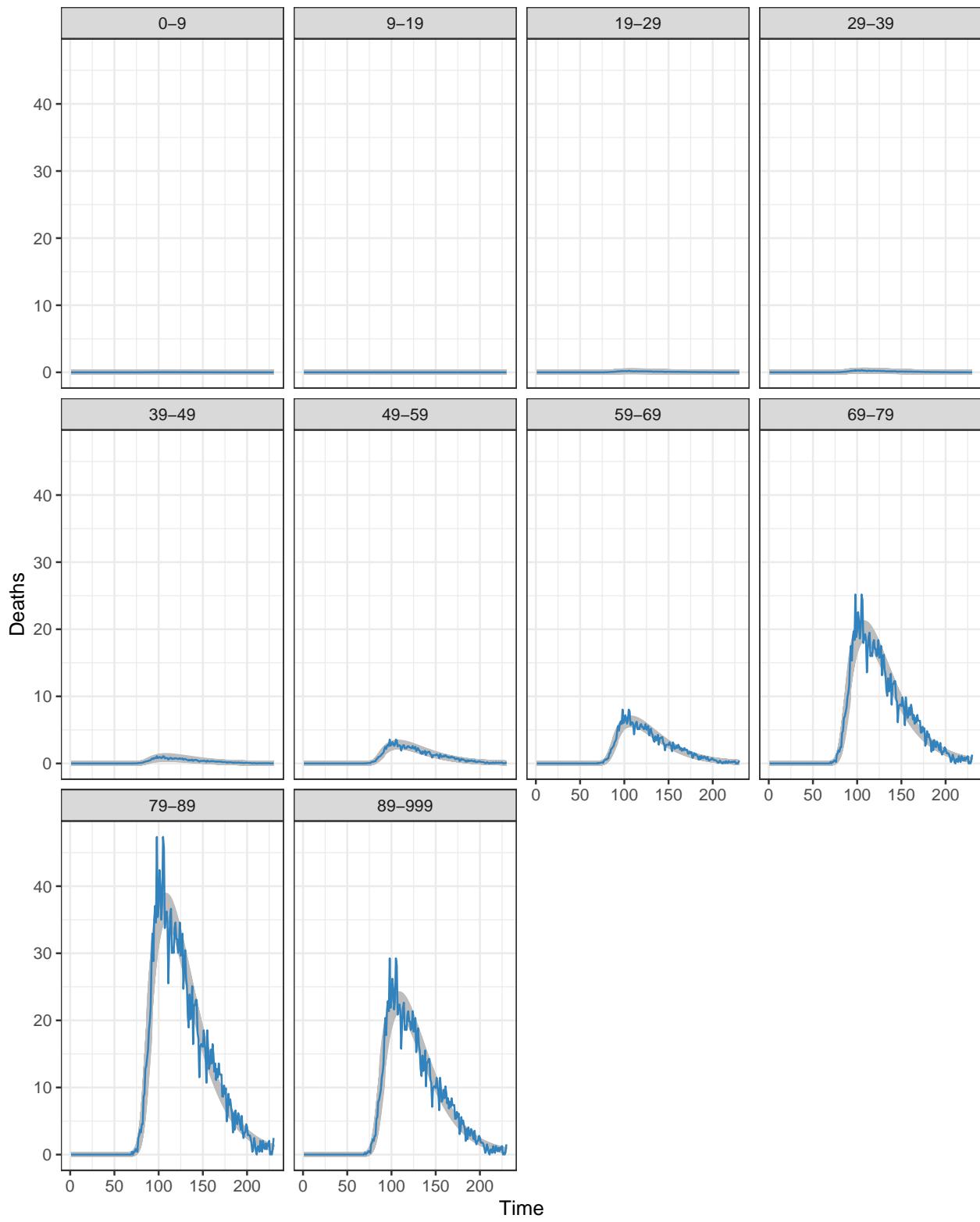
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0065	0.0070	0.0089	0.0093	0.0139	0.0160	252.2337	-2.5154	0.0169
chain2	0.0064	0.0072	0.0089	0.0093	0.0145	0.0161	679.4916	0.6653	0.3197
chain3	0.0065	0.0070	0.0089	0.0094	0.0144	0.0167	550.7680	2.3509	0.0252
chain4	0.0065	0.0071	0.0089	0.0094	0.0142	0.0158	465.1859	-0.5682	0.3395
chain5	0.0064	0.0072	0.0089	0.0095	0.0145	0.0168	169.6706	2.2646	0.0307
chain6	0.0064	0.0071	0.0091	0.0096	0.0145	0.0159	245.6340	-3.5029	0.0009
chain7	0.0064	0.0070	0.0087	0.0093	0.0142	0.0162	72.0722	6.8314	0.0000
chain8	0.0067	0.0071	0.0086	0.0093	0.0144	0.0158	615.6005	5.0165	0.0000
chain9	0.0067	0.0072	0.0095	0.0098	0.0142	0.0159	116.5928	-3.8061	0.0003
chain10	0.0065	0.0069	0.0088	0.0093	0.0142	0.0156	584.2139	0.1559	0.3941



Seroprevalence Observed vs. Inferred True Prev



Death Posterior Predictive Check



Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.2954	2.5030	57.9952	54.7209	69.1899	78.1308	774.1227	2.2110	0.0346
x2	82.5495	84.0791	85.6272	85.7415	87.9797	89.8877	2946.5481	-0.3502	0.3752
x3	83.6324	85.9791	88.7941	88.8679	92.0567	95.0926	3725.9578	-0.0318	0.3987
x4	214.0024	214.5672	222.7396	222.5316	229.6745	230.0000	1623.8656	-0.0996	0.3970
y1	0.0003	0.0555	1.3895	1.5736	4.0365	6.0310	6206.7519	-2.3784	0.0236
y2	0.0001	0.0659	1.5902	1.9229	5.5249	8.2753	1882.7838	2.0543	0.0484
y3	9.0758	9.2474	9.7238	9.6893	9.9641	10.0958	1329.2763	1.0192	0.2373
y4	9.0726	9.2269	9.7026	9.6665	9.9366	10.0633	1308.3507	0.9361	0.2574
y5	3.5771	4.0694	4.7559	4.7434	5.3360	5.7380	1452.1006	0.5280	0.3470
Ne1	0.8093	0.9105	1.0008	1.0008	1.0935	1.1839	10000.0000	1.5697	0.1164
Ne10	0.8051	0.9100	1.0013	1.0014	1.0944	1.1838	4968.5804	0.1723	0.3931
Ne2	0.8158	0.9067	1.0001	1.0002	1.0936	1.2386	9508.3455	-1.3991	0.1499
Ne3	0.8180	0.9084	1.0004	1.0003	1.0927	1.1764	10000.0000	-0.8094	0.2875
Ne4	0.8218	0.9069	0.9999	0.9998	1.0911	1.1893	9407.3669	0.0131	0.3989
Ne5	0.7996	0.9071	1.0002	1.0004	1.0939	1.1803	9132.9717	0.4871	0.3543
Ne6	0.8189	0.9093	1.0008	1.0002	1.0922	1.1937	8936.1307	-0.4418	0.3618
Ne7	0.8337	0.9069	0.9998	0.9999	1.0911	1.1834	8851.7091	-1.3016	0.1710
Ne8	0.8246	0.9069	0.9998	1.0003	1.0937	1.1847	7669.8285	1.0837	0.2218
Ne9	0.8199	0.9055	0.9996	0.9995	1.0924	1.1879	7438.5075	-1.5950	0.1118