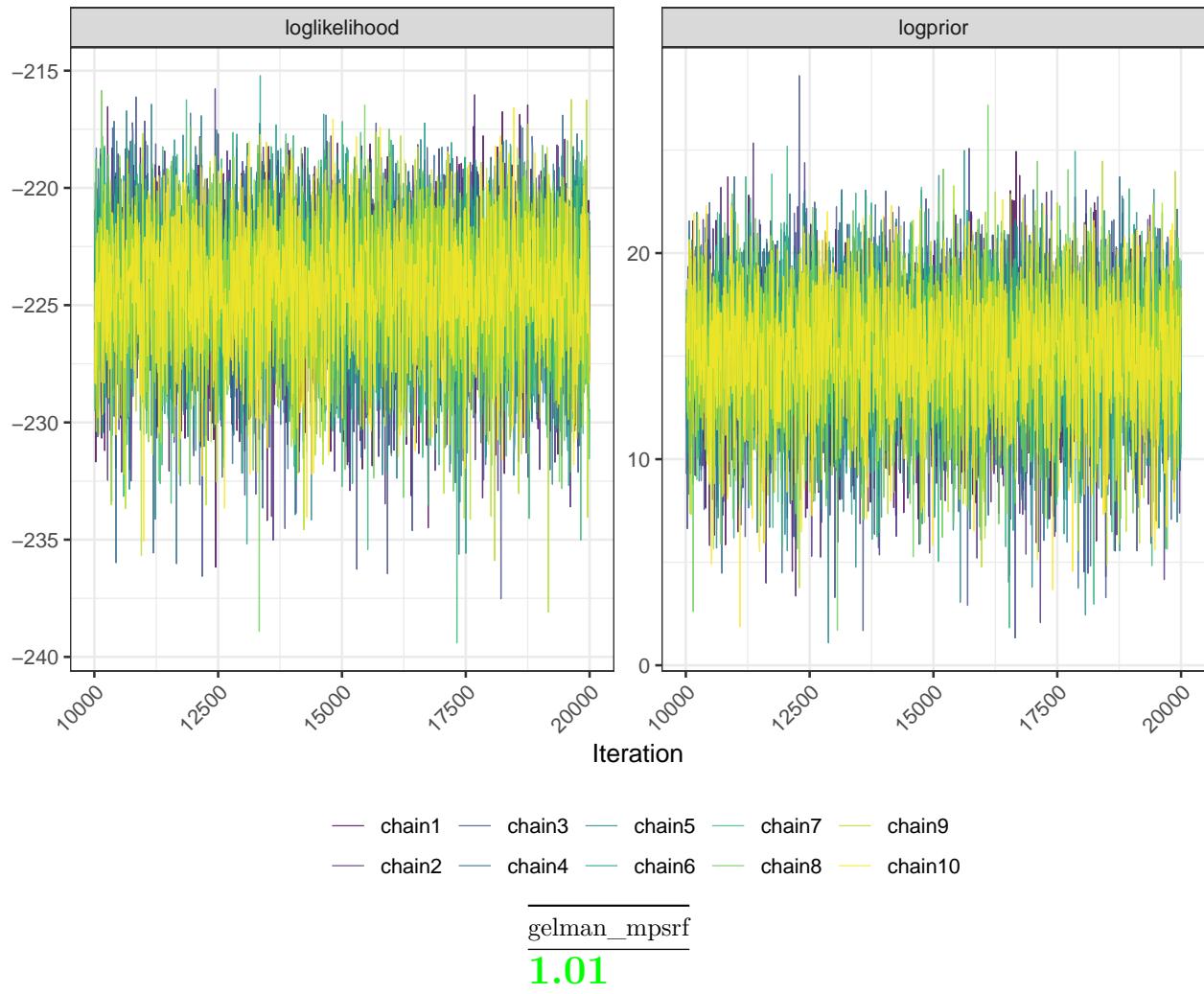


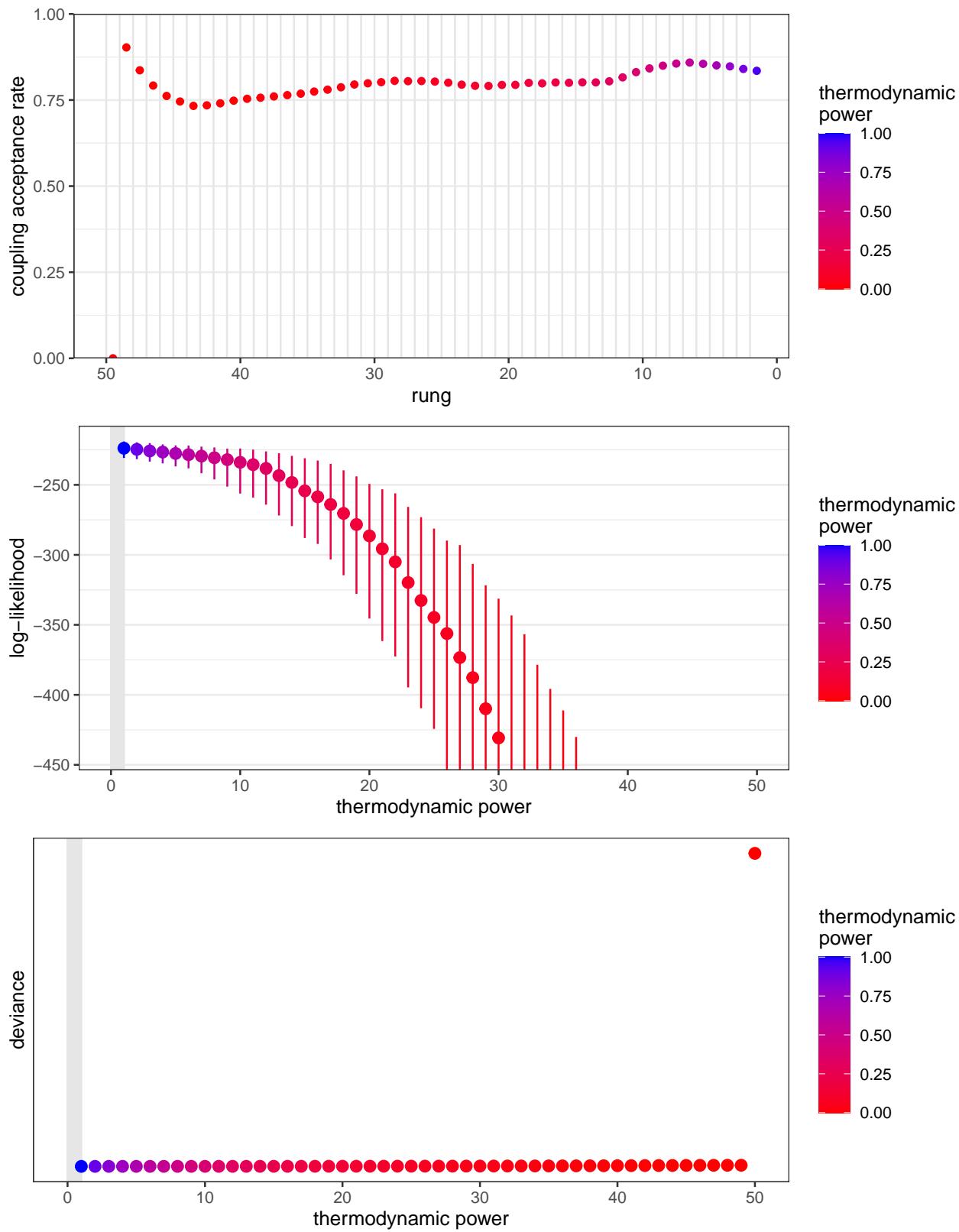
# CHE1 with Care Homes Excluded

## Fit Diagnostics

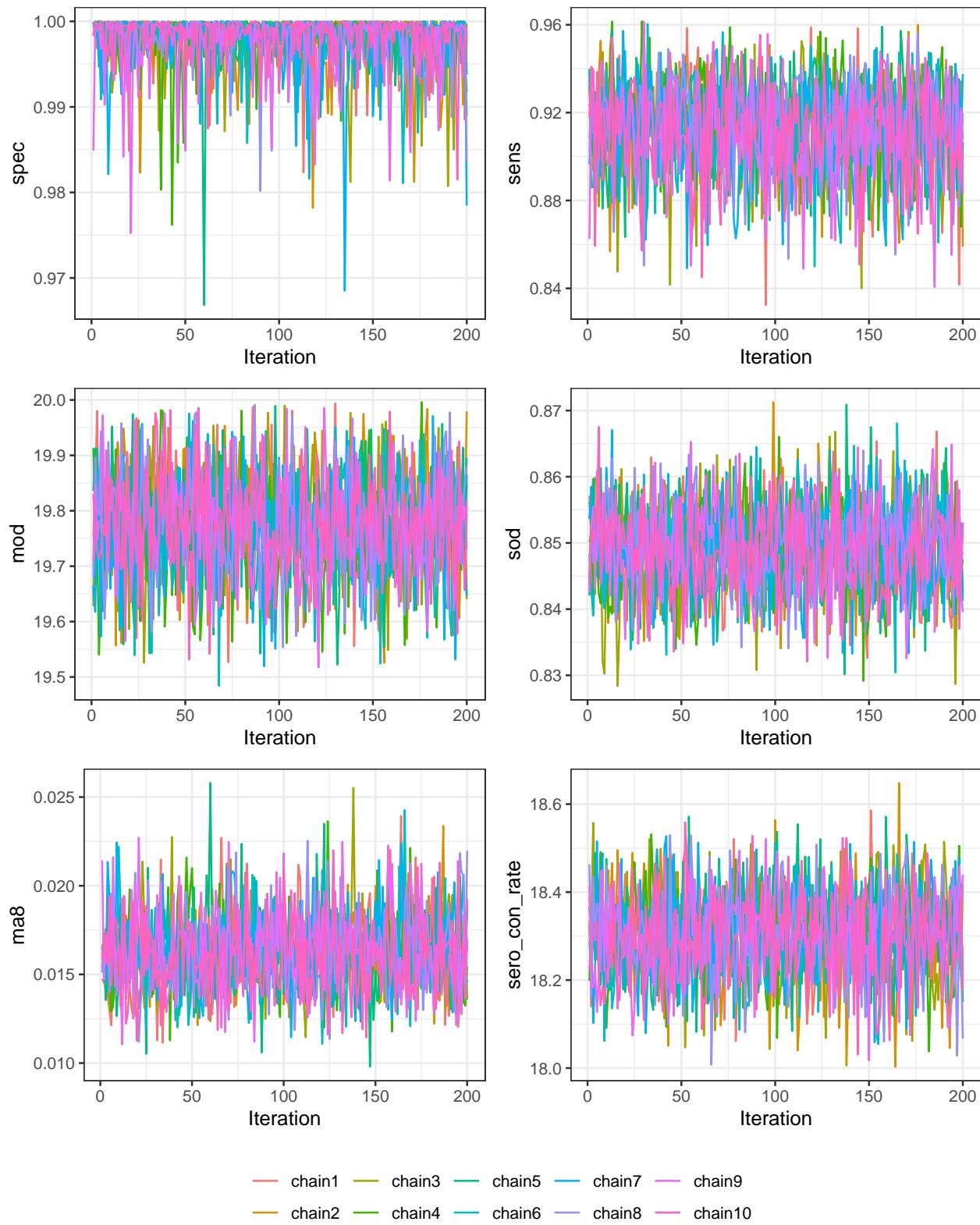
### Log Likelihood & Prior Plot



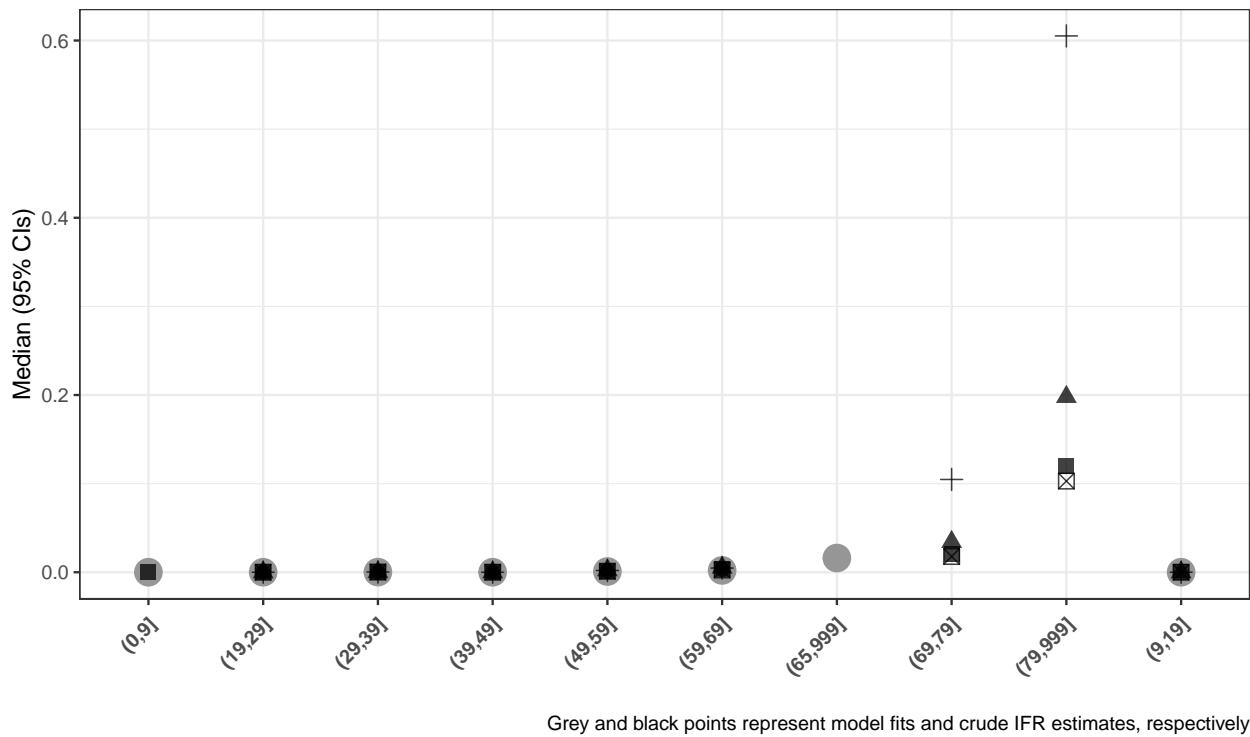
### Metropolis Coupling Acceptance Plot



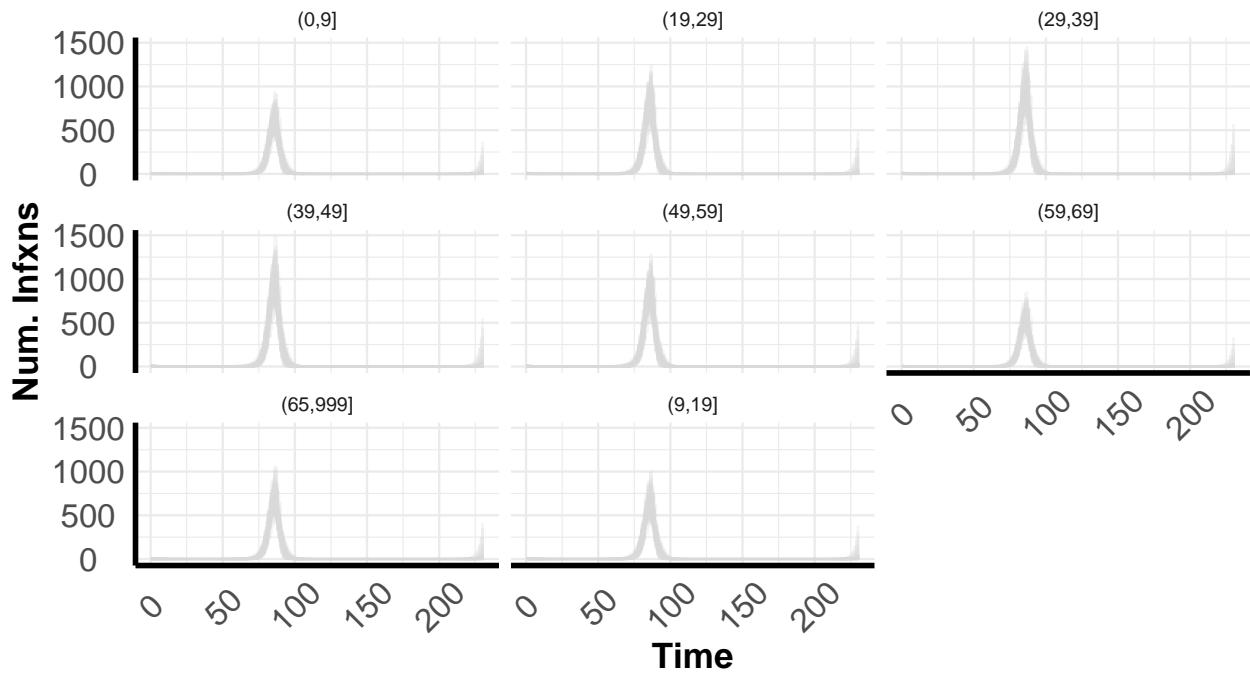
## Serological Diagnostics



## IFRs & Incidence Curve



## Posterior Draws of the Infection Curve



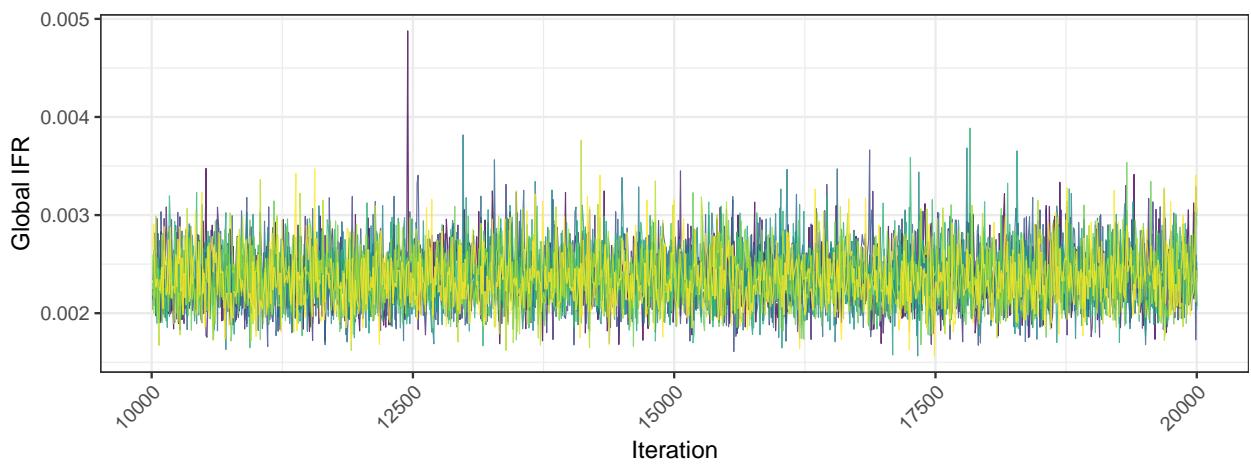
### Strata IFR

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	10066.666	1.0967	0.2186
(9,19]	ma2	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	9408.667	0.1453	0.3948
(19,29]	ma3	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	9350.161	-0.4313	0.3635
(29,39]	ma4	0.0000	0.0000	0.0002	0.0002	0.0005	0.0009	10000.000	1.7185	0.0911
(39,49]	ma5	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	9564.922	-0.8150	0.2862
(49,59]	ma6	0.0000	0.0003	0.0009	0.0009	0.0016	0.0027	10000.000	0.7163	0.3087
(59,69]	ma7	0.0000	0.0009	0.0021	0.0021	0.0036	0.0056	10000.000	-0.0336	0.3987
(65,999]	ma8	0.0098	0.0125	0.0161	0.0162	0.0207	0.0322	8241.962	0.1190	0.3961

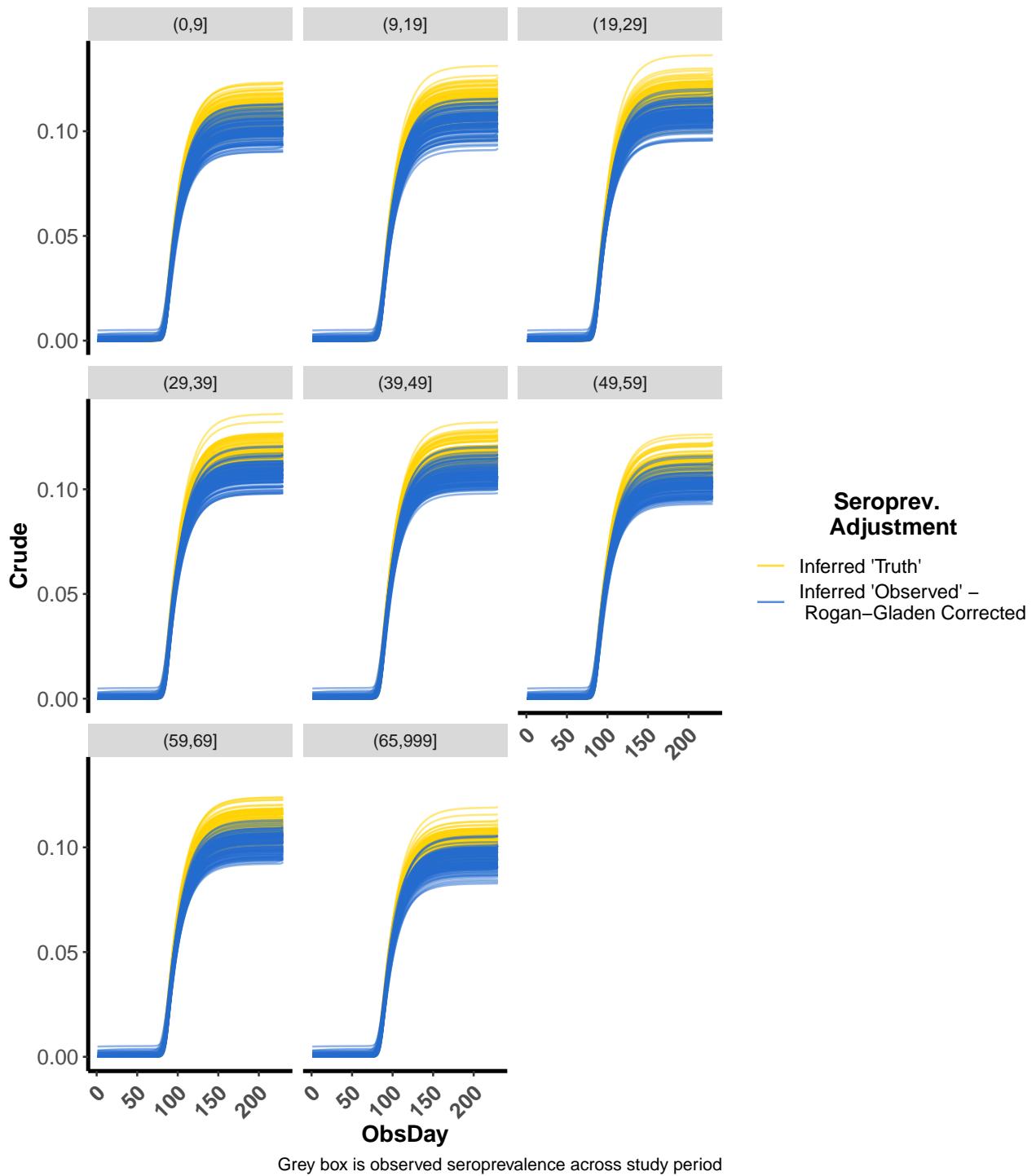
### Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0015	0.0018	0.0022	0.0022	0.0027	0.0048	10000	-1.3044	0.1704

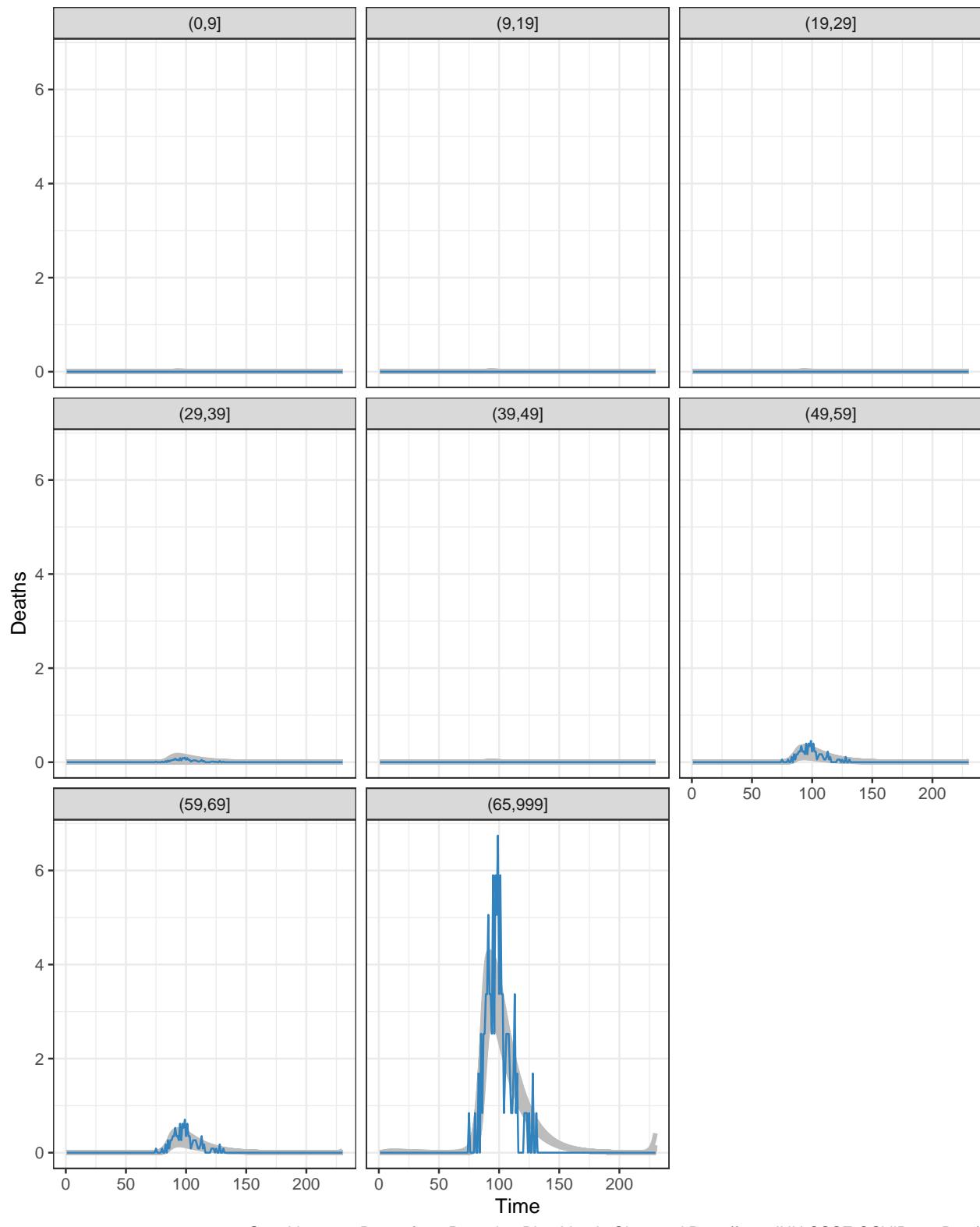
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0016	0.0017	0.0022	0.0022	0.0027	0.0048	1000.0000	-1.1786	0.1992
chain2	0.0016	0.0018	0.0022	0.0022	0.0027	0.0032	756.7803	-0.9438	0.2556
chain3	0.0016	0.0018	0.0022	0.0022	0.0027	0.0034	1000.0000	-0.4564	0.3595
chain4	0.0016	0.0018	0.0022	0.0022	0.0027	0.0031	829.8648	-0.6129	0.3306
chain5	0.0016	0.0018	0.0022	0.0022	0.0027	0.0035	896.6525	-0.5602	0.3410
chain6	0.0016	0.0018	0.0022	0.0022	0.0027	0.0034	903.9801	0.2575	0.3859
chain7	0.0015	0.0018	0.0022	0.0022	0.0027	0.0037	1000.0000	0.4743	0.3565
chain8	0.0016	0.0018	0.0022	0.0022	0.0027	0.0033	776.9392	-0.8185	0.2854
chain9	0.0015	0.0018	0.0022	0.0022	0.0028	0.0036	1000.0000	-0.3198	0.3791
chain10	0.0015	0.0017	0.0022	0.0022	0.0028	0.0033	901.7403	0.2965	0.3818



### 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)

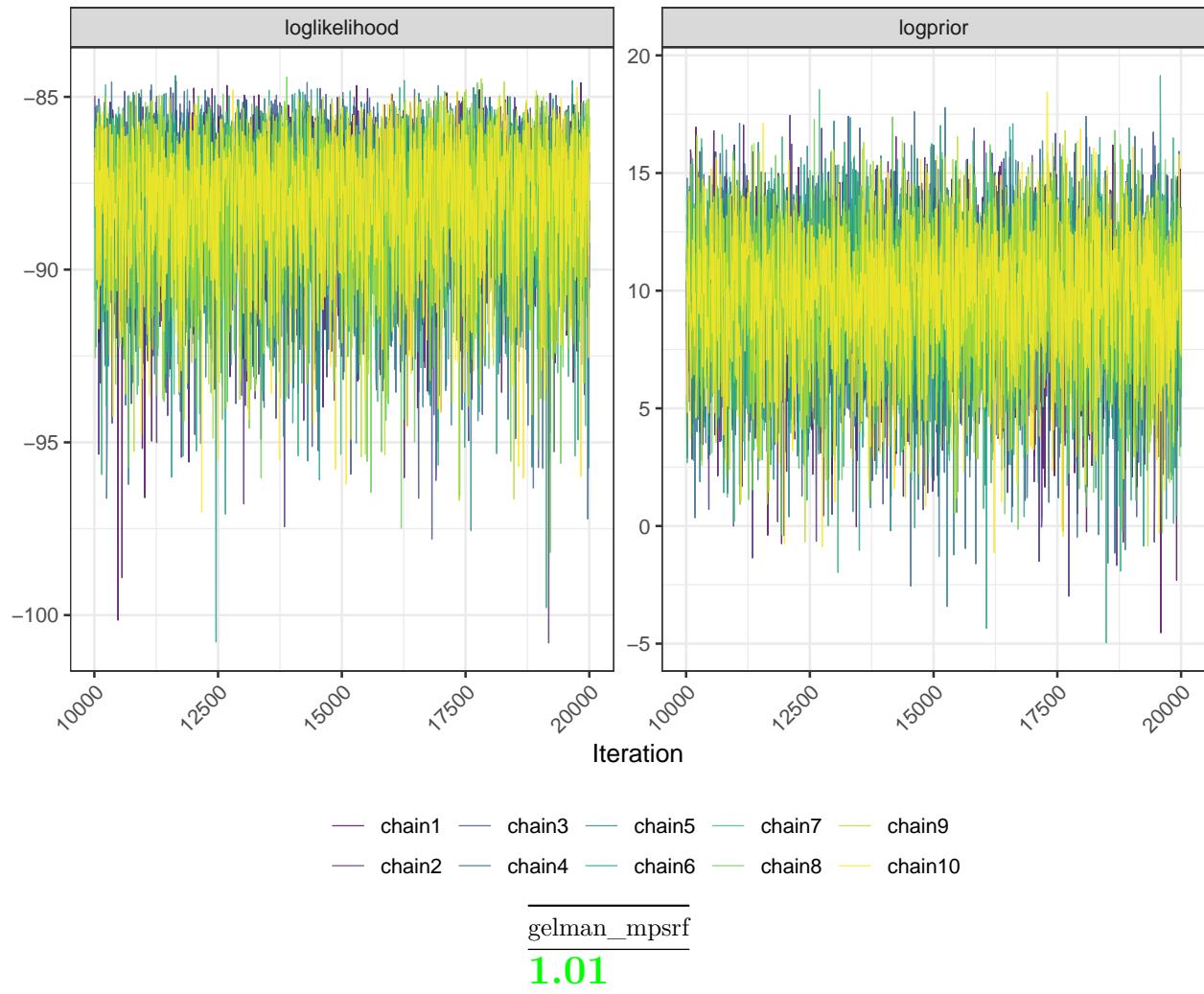
## Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.1922	2.5200	70.1335	67.4300	81.4030	86.3550	2785.6604	0.2145	0.3899
x2	70.4194	75.7826	86.7997	86.5568	95.0799	103.2353	867.0738	3.5762	0.0007
x3	85.2370	91.1460	100.1669	100.4409	111.0685	126.4013	3417.5172	-0.3032	0.3810
x4	216.0046	216.6166	224.8543	224.2968	229.7883	229.9982	6288.8291	1.1350	0.2095
y1	0.0002	0.1071	2.1353	2.2728	5.2804	7.7627	10000.0000	0.3626	0.3736
y2	0.0012	0.1356	3.2331	3.4282	7.6754	8.7256	2061.2072	0.5395	0.3449
y3	4.4008	5.7684	8.2801	8.0476	8.9824	9.4442	1008.9123	-2.6140	0.0131
y4	0.0006	0.1119	2.5610	2.8468	6.9510	8.7492	4183.0568	-4.7508	0.0000
y5	0.0018	0.1133	2.2087	2.4486	6.1456	8.5691	9016.5126	0.0951	0.3971
Ne1	0.8004	0.8772	0.9743	0.9744	1.0723	1.1600	10000.0000	-0.3042	0.3809
Ne2	0.8399	0.9165	1.0099	1.0101	1.1038	1.2080	10000.0000	-0.1536	0.3943
Ne3	0.8493	0.9519	1.0383	1.0383	1.1249	1.2307	9704.1679	0.0545	0.3983
Ne4	0.8524	0.9482	1.0388	1.0385	1.1273	1.2084	10000.0000	-0.8904	0.2684
Ne5	0.8824	0.9512	1.0387	1.0390	1.1279	1.2264	9671.0189	1.8844	0.0676
Ne6	0.8228	0.8907	0.9838	0.9834	1.0743	1.1547	10000.0000	0.2940	0.3821
Ne7	0.7753	0.8904	0.9833	0.9834	1.0755	1.1489	10000.0000	0.1544	0.3942
Ne8	0.7509	0.8274	0.9222	0.9220	1.0183	1.0962	9535.6044	-0.7833	0.2936

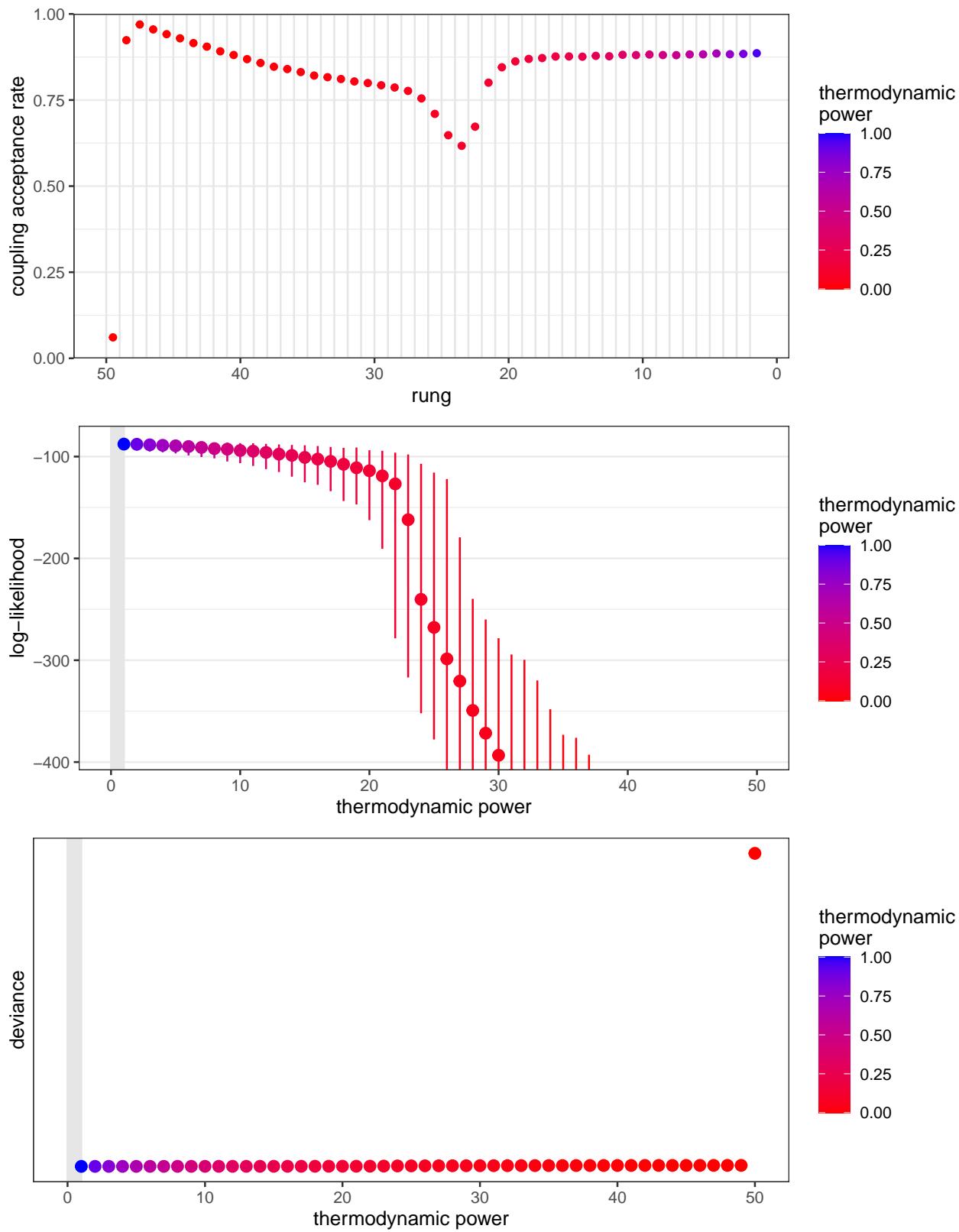
## CHE2 with Care Homes Excluded

### Fit Diagnostics

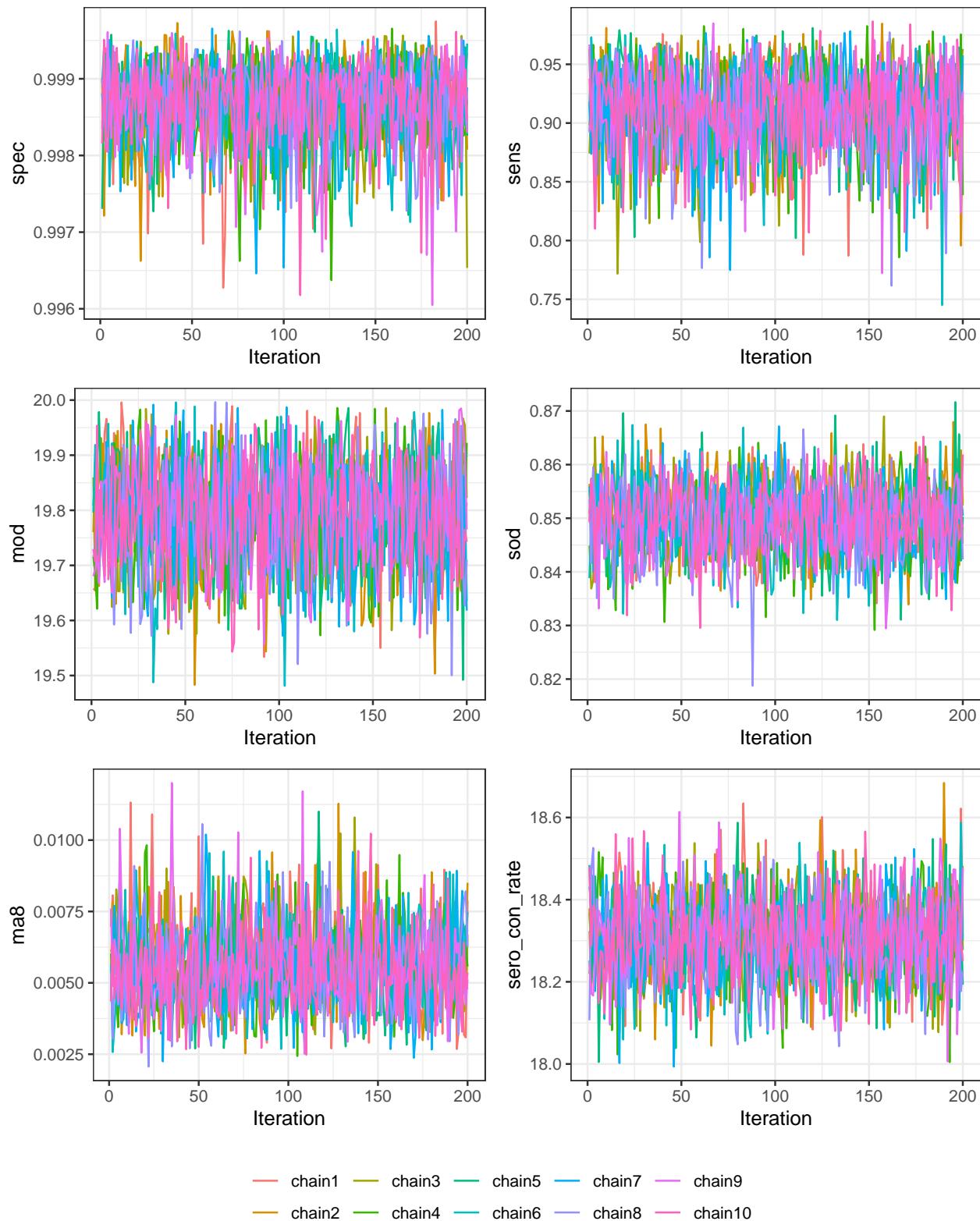
#### Log Likelihood & Prior Plot



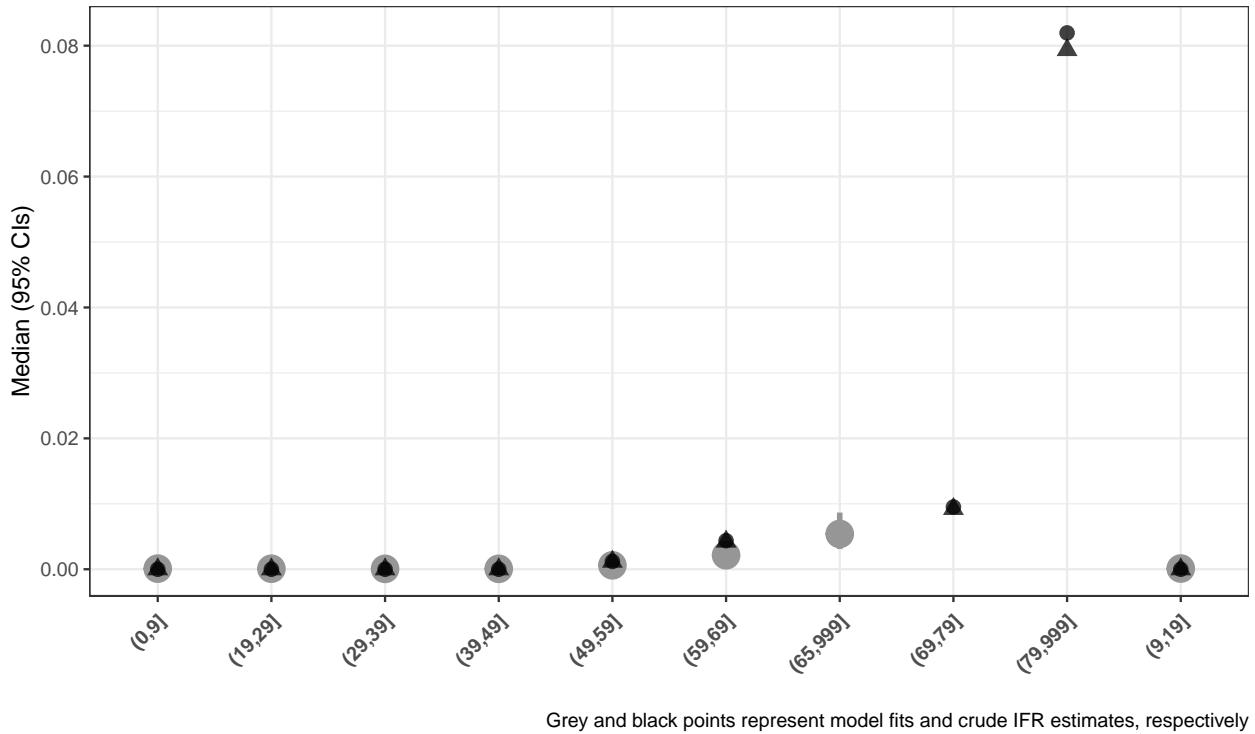
### Metropolis Coupling Acceptance Plot



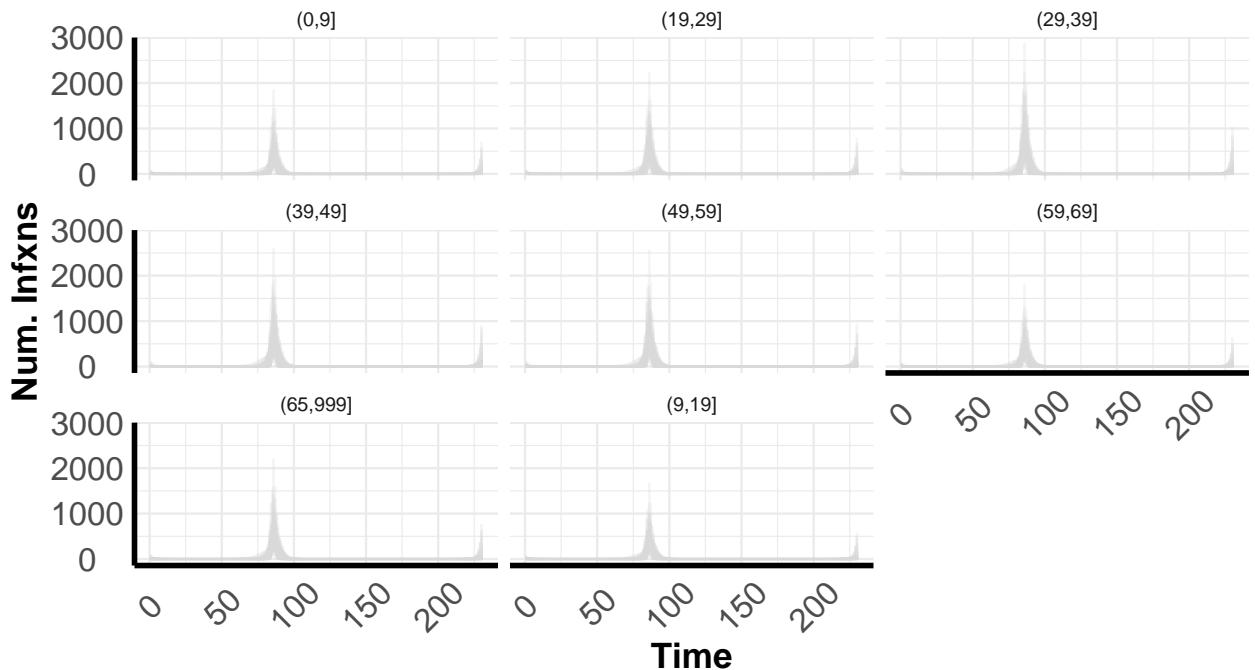
## Serological Diagnostics



## IFRs & Incidence Curve



## Posterior Draws of the Infection Curve



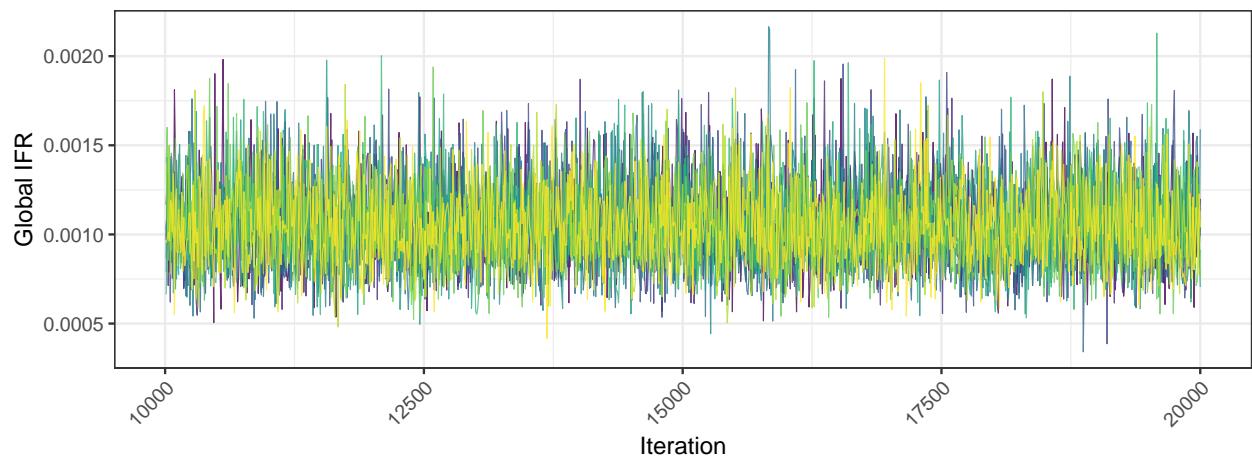
## Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
(0,9]	ma1	0.0000	0.0000	0.0001	0.0001	0.0002	0.0003	9130.243	0.4805	0.3554
(9,19]	ma2	0.0000	0.0000	0.0001	0.0001	0.0002	0.0003	9404.566	1.5236	0.1250
(19,29]	ma3	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	9049.691	0.6015	0.3329
(29,39]	ma4	0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	9637.606	1.1186	0.2134
(39,49]	ma5	0.0000	0.0000	0.0001	0.0001	0.0001	0.0002	9216.419	0.5920	0.3348
(49,59]	ma6	0.0000	0.0001	0.0006	0.0007	0.0016	0.0034	11239.543	-0.5413	0.3446
(59,69]	ma7	0.0000	0.0006	0.0021	0.0022	0.0043	0.0071	10000.000	-0.2401	0.3876
(65,999]	ma8	0.0013	0.0031	0.0054	0.0055	0.0087	0.0125	7570.110	0.0179	0.3989

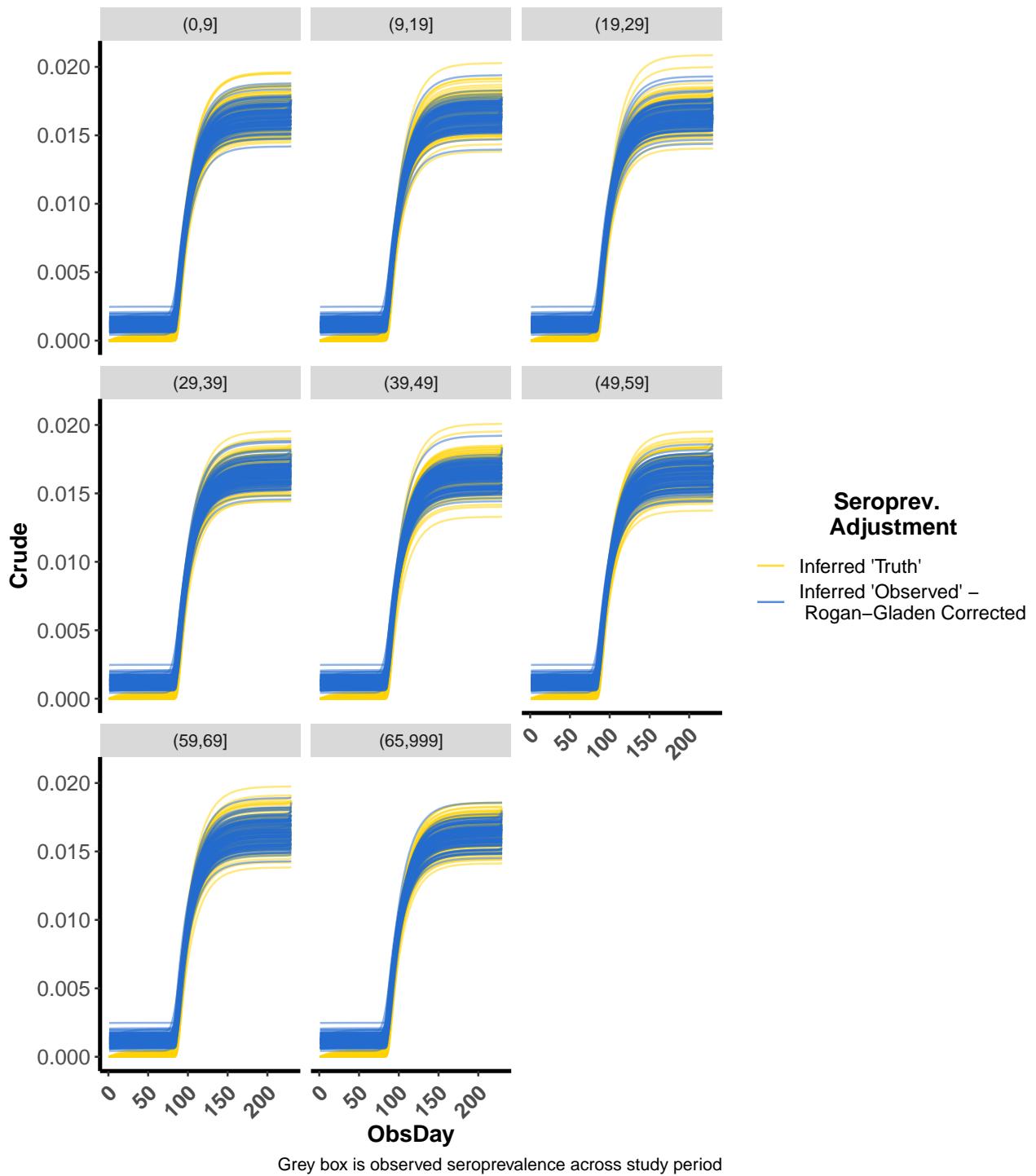
## Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
3e-04	7e-04	0.001	0.0011	0.0015	0.0022	8721.916	1.6458	0.103

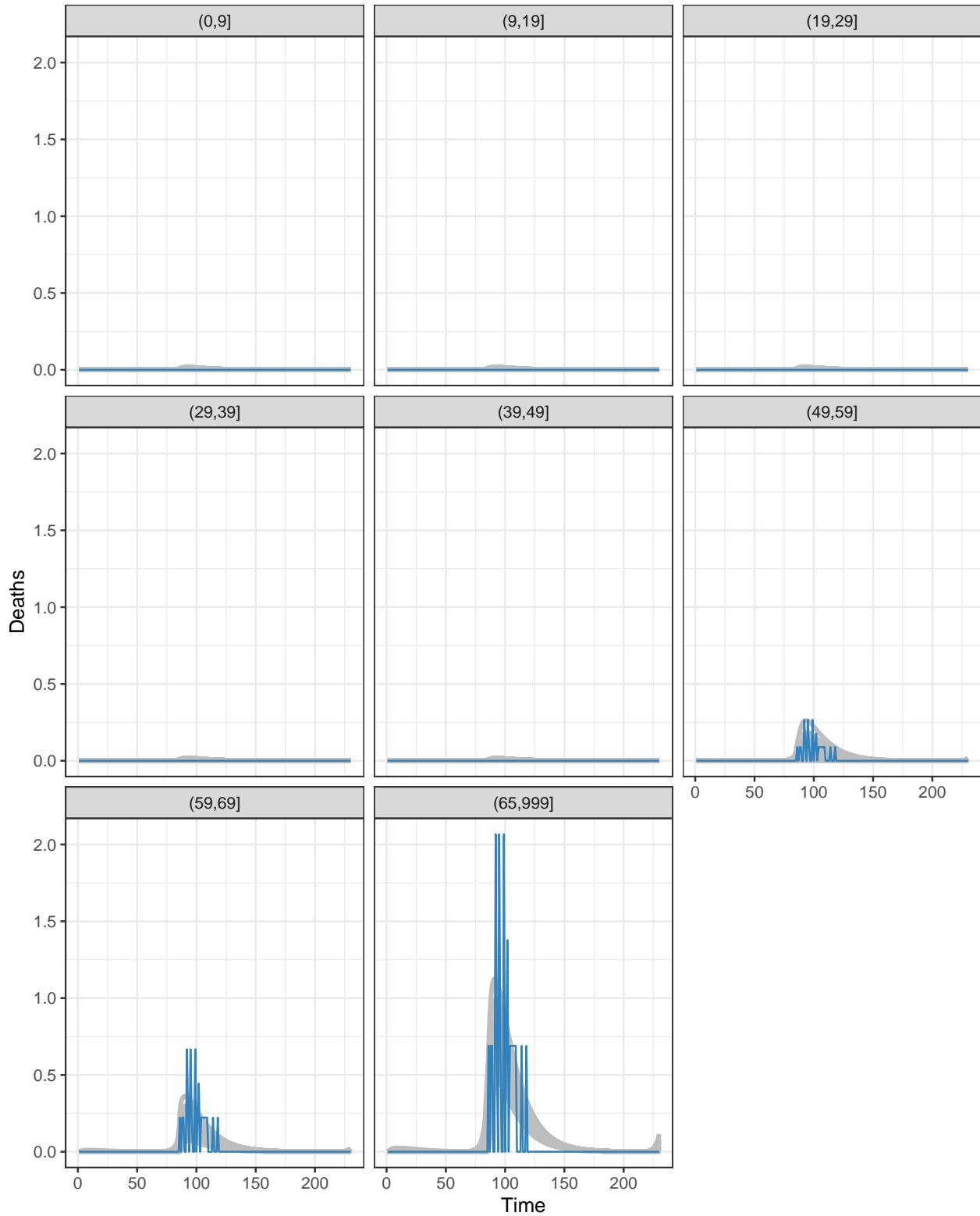
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	5e-04	7e-04	0.001	0.0010	0.0016	0.0020	1000.0000	0.1669	0.3934
chain2	5e-04	7e-04	0.001	0.0010	0.0015	0.0018	1000.0000	-0.7037	0.3115
chain3	4e-04	7e-04	0.001	0.0011	0.0016	0.0020	1000.0000	0.8650	0.2744
chain4	3e-04	7e-04	0.001	0.0011	0.0016	0.0018	867.6867	-0.2706	0.3846
chain5	5e-04	7e-04	0.001	0.0011	0.0015	0.0022	858.7175	0.2589	0.3858
chain6	5e-04	7e-04	0.001	0.0011	0.0015	0.0020	1000.0000	0.6607	0.3207
chain7	5e-04	7e-04	0.001	0.0010	0.0016	0.0021	888.7006	0.8882	0.2689
chain8	5e-04	7e-04	0.001	0.0011	0.0015	0.0019	818.8680	3.3611	0.0014
chain9	5e-04	7e-04	0.001	0.0010	0.0015	0.0018	1000.0000	0.0552	0.3983
chain10	4e-04	7e-04	0.001	0.0011	0.0015	0.0020	1000.0000	0.3491	0.3754



### Seroprevalence Observed vs. Inferred True Prev



## Death Posterior Predictive Check



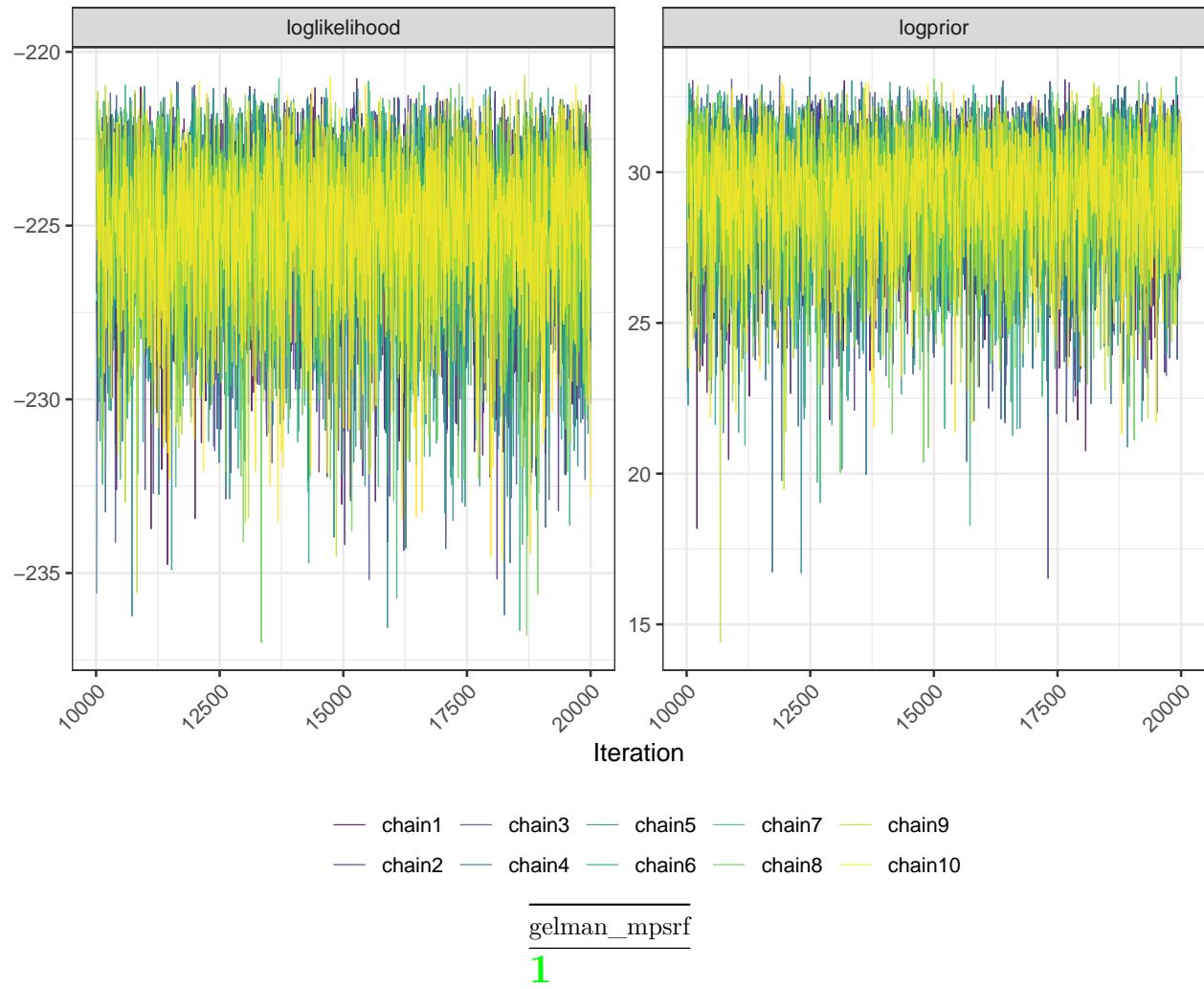
## Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.0703	1.3794	74.7311	69.7956	83.7482	90.2698	656.7204	1.0791	0.2229
x2	64.5557	76.1956	85.7428	85.7847	95.5089	111.0457	1925.8961	0.6416	0.3247
x3	82.8691	87.4769	97.1805	98.5124	116.6809	228.9284	2986.4371	-2.8069	0.0078
x4	216.0061	216.6681	225.0068	224.4044	229.7815	229.9985	6648.9475	1.0461	0.2308
y1	0.0008	0.1507	2.6382	2.7791	6.1578	7.7061	8317.2444	0.6599	0.3209
y2	0.0001	0.1104	2.3801	2.7071	6.7926	8.8562	3958.4260	-0.8829	0.2702
y3	3.0250	4.8948	7.5605	7.3862	8.9568	11.0907	677.9862	-0.9132	0.2629
y4	0.0004	0.1417	2.8357	3.0561	7.2109	9.0137	4925.0290	-0.8670	0.2740
y5	0.0016	0.1228	2.4104	2.6415	6.4951	8.8322	9531.4772	-1.6401	0.1039
Ne1	0.8123	0.9075	1.0013	1.0007	1.0941	1.1775	10000.0000	0.0082	0.3989
Ne2	0.8182	0.9035	0.9995	0.9997	1.0954	1.1798	9637.2332	-0.0563	0.3983
Ne3	0.8315	0.9065	1.0005	1.0003	1.0945	1.1711	9662.9475	0.0966	0.3971
Ne4	0.7999	0.9062	0.9993	1.0001	1.0974	1.1925	9659.9850	0.6525	0.3225
Ne5	0.8192	0.9058	0.9996	0.9999	1.0936	1.1893	10000.0000	-0.6352	0.3261
Ne6	0.8287	0.9054	0.9991	0.9993	1.0947	1.1902	9604.2482	1.6933	0.0951
Ne7	0.8246	0.9071	0.9994	0.9998	1.0938	1.1924	8695.8353	-0.7095	0.3102
Ne8	0.8329	0.9115	1.0008	1.0017	1.0953	1.1839	10000.0000	-0.2903	0.3825

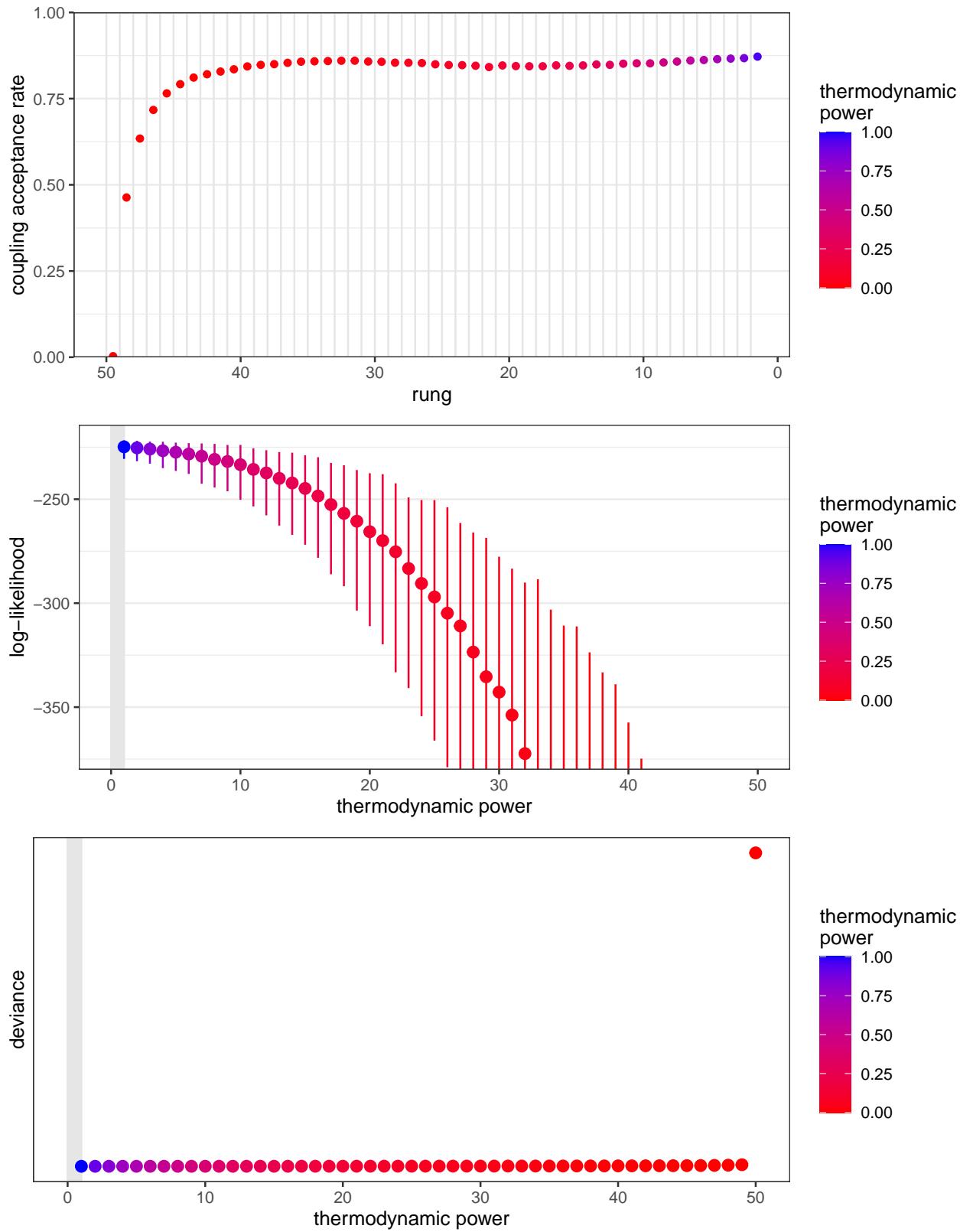
# DNK1 with Care Homes Excluded

## Fit Diagnostics

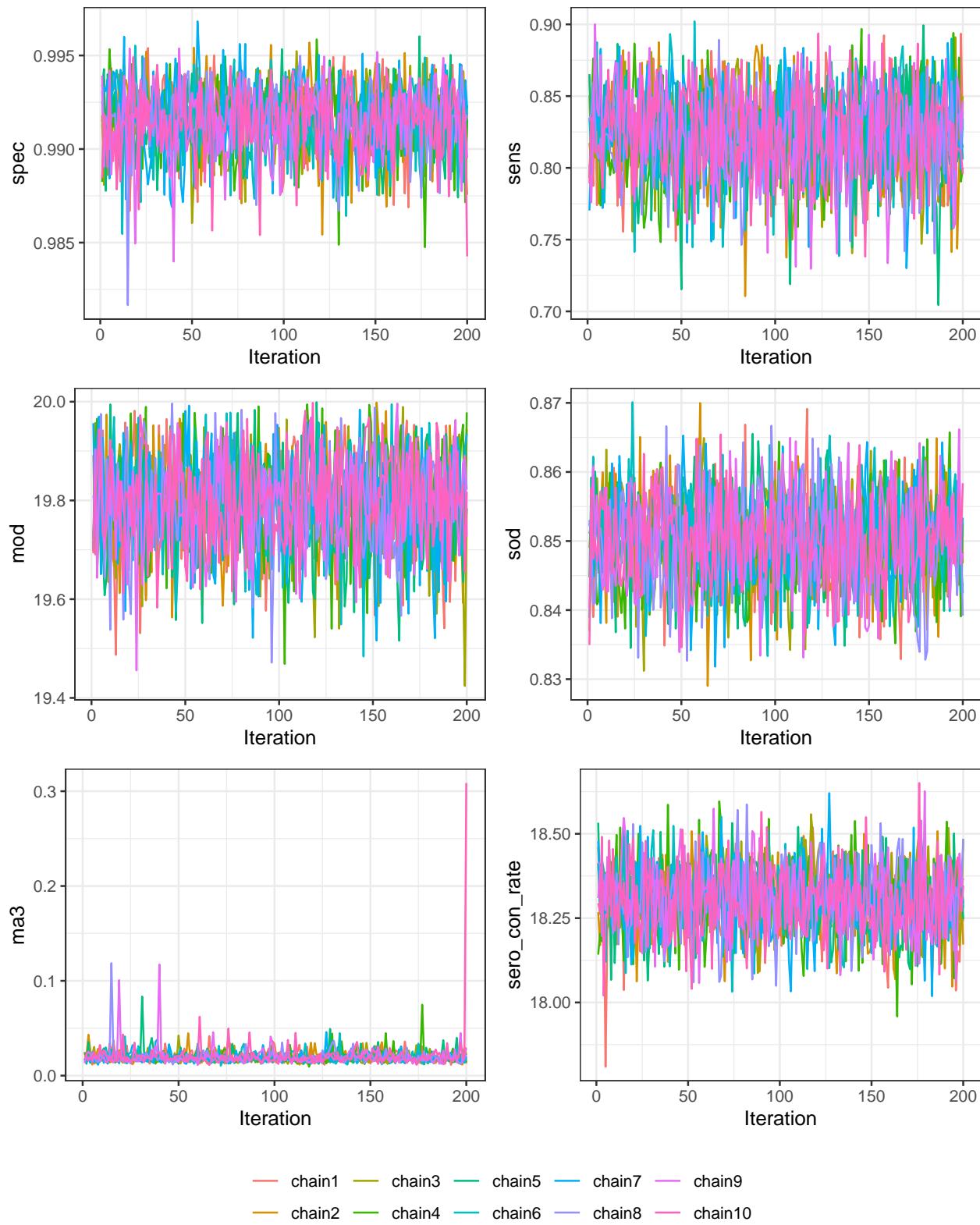
### Log Likelihood & Prior Plot



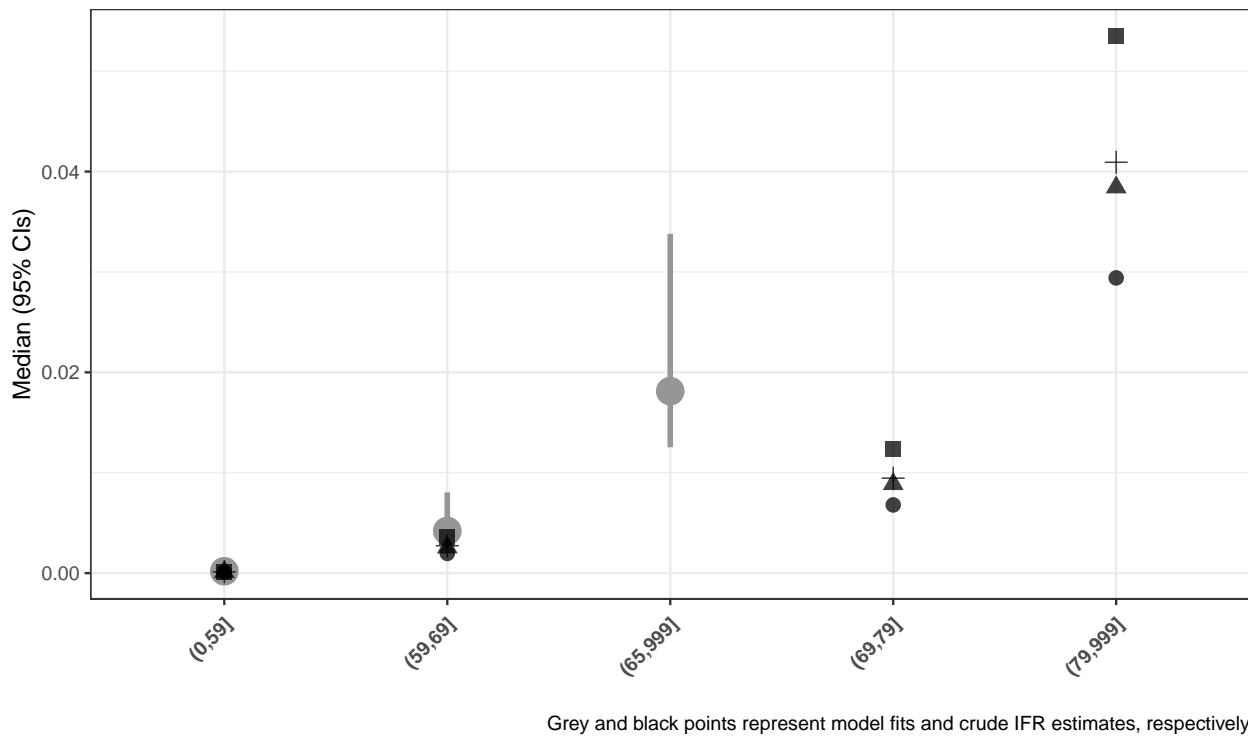
### Metropolis Coupling Acceptance Plot



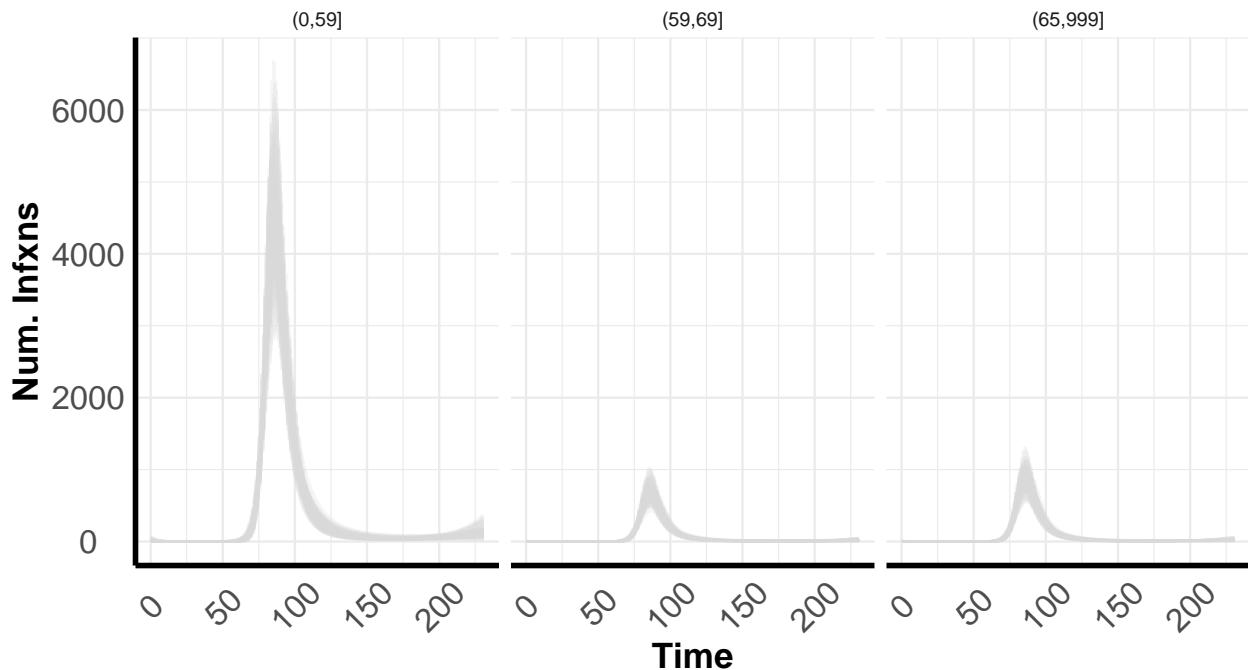
## Serological Diagnostics



## IFRs & Incidence Curve



## Posterior Draws of the Infection Curve



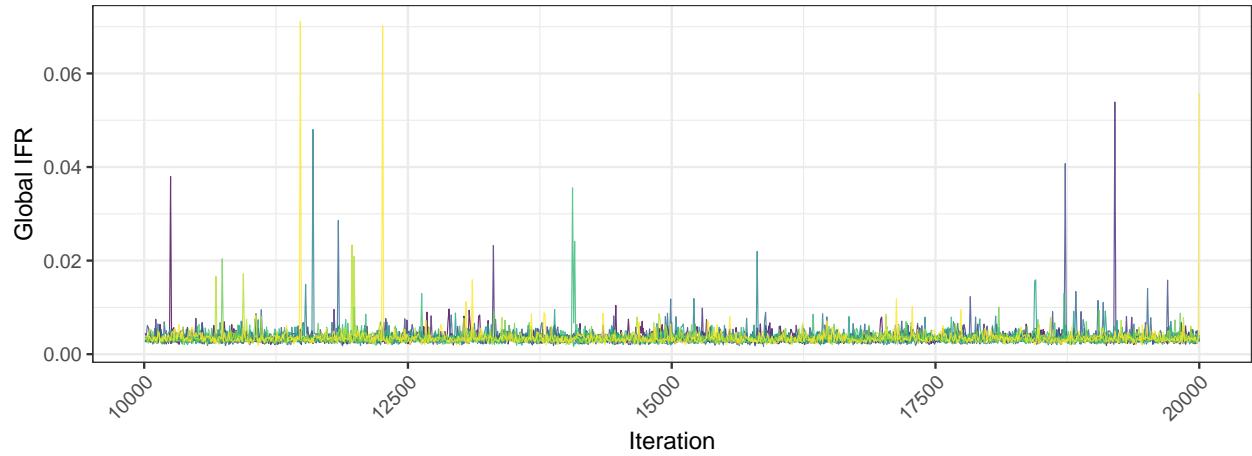
### Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
(0,59]	ma1	0.0001	0.0001	0.0002	0.0002	0.0004	0.0058	9234.365	1.3603	0.1582
(59,69]	ma2	0.0017	0.0027	0.0042	0.0045	0.0080	0.1028	8375.937	0.2228	0.3892
(65,999]	ma3	0.0093	0.0125	0.0181	0.0196	0.0338	0.3964	8399.972	0.7166	0.3086

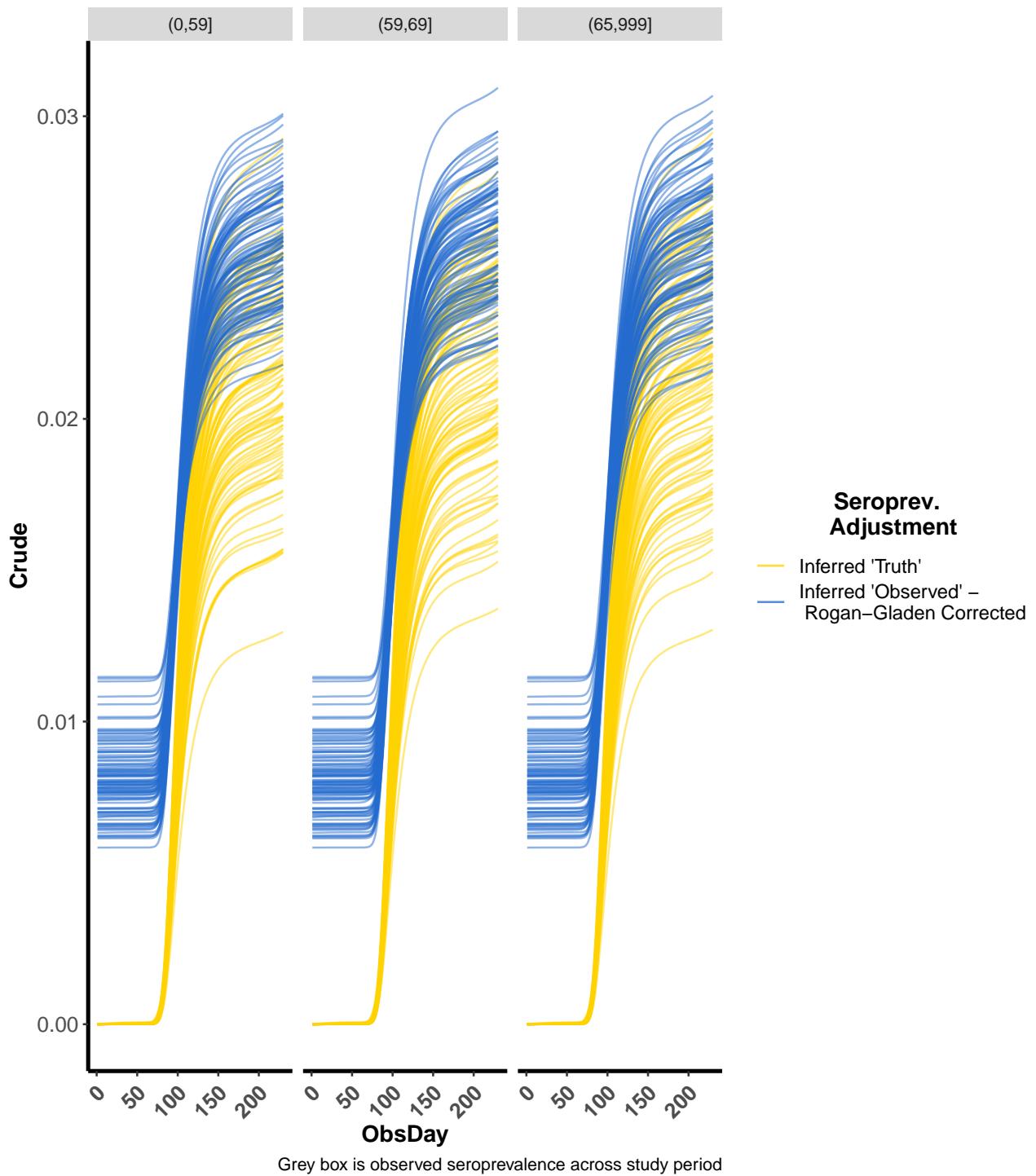
### Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0017	0.0022	0.0032	0.0035	0.006	0.0697	10000	1.2098	0.1919

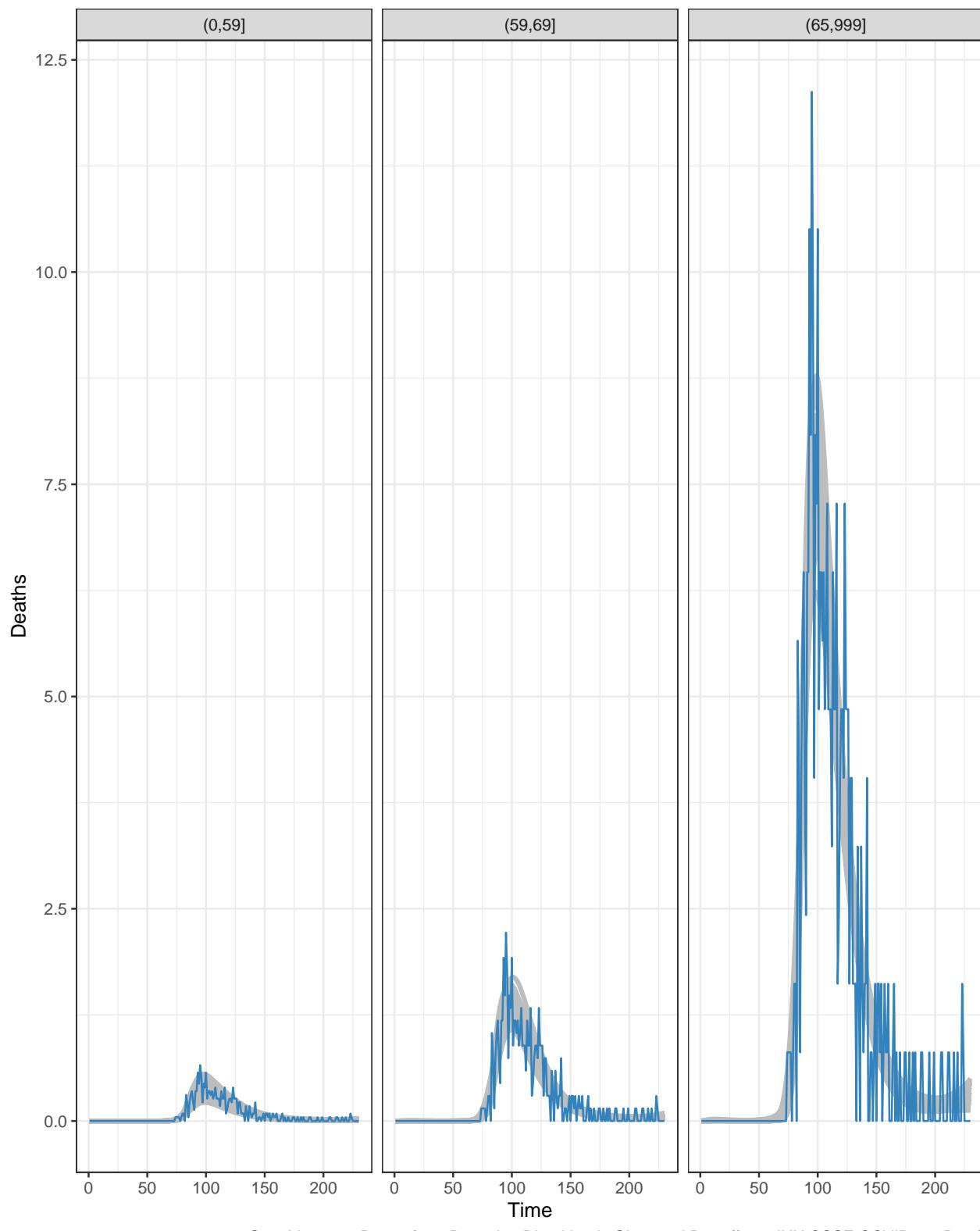
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0019	0.0022	0.0033	0.0035	0.0061	0.0363	1000.0000	1.2704	0.1780
chain2	0.0018	0.0022	0.0032	0.0034	0.0058	0.0529	1000.0000	-0.4819	0.3552
chain3	0.0019	0.0022	0.0032	0.0034	0.0054	0.0402	898.0787	-0.1512	0.3944
chain4	0.0017	0.0022	0.0032	0.0035	0.0063	0.0295	1000.0000	-0.6116	0.3309
chain5	0.0020	0.0022	0.0032	0.0035	0.0061	0.0444	641.7659	-0.4564	0.3595
chain6	0.0017	0.0023	0.0032	0.0035	0.0059	0.0157	701.3527	-1.0428	0.2316
chain7	0.0019	0.0022	0.0032	0.0035	0.0059	0.0352	585.9807	-0.3982	0.3685
chain8	0.0019	0.0023	0.0032	0.0034	0.0058	0.0203	1000.0000	0.8308	0.2825
chain9	0.0019	0.0023	0.0032	0.0035	0.0058	0.0217	568.8551	1.5865	0.1133
chain10	0.0019	0.0023	0.0032	0.0037	0.0063	0.0697	1000.0000	0.3112	0.3801



## Seroprevalence Observed vs. Inferred True Prev



## Death Posterior Predictive Check



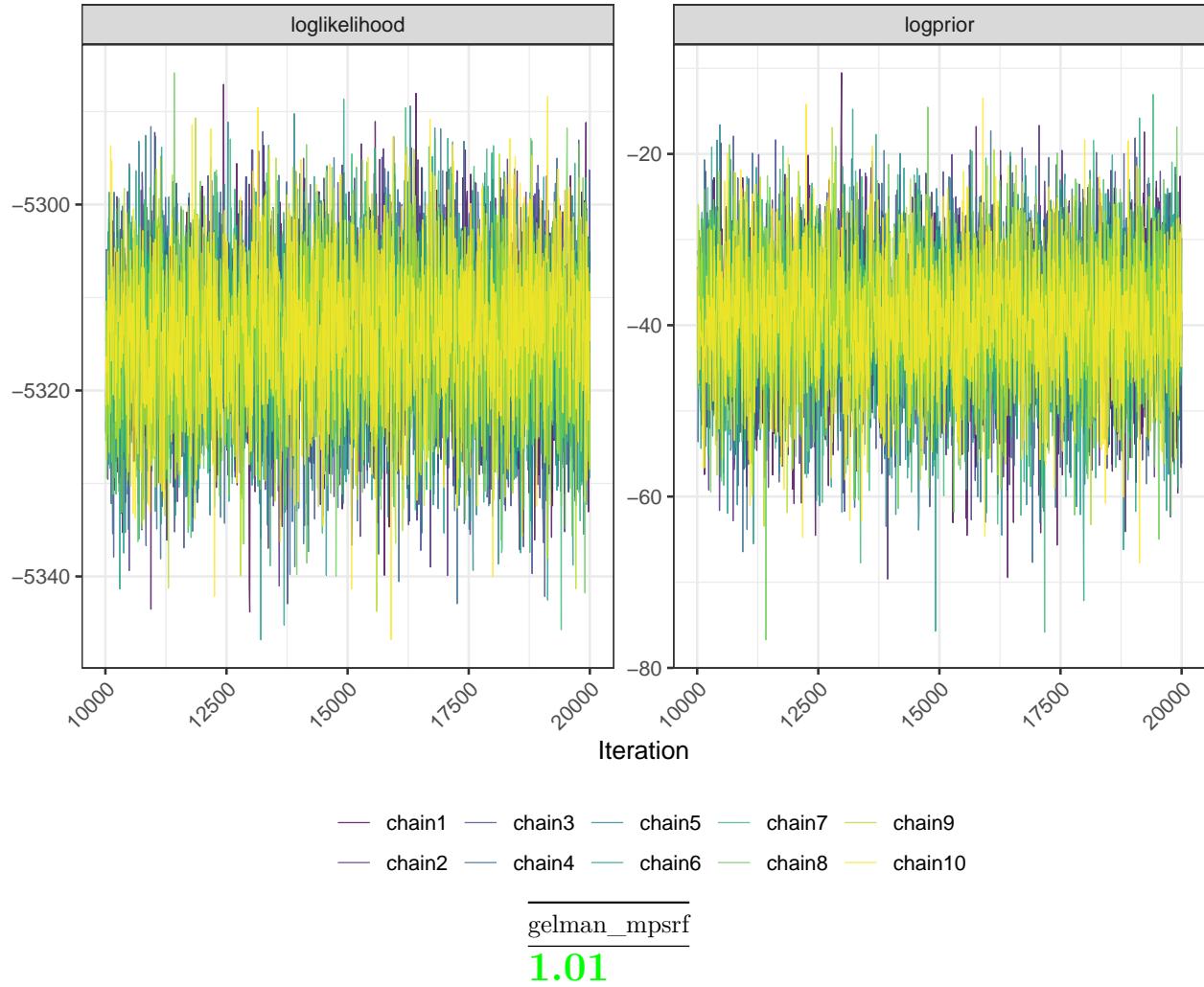
## Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.0943	2.5176	57.6426	52.5731	71.1063	77.6089	1578.003	-0.5358	0.3456
x2	63.1529	72.9967	81.1443	81.3380	90.3987	97.8476	2586.340	0.6411	0.3248
x3	83.6480	89.5596	99.8708	100.6164	115.9586	148.7192	2699.105	0.2290	0.3886
x4	216.0010	216.3887	223.0403	223.0393	229.6613	229.9999	6639.441	0.1206	0.3961
y1	0.0002	0.0836	1.9424	2.1180	5.1482	7.0779	6898.194	-0.2452	0.3871
y2	0.0001	0.0689	1.7301	2.0774	5.7277	7.4878	3120.634	1.6120	0.1088
y3	4.9692	6.7852	8.2829	8.1572	8.9449	9.2682	2397.392	-0.2755	0.3841
y4	3.0663	5.7329	7.4893	7.3995	8.4907	9.0991	2747.984	-0.3973	0.3687
y5	0.7866	3.5085	4.8880	4.8732	6.1175	7.5821	9548.895	-0.7256	0.3066
Ne1	0.8235	0.9044	1.0004	1.0007	1.0997	1.1877	9626.022	-0.1658	0.3935
Ne2	0.8074	0.9018	0.9992	0.9995	1.0972	1.1881	10000.000	1.5958	0.1117
Ne3	0.8155	0.9036	0.9994	0.9994	1.0963	1.1774	10000.000	-1.3767	0.1547

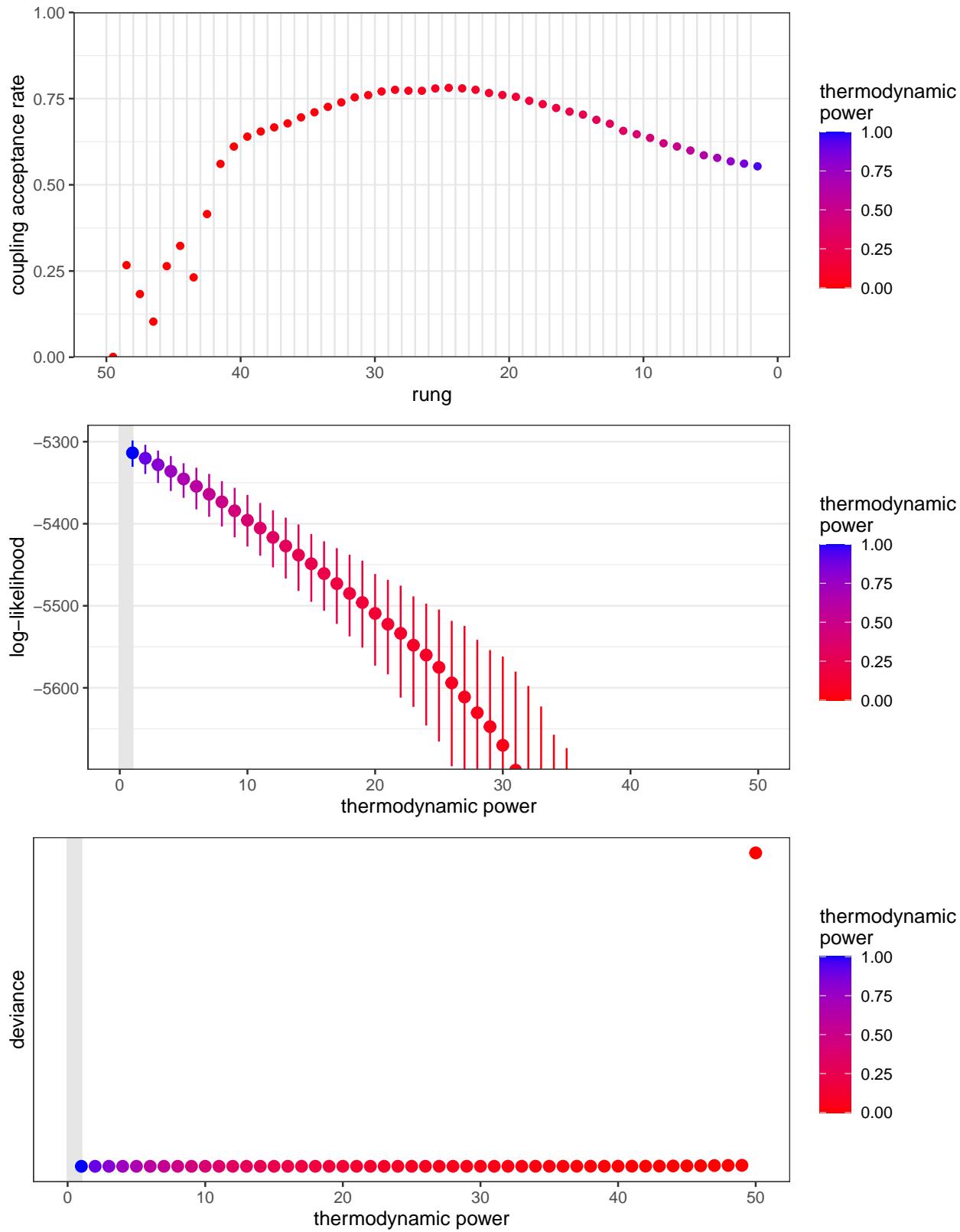
## ESP1-2 with Care Homes Excluded

### Fit Diagnostics

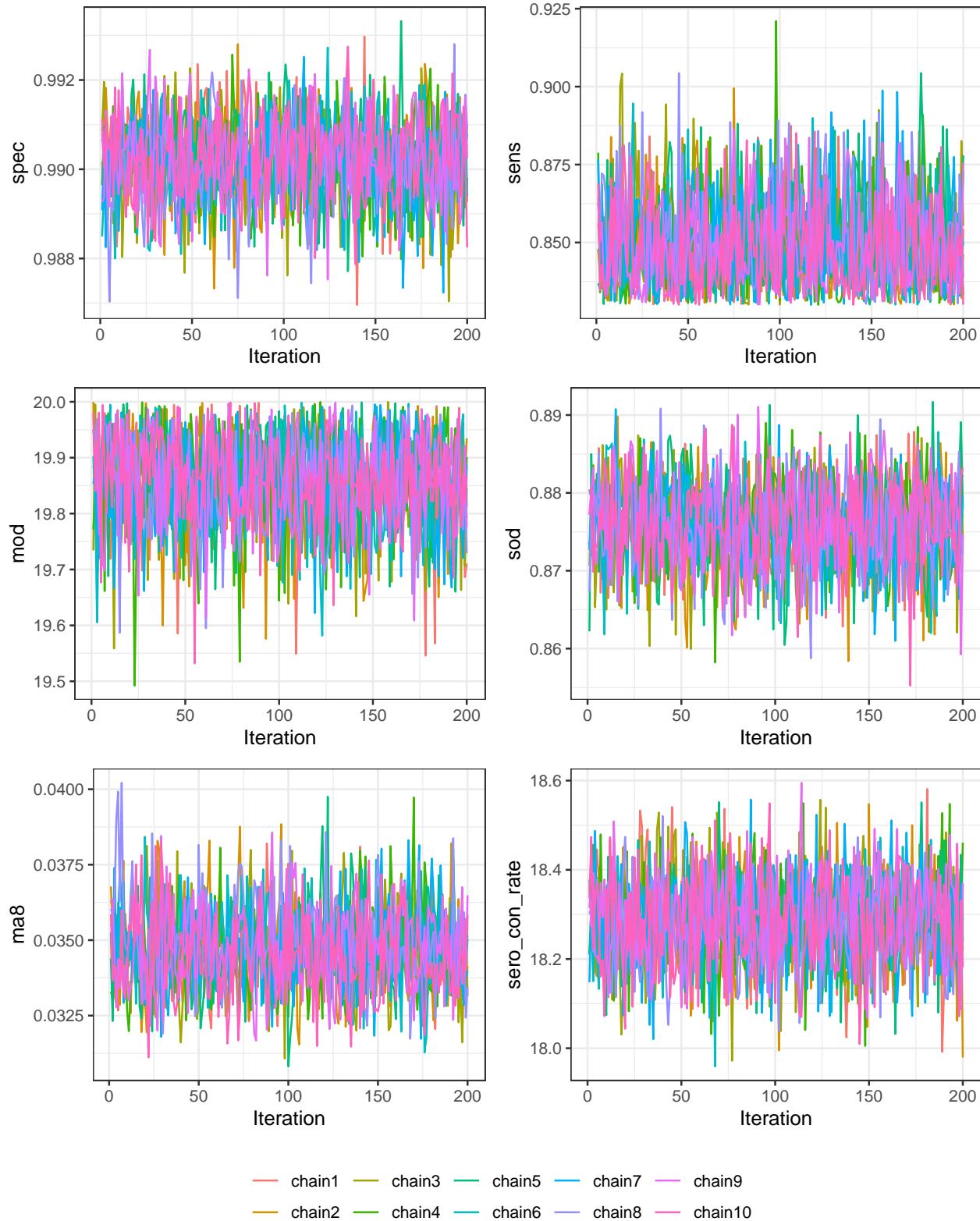
#### Log Likelihood & Prior Plot



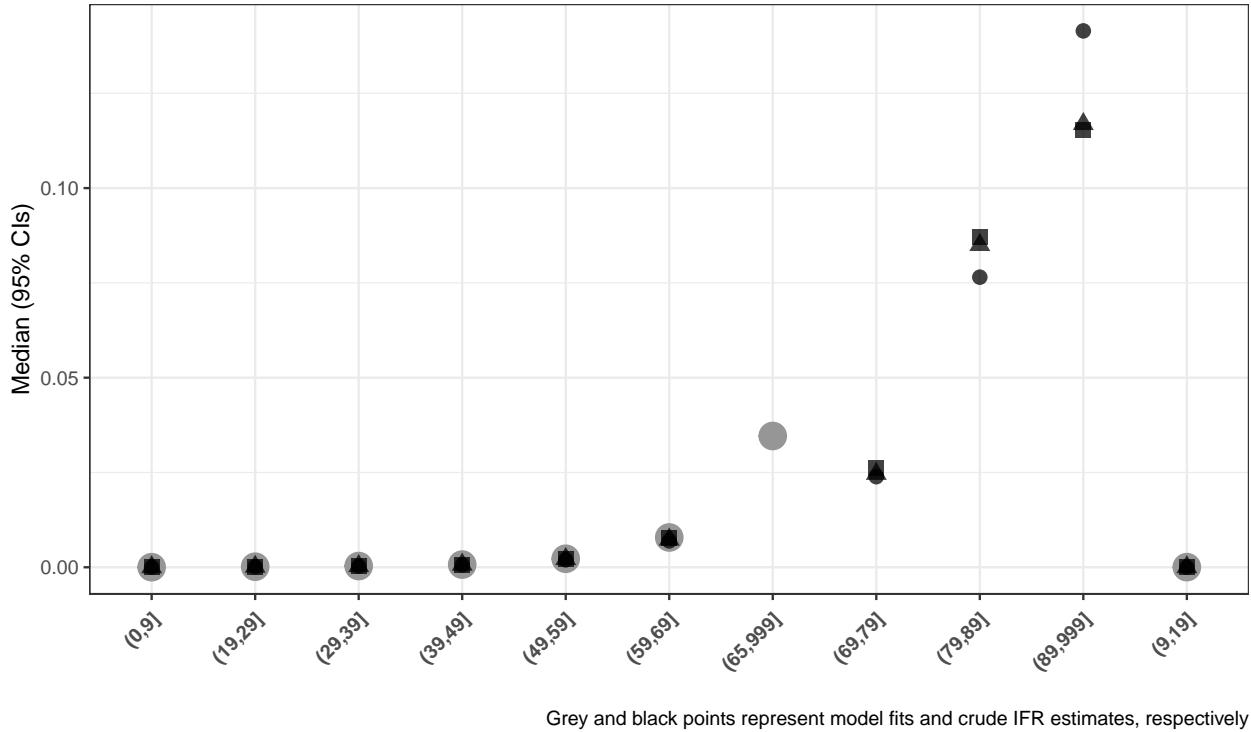
### Metropolis Coupling Acceptance Plot



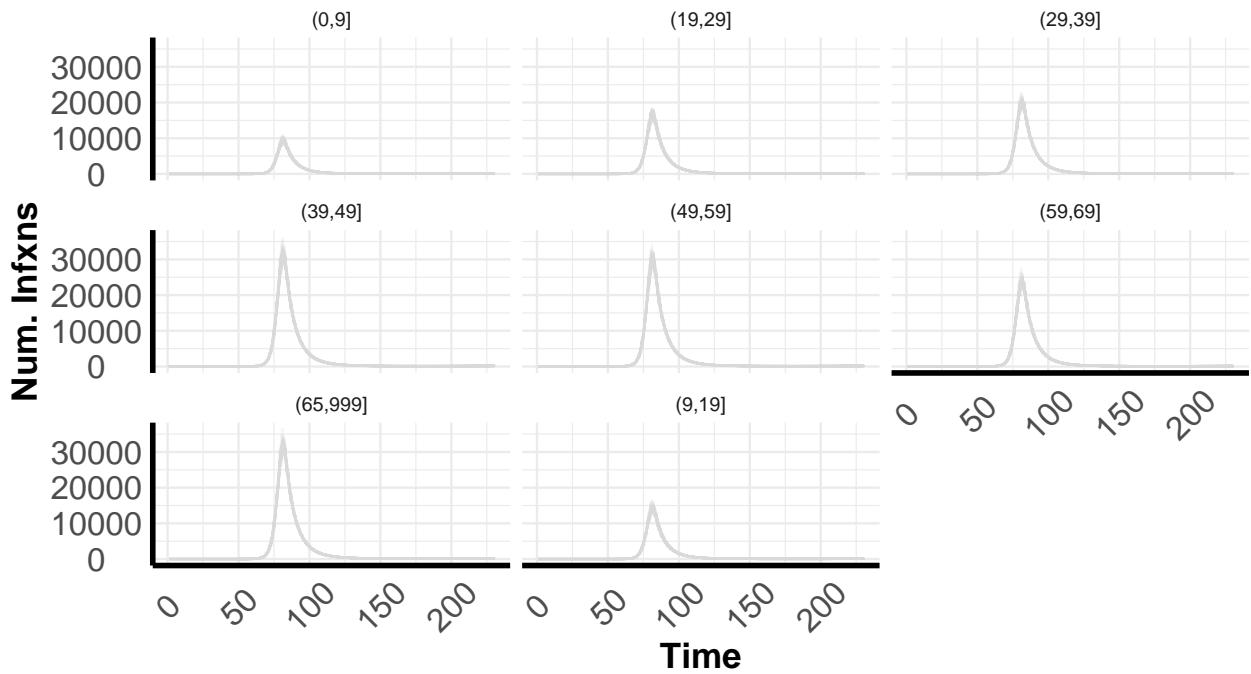
## Serological Diagnostics



## IFRs & Incidence Curve



## Posterior Draws of the Infection Curve



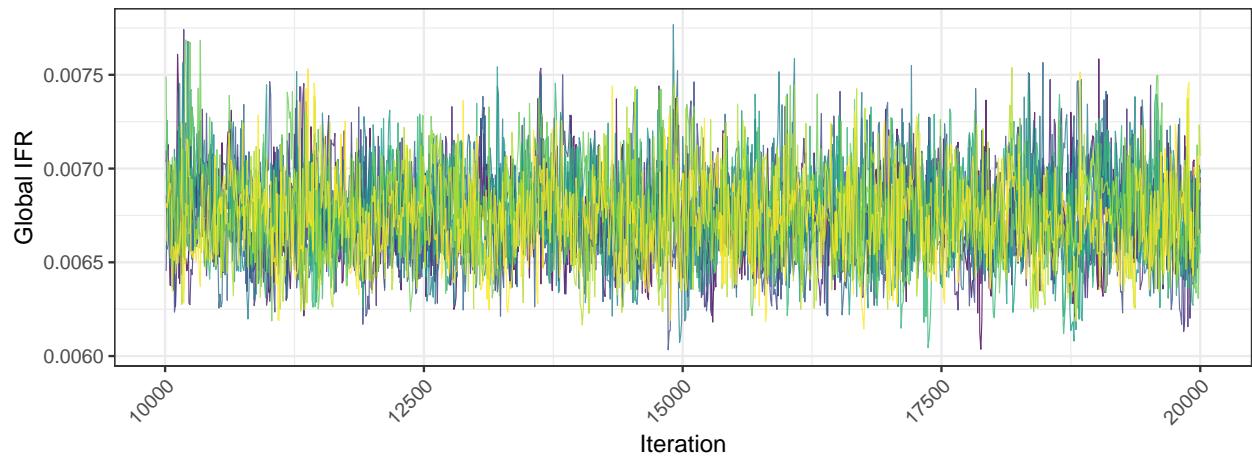
### Strata IFR

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	9391.442	0.3436	0.3761
(9,19]	ma2	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	9419.313	-0.1129	0.3964
(19,29]	ma3	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	9401.167	-0.7870	0.2927
(29,39]	ma4	0.0002	0.0003	0.0003	0.0003	0.0004	0.0005	8282.150	-2.3119	0.0276
(39,49]	ma5	0.0005	0.0006	0.0007	0.0007	0.0008	0.0009	6314.763	-1.5774	0.1150
(49,59]	ma6	0.0019	0.0020	0.0022	0.0022	0.0025	0.0028	4204.811	0.5866	0.3359
(59,69]	ma7	0.0068	0.0073	0.0079	0.0079	0.0085	0.0095	3861.975	-1.4024	0.1492
(65,999]	ma8	0.0305	0.0323	0.0346	0.0347	0.0374	0.0402	2009.933	-2.4156	0.0216

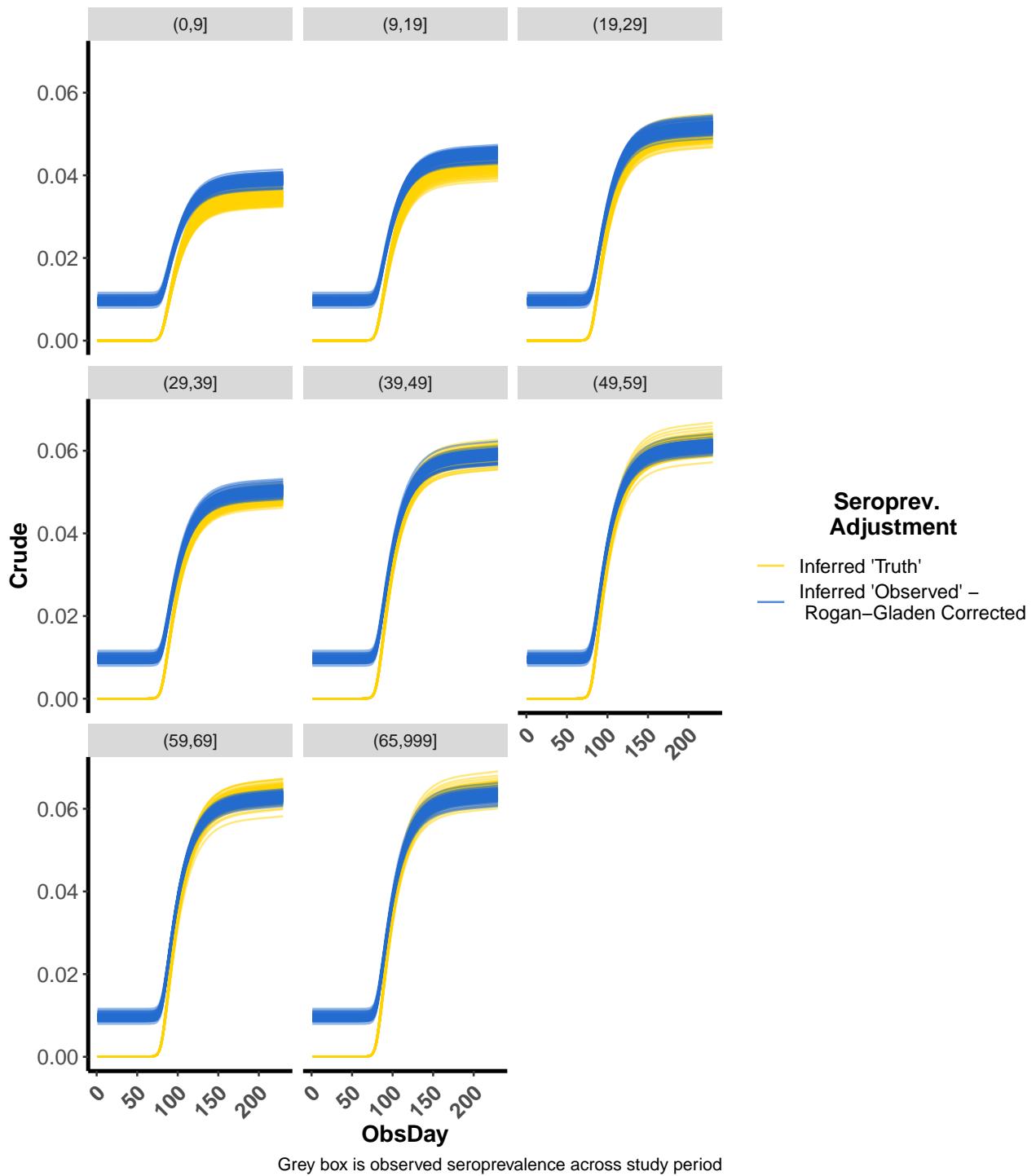
### Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0071	0.0074	0.0078	0.0078	0.0084	0.0091	3371.917	2.1025	0.0438

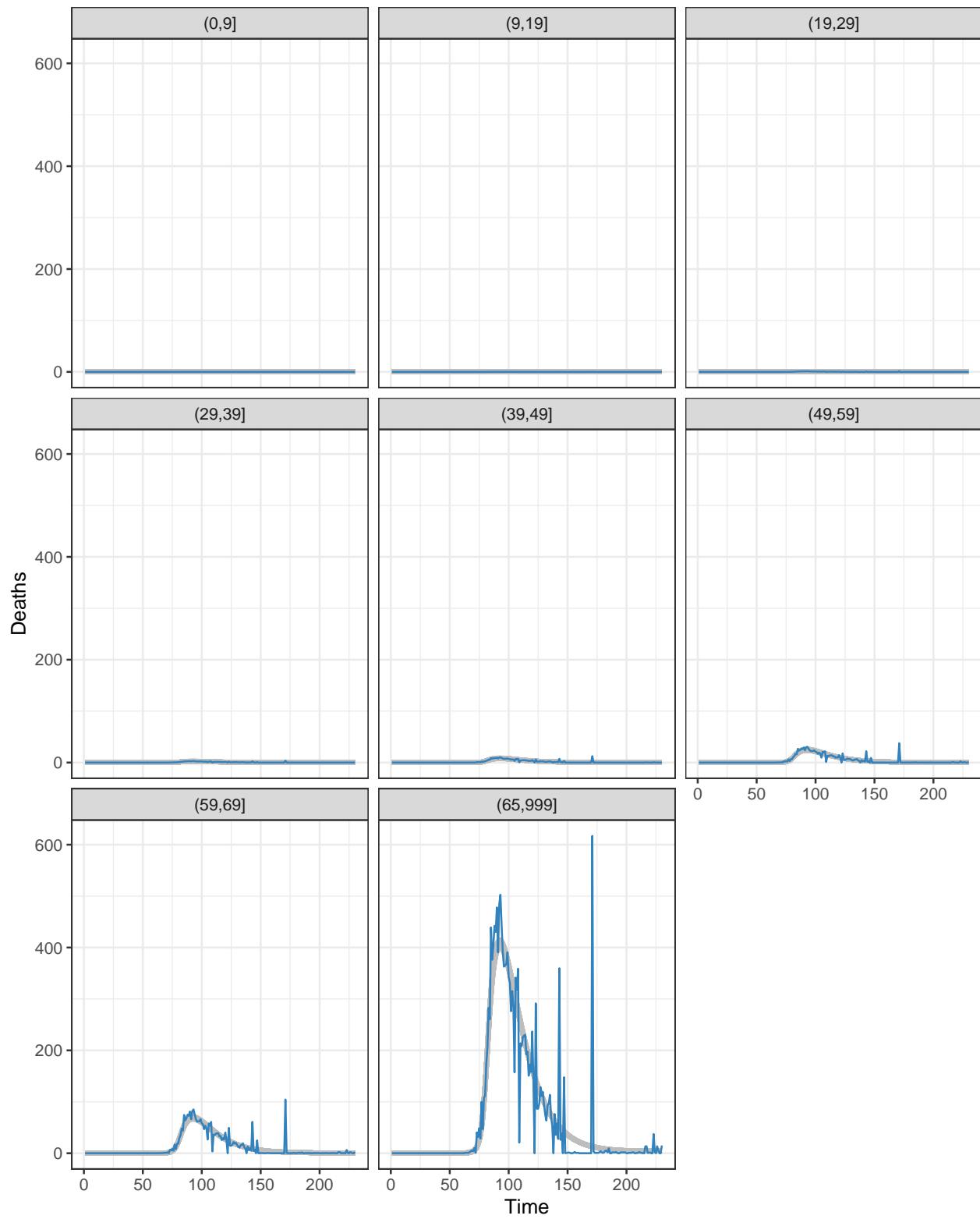
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0073	0.0074	0.0078	0.0078	0.0083	0.0087	336.7048	0.9822	0.2463
chain2	0.0073	0.0074	0.0078	0.0078	0.0083	0.0088	318.4004	-0.2259	0.3889
chain3	0.0072	0.0074	0.0078	0.0079	0.0083	0.0087	320.7165	1.3745	0.1551
chain4	0.0072	0.0074	0.0078	0.0078	0.0084	0.0087	567.4421	0.1117	0.3965
chain5	0.0073	0.0074	0.0078	0.0079	0.0084	0.0089	213.4736	0.1536	0.3943
chain6	0.0072	0.0074	0.0079	0.0079	0.0084	0.0087	216.2865	4.1454	0.0001
chain7	0.0072	0.0074	0.0079	0.0079	0.0084	0.0087	226.8724	-0.1645	0.3936
chain8	0.0071	0.0075	0.0079	0.0079	0.0084	0.0091	245.2332	3.3061	0.0017
chain9	0.0072	0.0074	0.0078	0.0078	0.0083	0.0087	316.9264	-2.2389	0.0325
chain10	0.0072	0.0074	0.0078	0.0078	0.0083	0.0089	250.3999	1.2883	0.1740



### 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)

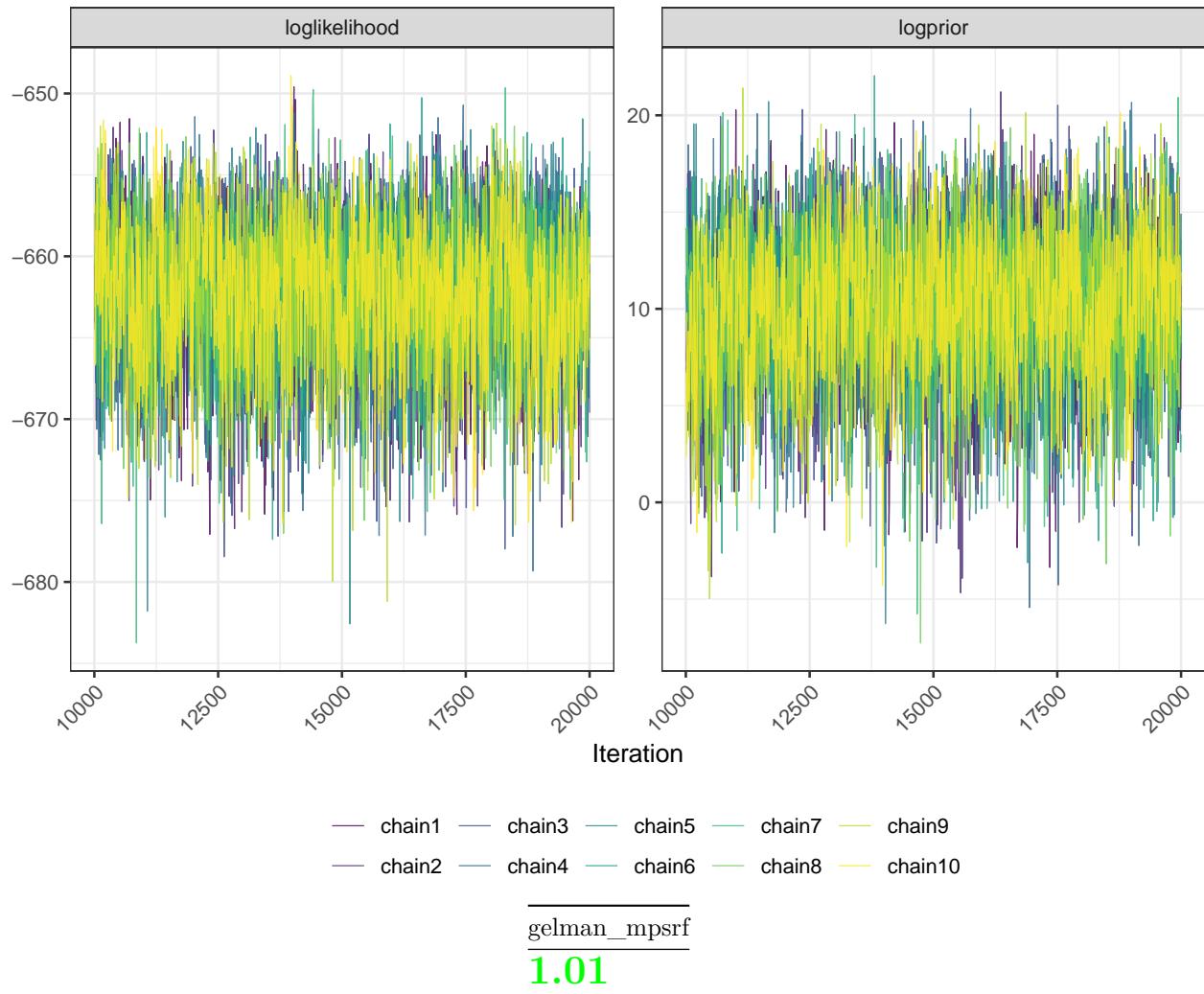
## Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.2140	55.0696	66.3469	65.8205	72.5204	76.8151	697.5067	2.2968	0.0285
x2	77.6499	80.6451	82.4402	82.3705	83.7691	84.9950	541.6760	-3.5221	0.0008
x3	82.2813	83.6779	85.1493	85.1639	86.7099	88.0971	295.6472	-0.6672	0.3193
x4	216.0004	216.1589	220.1146	220.9418	229.1420	229.9964	537.6496	0.8198	0.2851
y1	0.0000	0.0416	0.9904	1.1913	3.2983	4.7671	6998.4449	-1.0393	0.2325
y2	0.0279	2.2763	7.6581	7.3441	9.9249	11.2083	637.0733	2.1622	0.0385
y3	11.6183	11.9169	12.0297	12.0294	12.1376	12.2080	846.9239	3.3968	0.0012
y4	11.3584	11.5416	11.7365	11.7307	11.9100	12.0973	273.2198	0.5983	0.3336
y5	6.2071	6.4512	6.7230	6.7323	7.0547	7.3710	2322.6891	1.4905	0.1314
Ne1	0.5157	0.5728	0.6405	0.6407	0.7088	0.7883	8635.2716	0.0652	0.3981
Ne2	0.6583	0.7130	0.7722	0.7728	0.8357	0.9038	8070.3864	-1.2621	0.1799
Ne3	0.7852	0.8499	0.9161	0.9162	0.9850	1.0440	8237.6744	0.1996	0.3911
Ne4	0.7720	0.8294	0.8898	0.8907	0.9541	1.0165	7169.1970	0.8965	0.2669
Ne5	0.9444	1.0086	1.0681	1.0686	1.1291	1.1986	6141.6158	0.3611	0.3738
Ne6	1.0025	1.0650	1.1235	1.1239	1.1846	1.2375	6848.5747	-1.3475	0.1609
Ne7	1.0373	1.0941	1.1556	1.1559	1.2203	1.2840	5927.9779	-0.3515	0.3750
Ne8	1.0588	1.1039	1.1703	1.1700	1.2354	1.2822	2981.8610	1.5715	0.1161

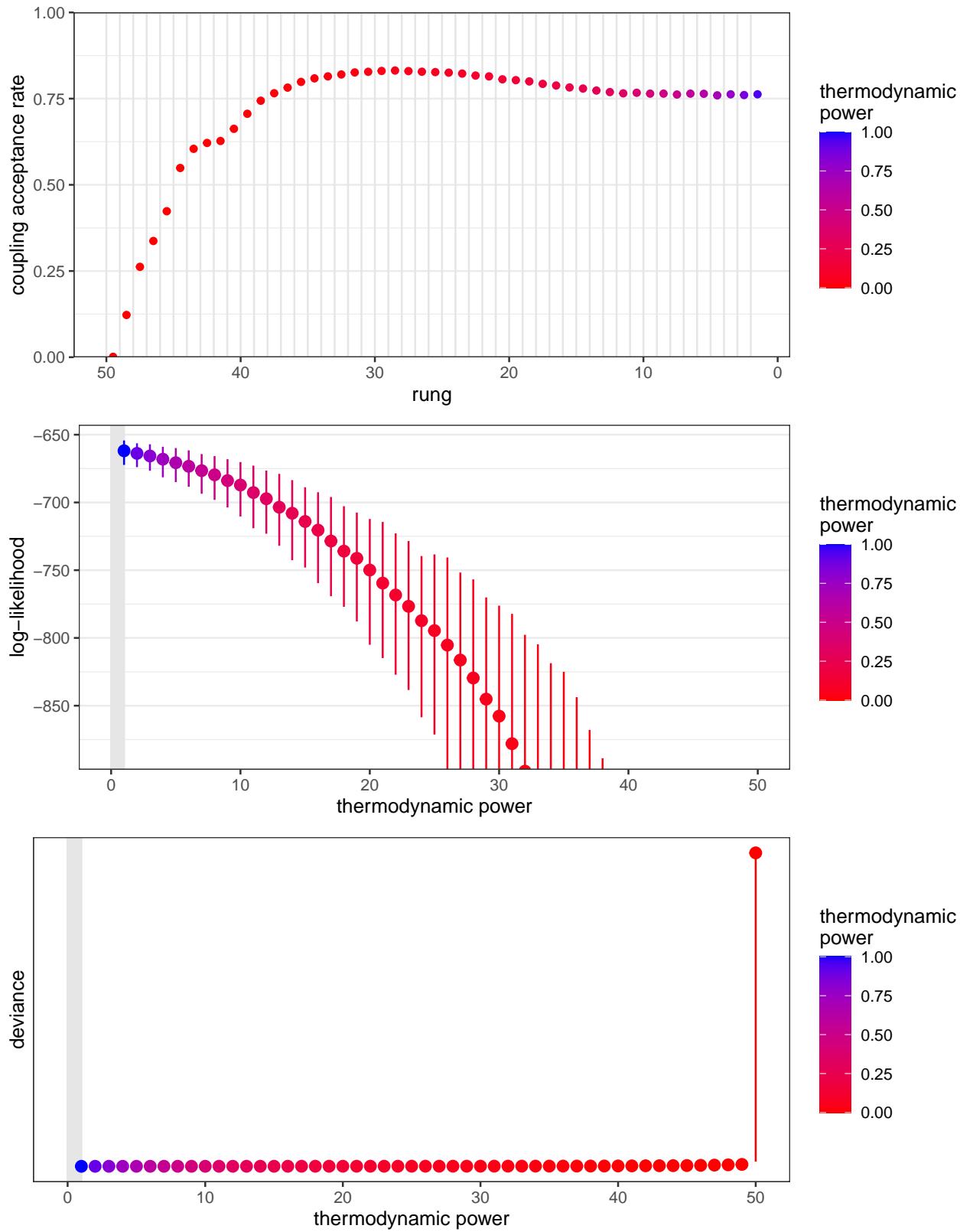
## GBR3 with Care Homes Excluded

### Fit Diagnostics

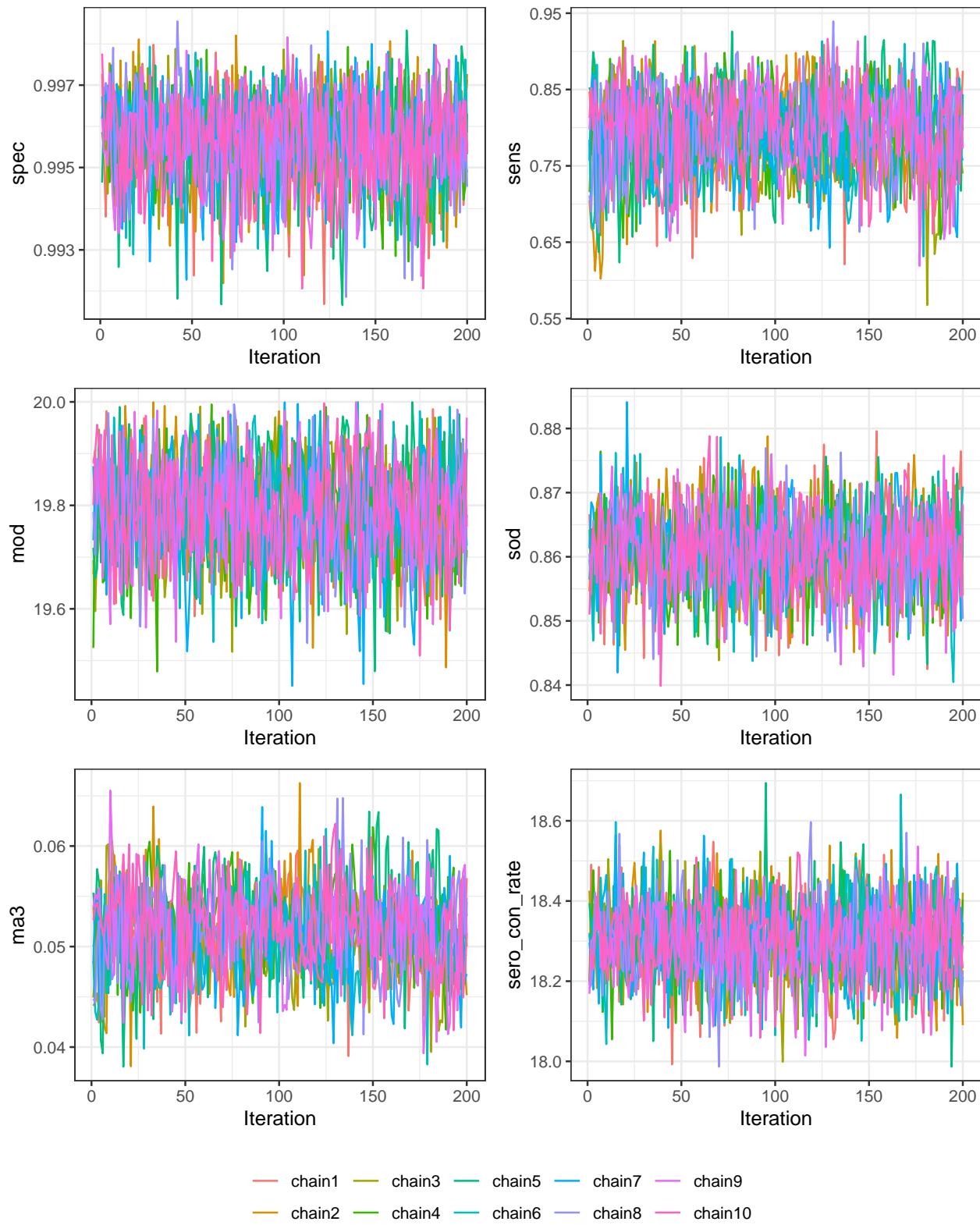
#### Log Likelihood & Prior Plot



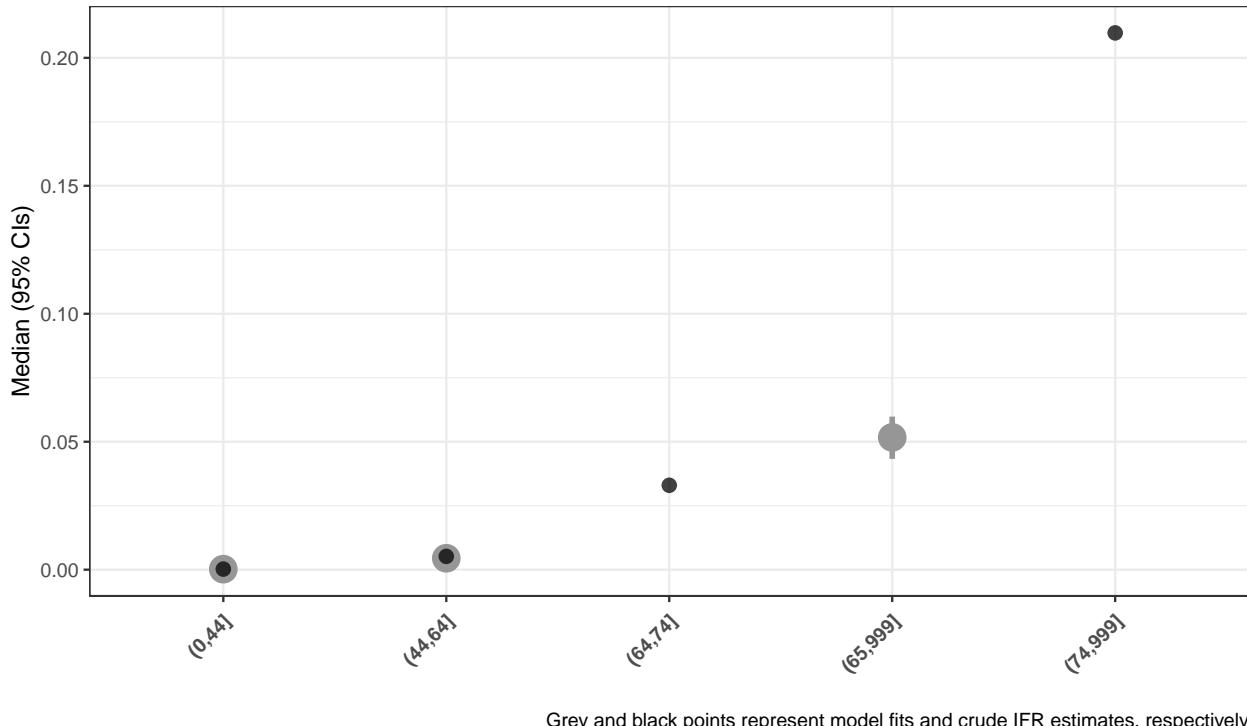
### Metropolis Coupling Acceptance Plot



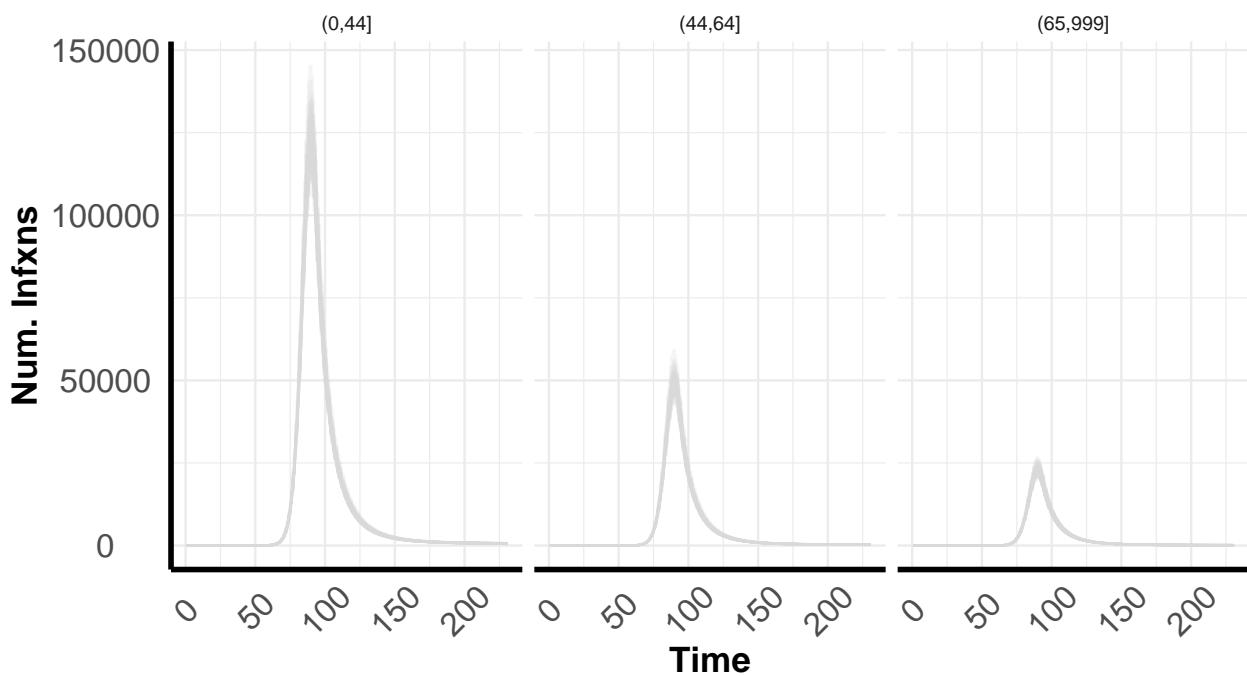
## Serological Diagnostics



## IFRs & Incidence Curve



## Posterior Draws of the Infection Curve



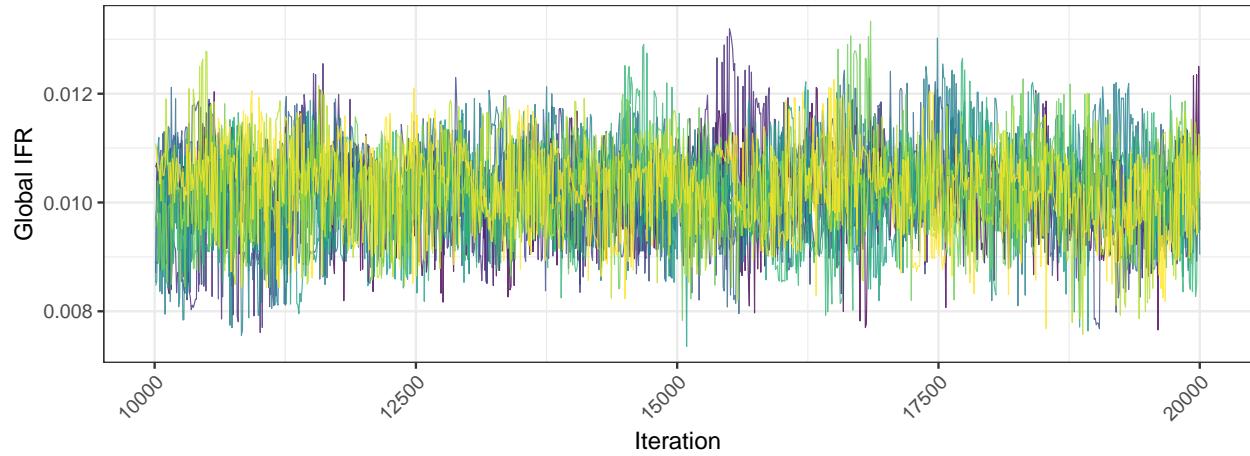
## Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
(0,44]	ma1	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	1003.2649	-1.0451	0.2311
(44,64]	ma2	0.0033	0.0038	0.0045	0.0045	0.0051	0.0056	775.1074	-1.1823	0.1983
(65,999]	ma3	0.0367	0.0433	0.0517	0.0515	0.0598	0.0683	605.9378	-1.8401	0.0734

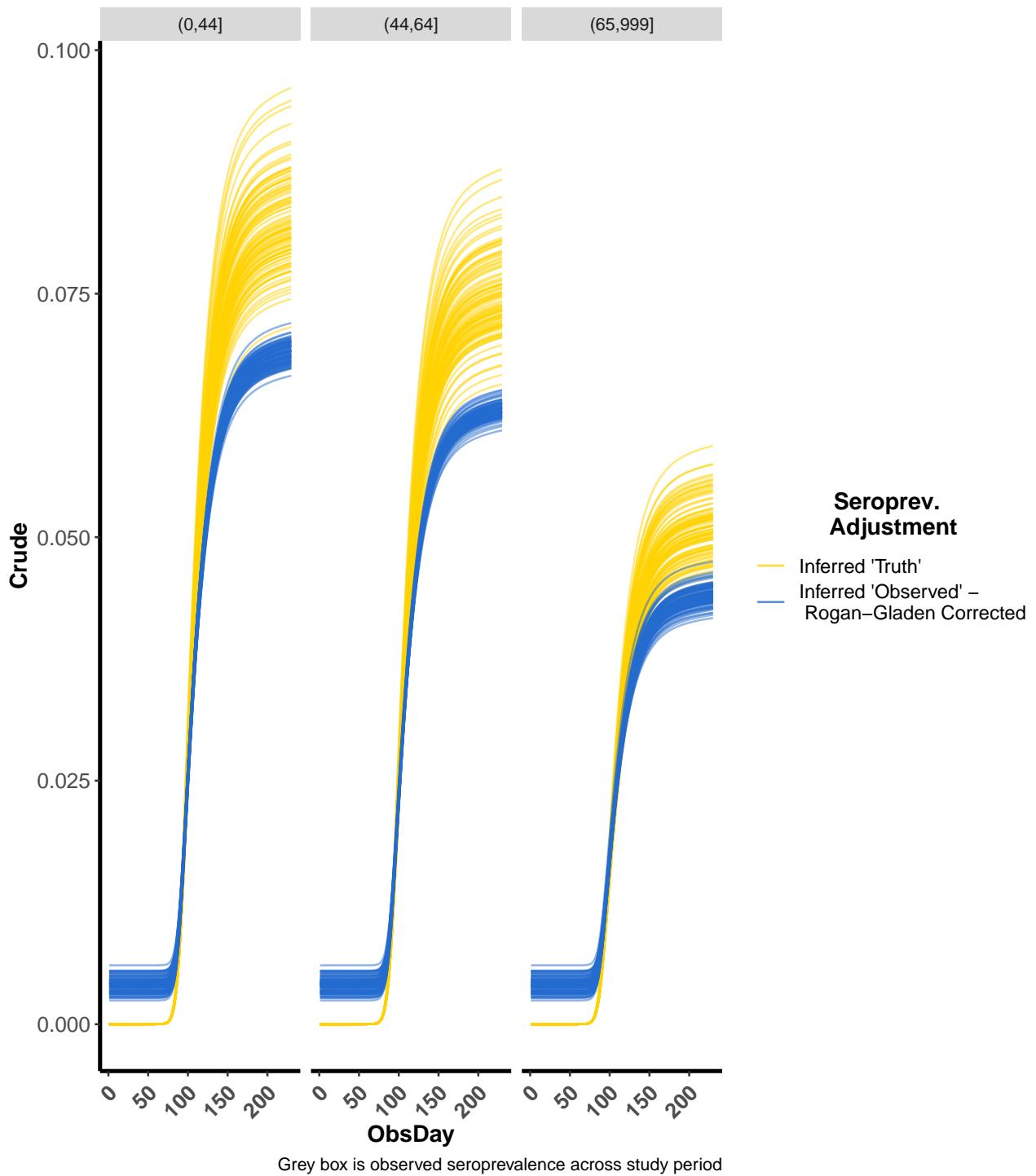
## Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0054	0.0062	0.0074	0.0073	0.0084	0.0091	2798.622	-4.202	1e-04

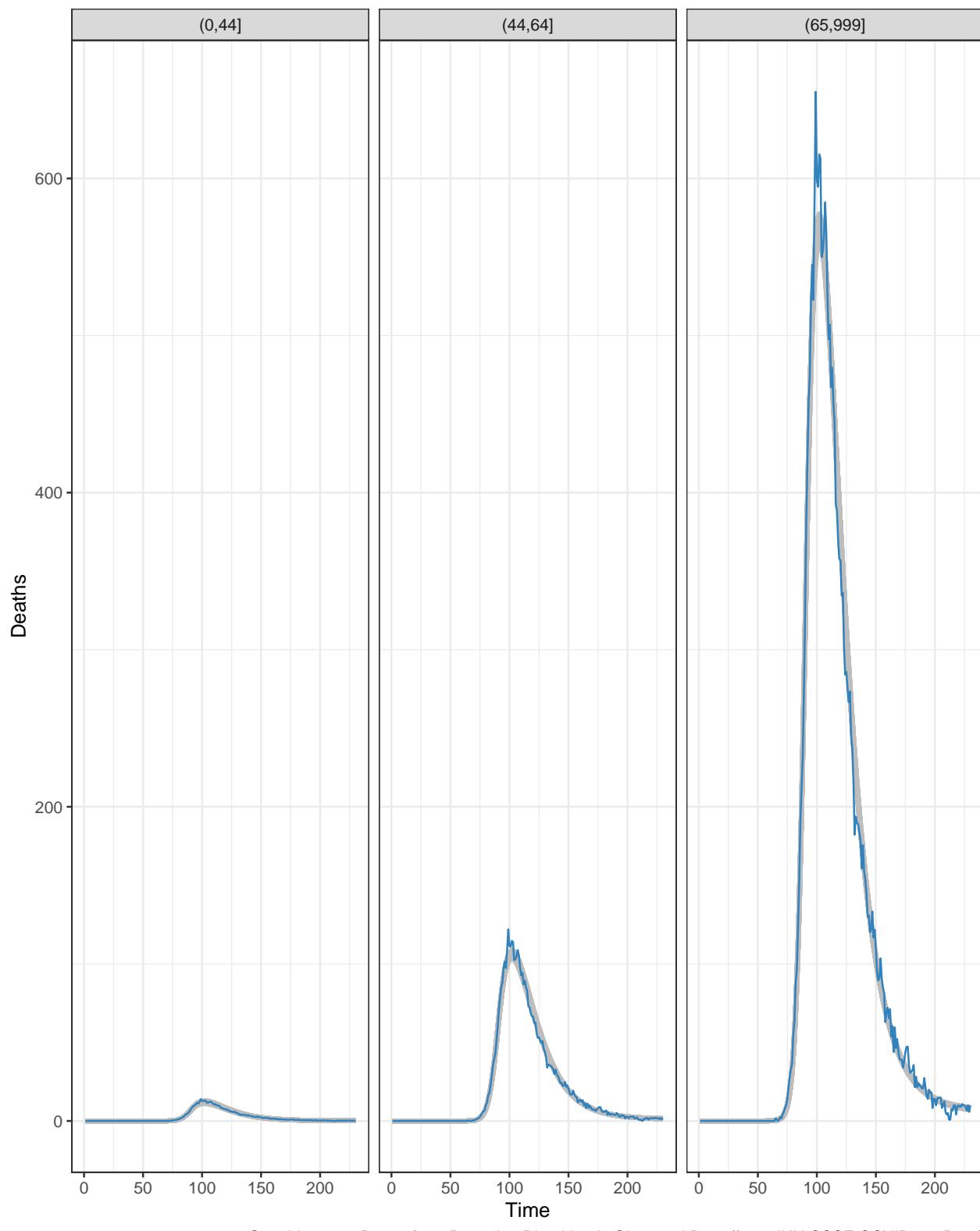
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0056	0.0062	0.0073	0.0073	0.0082	0.0088	103.0112	-1.7412	0.0876
chain2	0.0056	0.0059	0.0073	0.0073	0.0084	0.0090	74.1187	-1.6701	0.0989
chain3	0.0054	0.0061	0.0073	0.0073	0.0081	0.0086	113.3353	2.2600	0.0310
chain4	0.0057	0.0063	0.0074	0.0074	0.0084	0.0090	92.4025	-0.6255	0.3281
chain5	0.0056	0.0062	0.0075	0.0074	0.0085	0.0090	79.4368	-4.2891	0.0000
chain6	0.0057	0.0062	0.0073	0.0073	0.0083	0.0087	99.1385	-1.5826	0.1140
chain7	0.0058	0.0062	0.0074	0.0073	0.0083	0.0088	93.4613	0.8784	0.2712
chain8	0.0056	0.0063	0.0074	0.0074	0.0084	0.0091	76.6769	-2.8435	0.0070
chain9	0.0057	0.0062	0.0074	0.0074	0.0083	0.0086	165.5207	-1.0492	0.2301
chain10	0.0057	0.0063	0.0075	0.0074	0.0084	0.0088	163.6963	4.7505	0.0000



## Seroprevalence Observed vs. Inferred True Prev



## Death Posterior Predictive Check



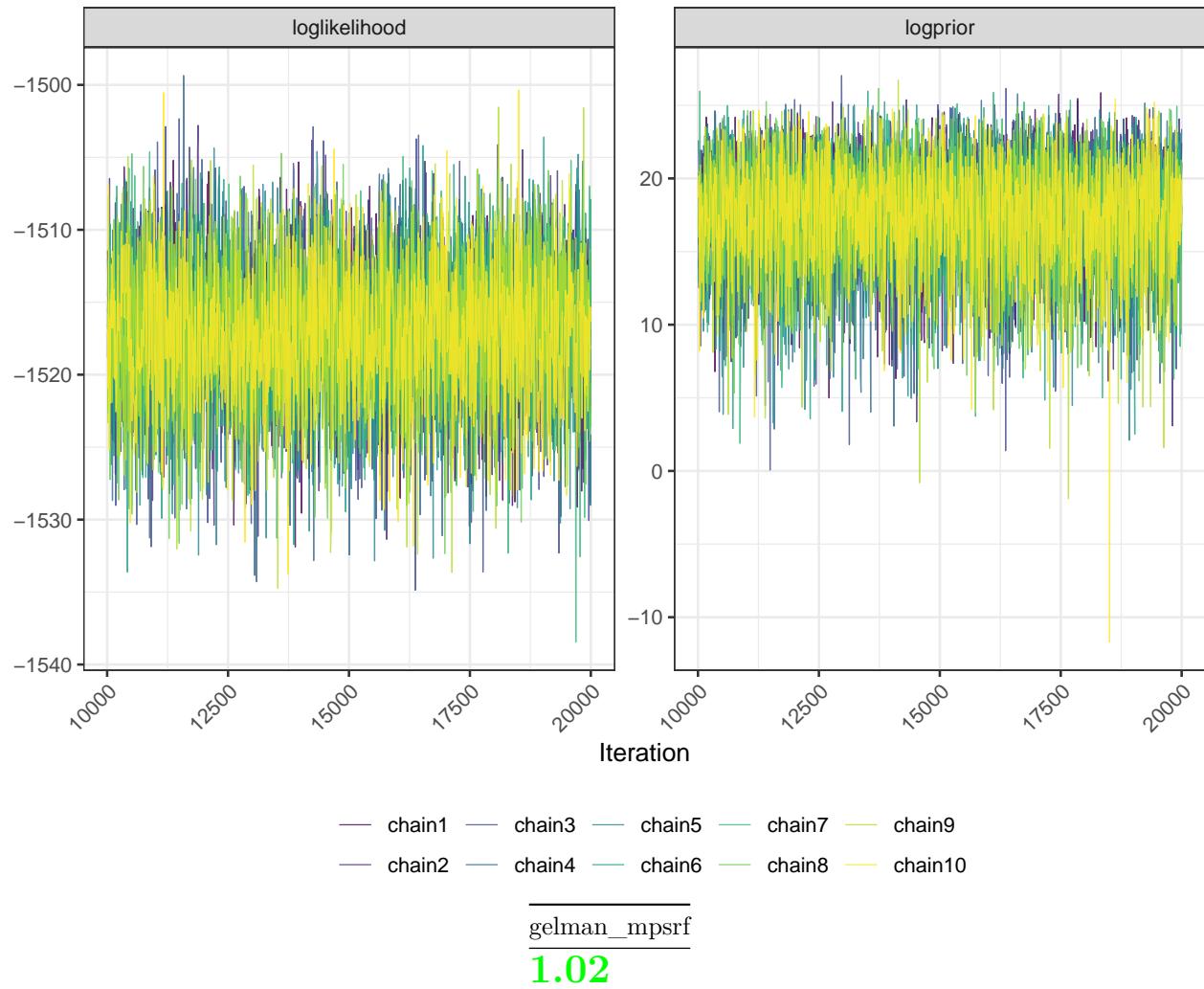
## Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.1673	4.1231	51.1770	50.0568	62.2065	71.8720	487.7472	-2.6057	0.0134
x2	86.2662	89.2338	91.7011	91.6036	93.4312	94.3358	459.7847	1.3213	0.1666
x3	92.4841	94.0414	95.7378	95.8010	97.9800	99.8035	424.8210	0.0227	0.3988
x4	216.0000	216.1397	219.3515	220.5280	229.0840	230.0000	652.1901	0.5972	0.3338
y1	0.0006	0.0644	1.3894	1.5533	3.8798	5.5348	3677.5445	1.6465	0.1029
y2	0.0005	0.1037	2.3600	2.5336	5.9560	8.6934	540.0512	-0.9475	0.2547
y3	11.8483	11.9607	12.1167	12.1225	12.3036	12.4408	669.7255	0.3890	0.3699
y4	11.3212	11.5445	11.7837	11.7834	12.0059	12.1537	539.2072	1.0535	0.2290
y5	6.4898	6.7247	6.9747	6.9746	7.2226	7.4338	2379.6243	2.3630	0.0245
Ne1	1.0163	1.0765	1.1444	1.1451	1.2178	1.3161	2866.7296	0.4618	0.3586
Ne2	0.9196	0.9772	1.0435	1.0438	1.1130	1.1921	3564.0960	0.4454	0.3613
Ne3	0.5888	0.6496	0.7081	0.7083	0.7698	0.8428	1297.4047	0.7956	0.2907

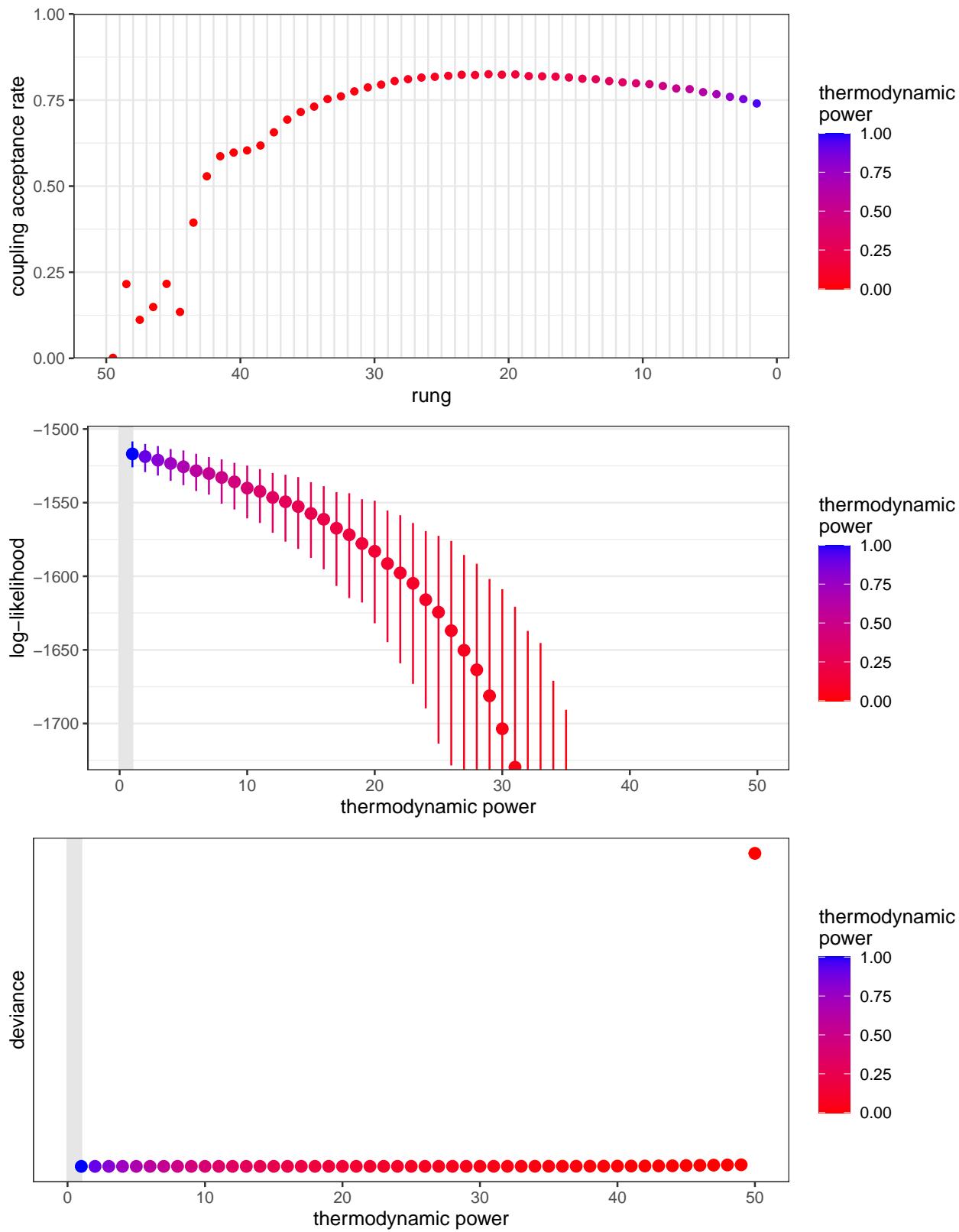
# NYS1 with Care Homes Excluded

## Fit Diagnostics

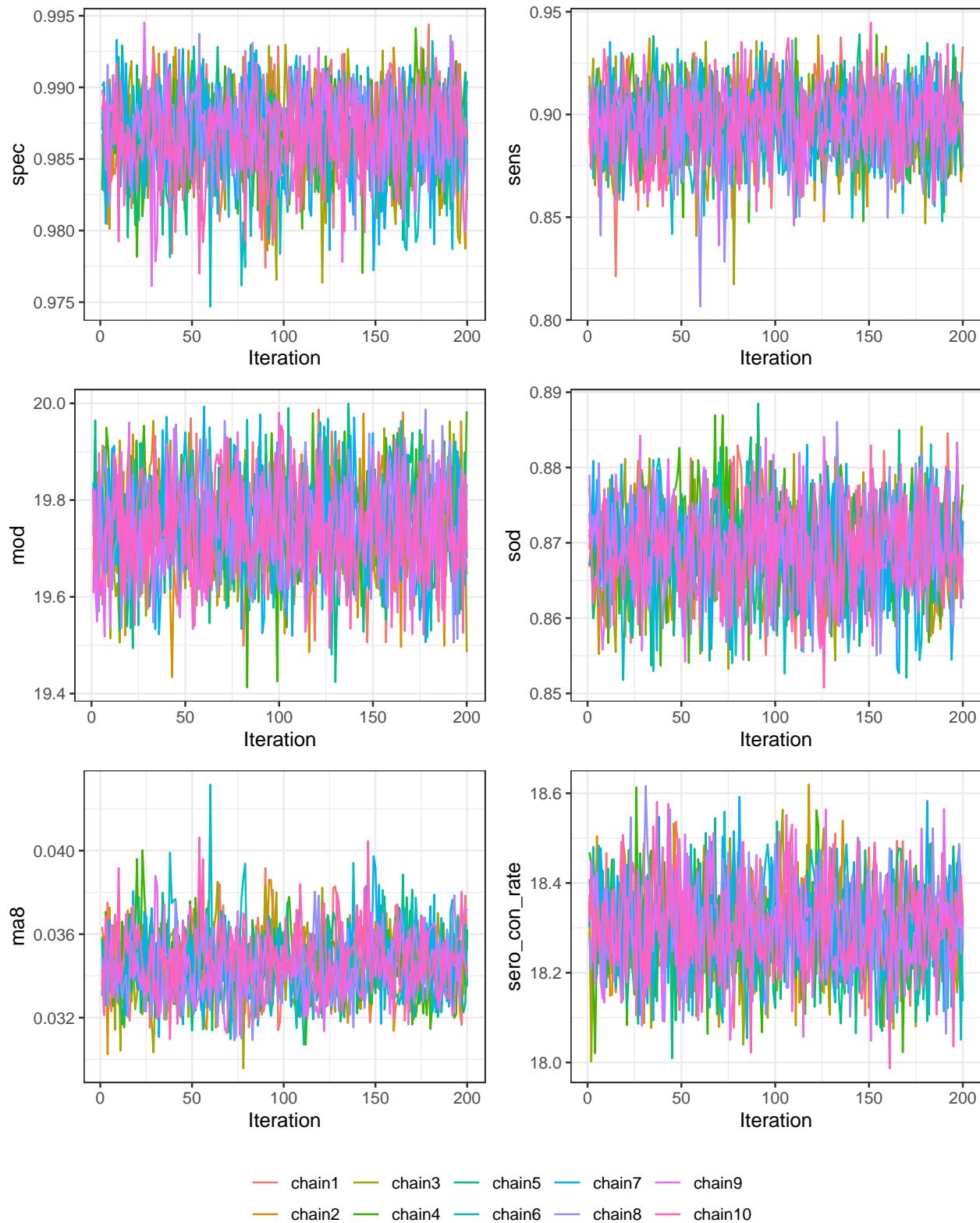
### Log Likelihood & Prior Plot



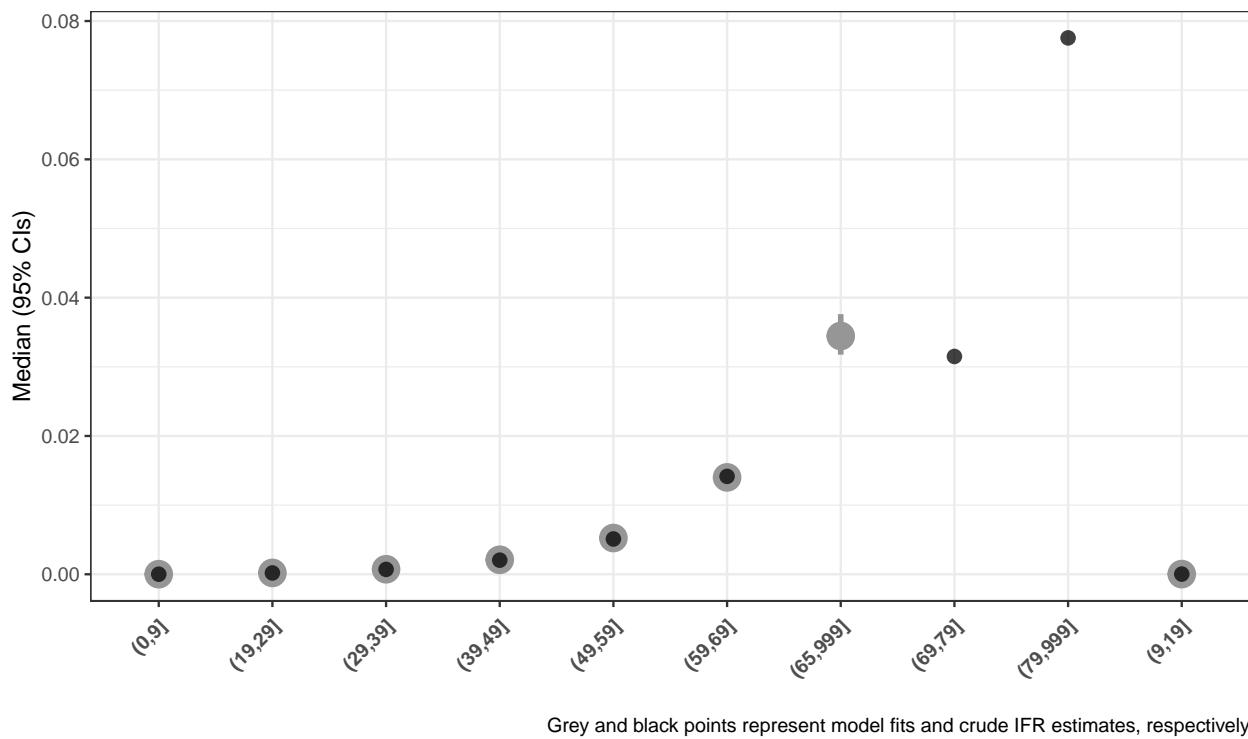
### Metropolis Coupling Acceptance Plot



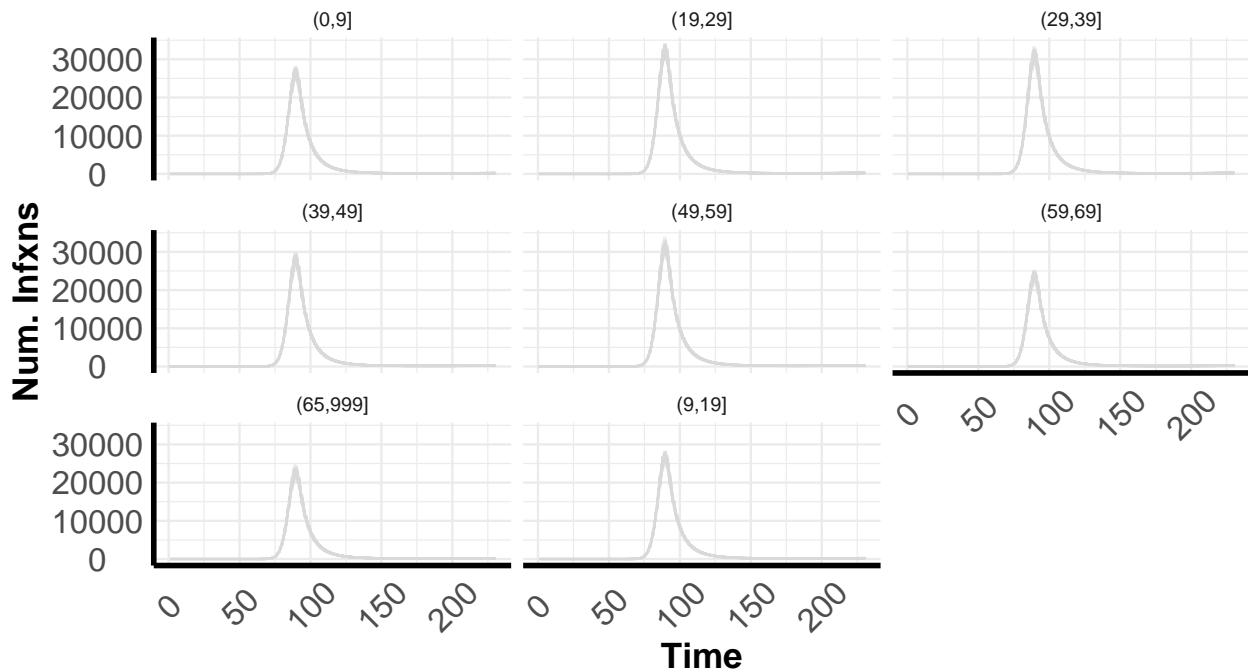
## Serological Diagnostics



## IFRs & Incidence Curve



## Posterior Draws of the Infection Curve



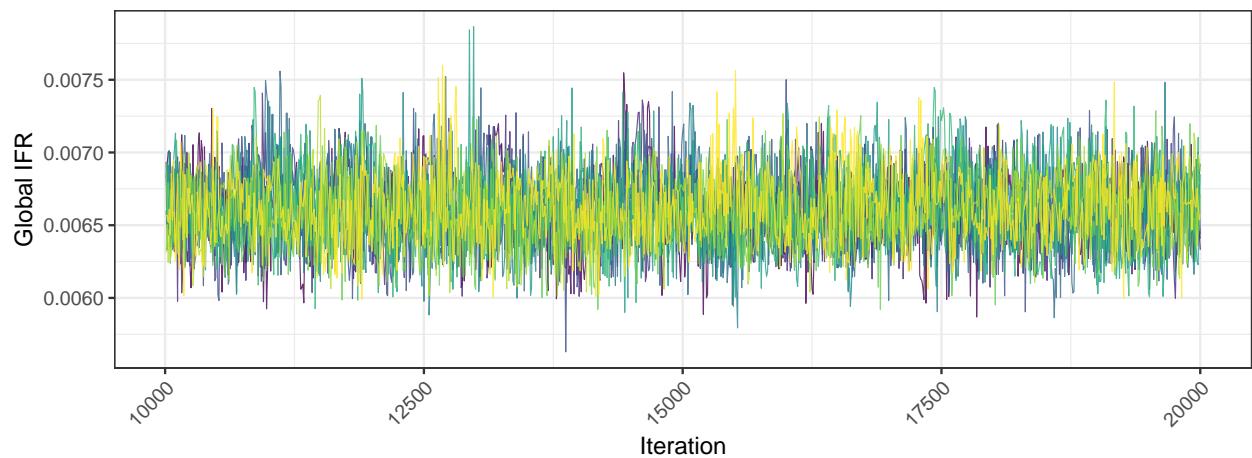
## Strata IFR

strata	param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
(0,9]	ma1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	9654.827	0.8298	0.2827
(9,19]	ma2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	10000.000	2.1058	0.0435
(19,29]	ma3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	8720.079	-0.4640	0.3582
(29,39]	ma4	0.0006	0.0006	0.0007	0.0007	0.0008	0.0010	5455.156	-0.0583	0.3983
(39,49]	ma5	0.0017	0.0019	0.0021	0.0021	0.0023	0.0026	5689.547	0.0045	0.3989
(49,59]	ma6	0.0044	0.0048	0.0052	0.0053	0.0057	0.0064	3874.786	-0.2179	0.3896
(59,69]	ma7	0.0113	0.0128	0.0140	0.0140	0.0154	0.0168	3635.263	-1.3332	0.1640
(65,999]	ma8	0.0296	0.0318	0.0345	0.0345	0.0376	0.0432	2017.950	-1.0819	0.2222

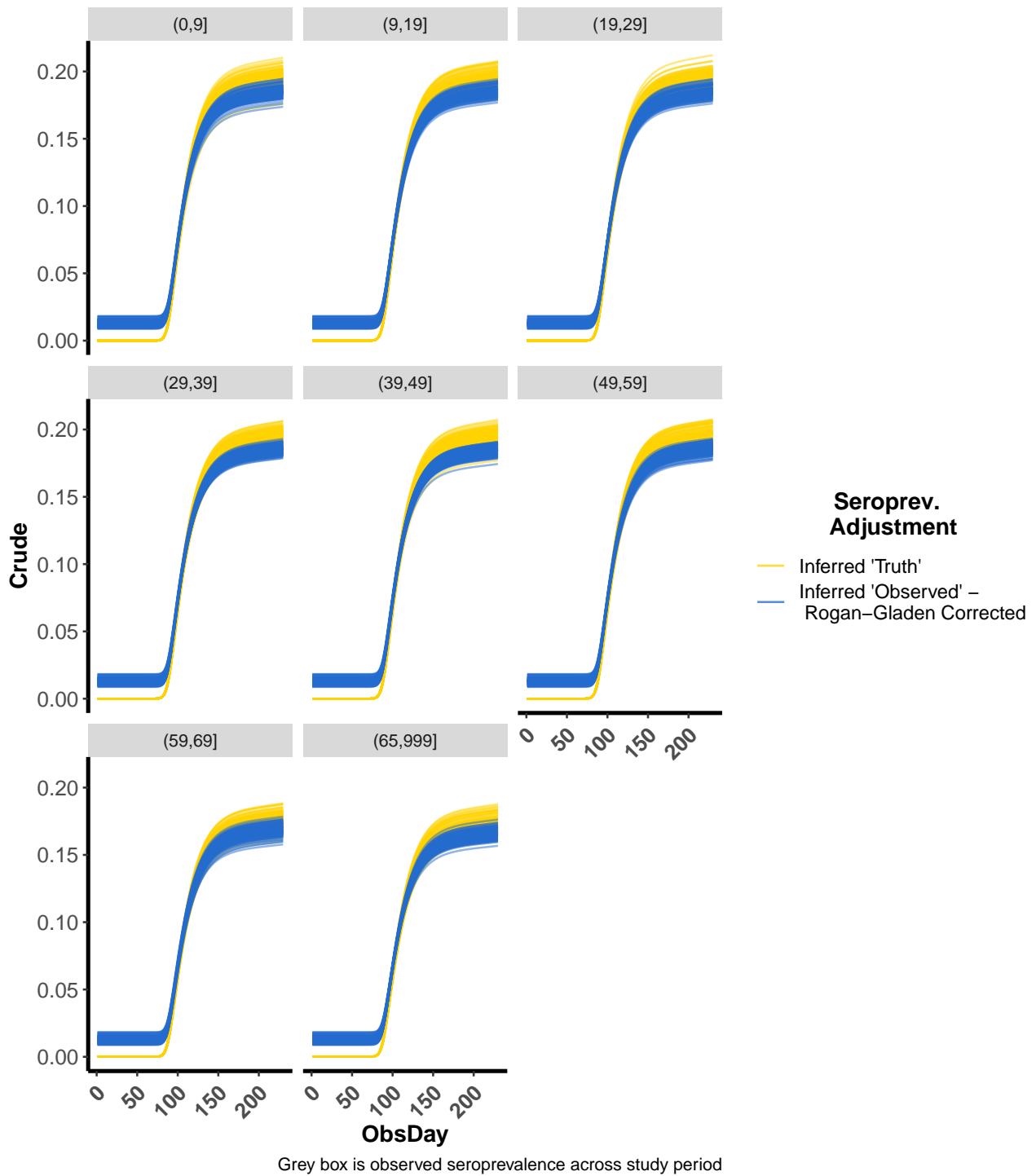
## Overall IFR

min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
0.0053	0.0058	0.0062	0.0062	0.0066	0.007	4252.317	0.2608	0.3856

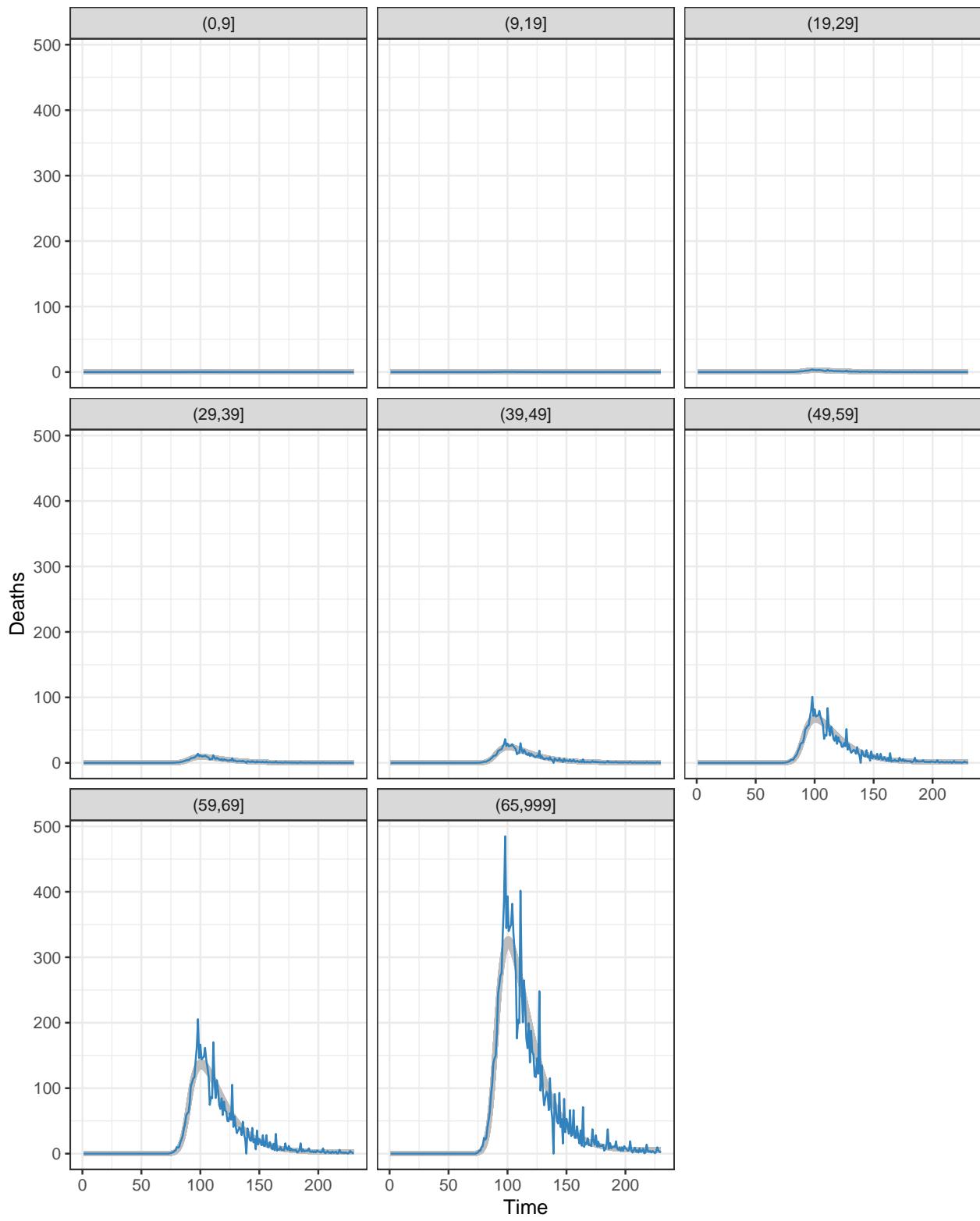
chain	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
chain1	0.0055	0.0057	0.0061	0.0062	0.0066	0.0069	327.9097	0.4338	0.3631
chain2	0.0057	0.0058	0.0062	0.0062	0.0066	0.0070	320.7246	1.2552	0.1815
chain3	0.0053	0.0058	0.0062	0.0062	0.0066	0.0069	450.1320	-2.7963	0.0080
chain4	0.0055	0.0058	0.0061	0.0062	0.0066	0.0070	214.7567	2.7523	0.0090
chain5	0.0055	0.0058	0.0062	0.0062	0.0066	0.0070	390.9401	-1.8533	0.0716
chain6	0.0055	0.0058	0.0062	0.0062	0.0066	0.0070	208.9962	0.1009	0.3969
chain7	0.0056	0.0058	0.0062	0.0062	0.0066	0.0068	211.2798	0.3998	0.3683
chain8	0.0055	0.0058	0.0061	0.0061	0.0065	0.0068	535.7849	0.0714	0.3979
chain9	0.0056	0.0058	0.0062	0.0062	0.0065	0.0069	318.5012	-1.4301	0.1435
chain10	0.0056	0.0058	0.0062	0.0062	0.0066	0.0070	454.9770	-0.3959	0.3689



## Seroprevalence Observed vs. Inferred True Prev



## Death Posterior Predictive Check



## Additional Parameters

param	min	LCI	median	mean	UCI	max	ESS	GewekeZ	GewekeP
x1	1.0428	1.7293	59.9469	53.9764	69.0322	77.5970	579.5271	3.9627	0.0002
x2	85.7184	88.9289	90.9789	90.8871	92.3827	93.3810	725.4880	4.7708	0.0000
x3	91.5425	92.9025	94.1705	94.2613	95.9610	97.8324	579.8209	-13.9272	0.0000
x4	216.0000	216.0382	217.1238	217.5912	221.6793	229.1377	1350.5408	3.2906	0.0018
y1	0.0000	0.0829	1.7714	1.9179	4.8443	6.4816	2701.7528	-2.8665	0.0066
y2	0.0002	0.1002	2.1963	2.5319	6.3379	9.5444	814.5990	0.7146	0.3090
y3	11.9851	12.1422	12.2566	12.2531	12.3517	12.4732	1093.1258	-3.5213	0.0008
y4	11.4598	11.6830	11.9034	11.8922	12.0549	12.2898	569.1415	12.9712	0.0000
y5	7.0061	7.2080	7.4053	7.4063	7.6000	7.8151	8105.4130	1.2682	0.1785
Ne1	0.9135	0.9662	1.0251	1.0254	1.0858	1.1477	8576.8994	1.3134	0.1684
Ne2	0.9091	0.9647	1.0256	1.0258	1.0877	1.1519	8454.6896	1.2728	0.1775
Ne3	0.9136	0.9658	1.0248	1.0252	1.0868	1.1638	7627.0330	0.2040	0.3907
Ne4	0.9178	0.9656	1.0257	1.0255	1.0865	1.1577	8712.6544	-0.4910	0.3536
Ne5	0.8849	0.9670	1.0257	1.0258	1.0861	1.1469	7714.5932	-1.1554	0.2046
Ne6	0.9185	0.9652	1.0258	1.0261	1.0874	1.1520	6715.5060	-0.5994	0.3333
Ne7	0.8131	0.8649	0.9278	0.9281	0.9923	1.0604	5661.2260	1.2823	0.1753
Ne8	0.8131	0.8569	0.9129	0.9129	0.9672	1.0241	3566.7128	1.4937	0.1307