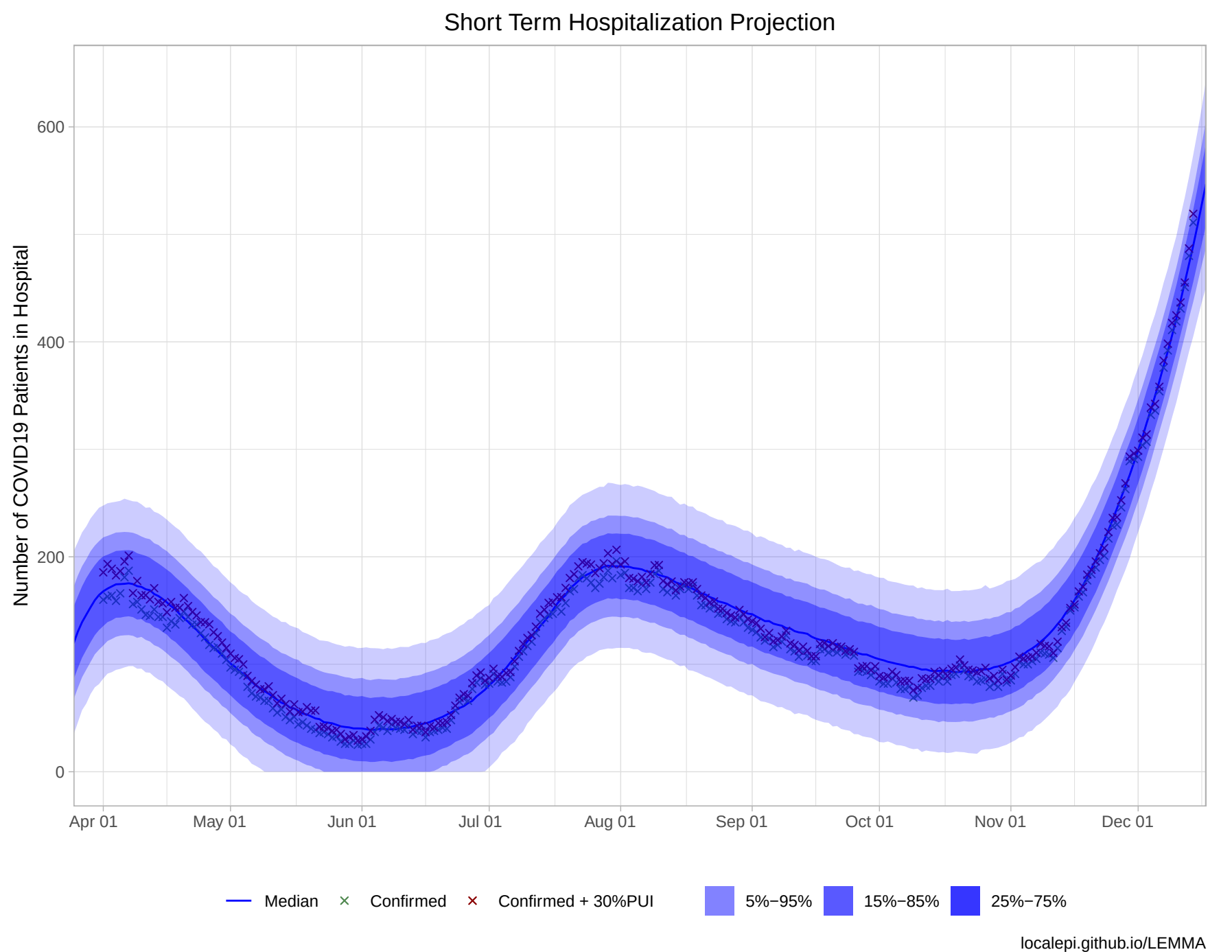
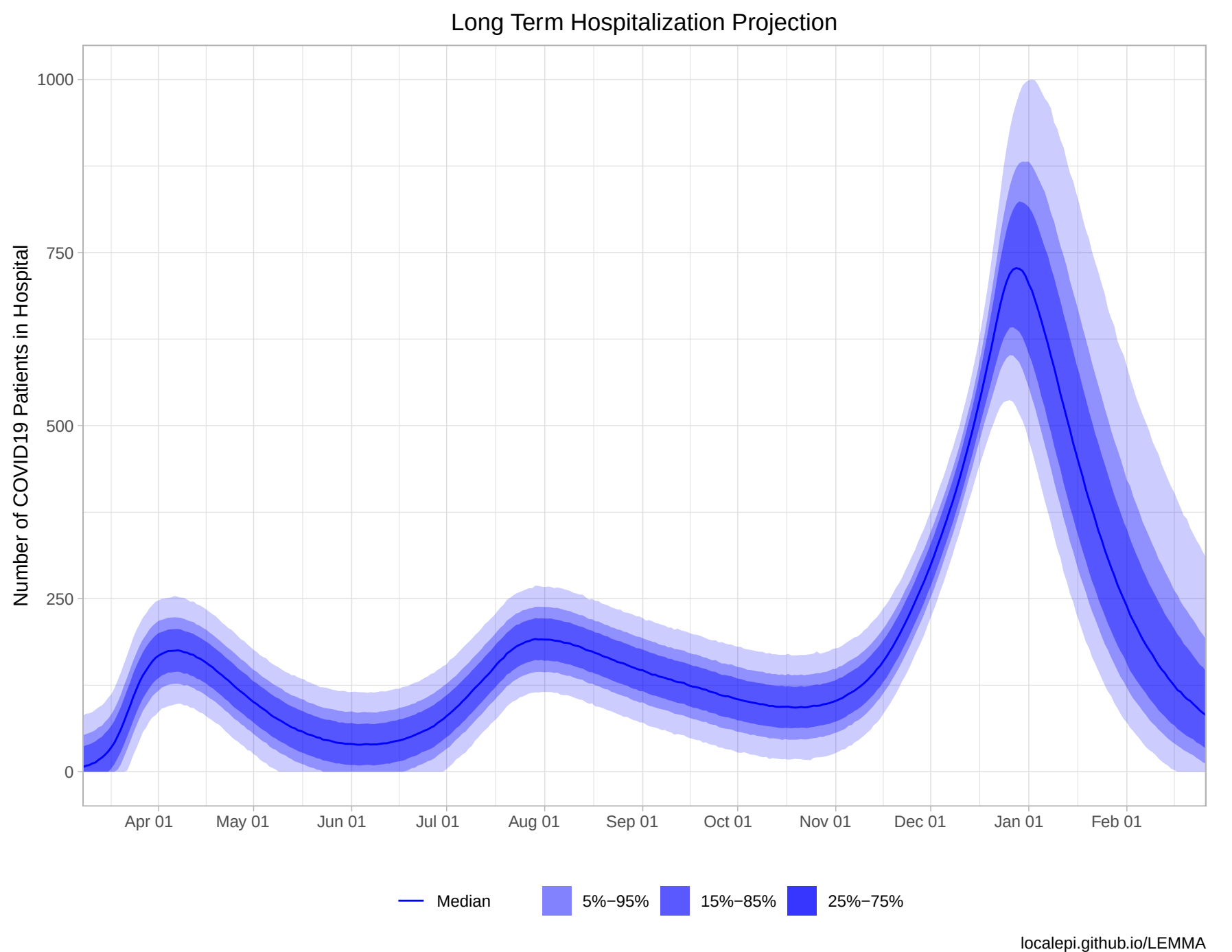
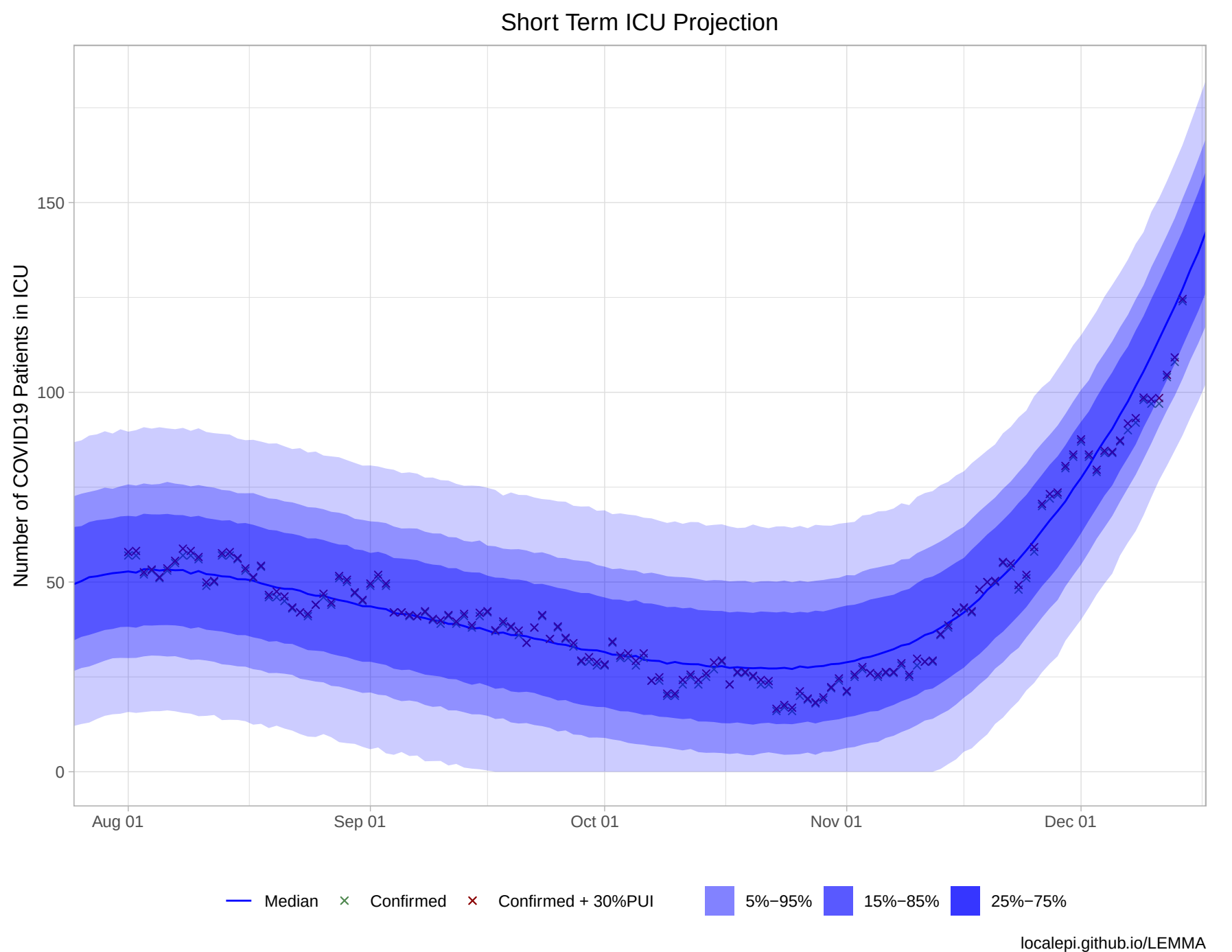
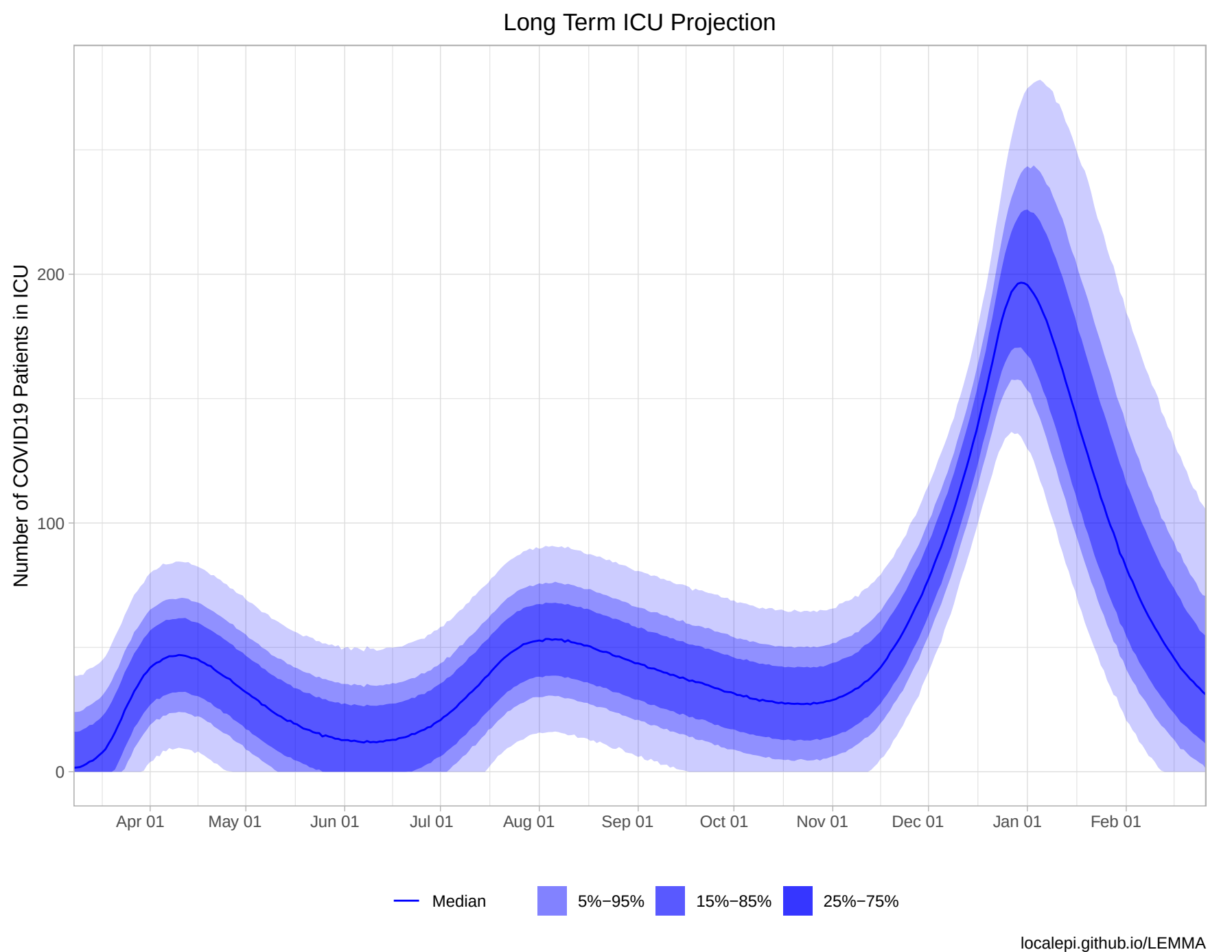
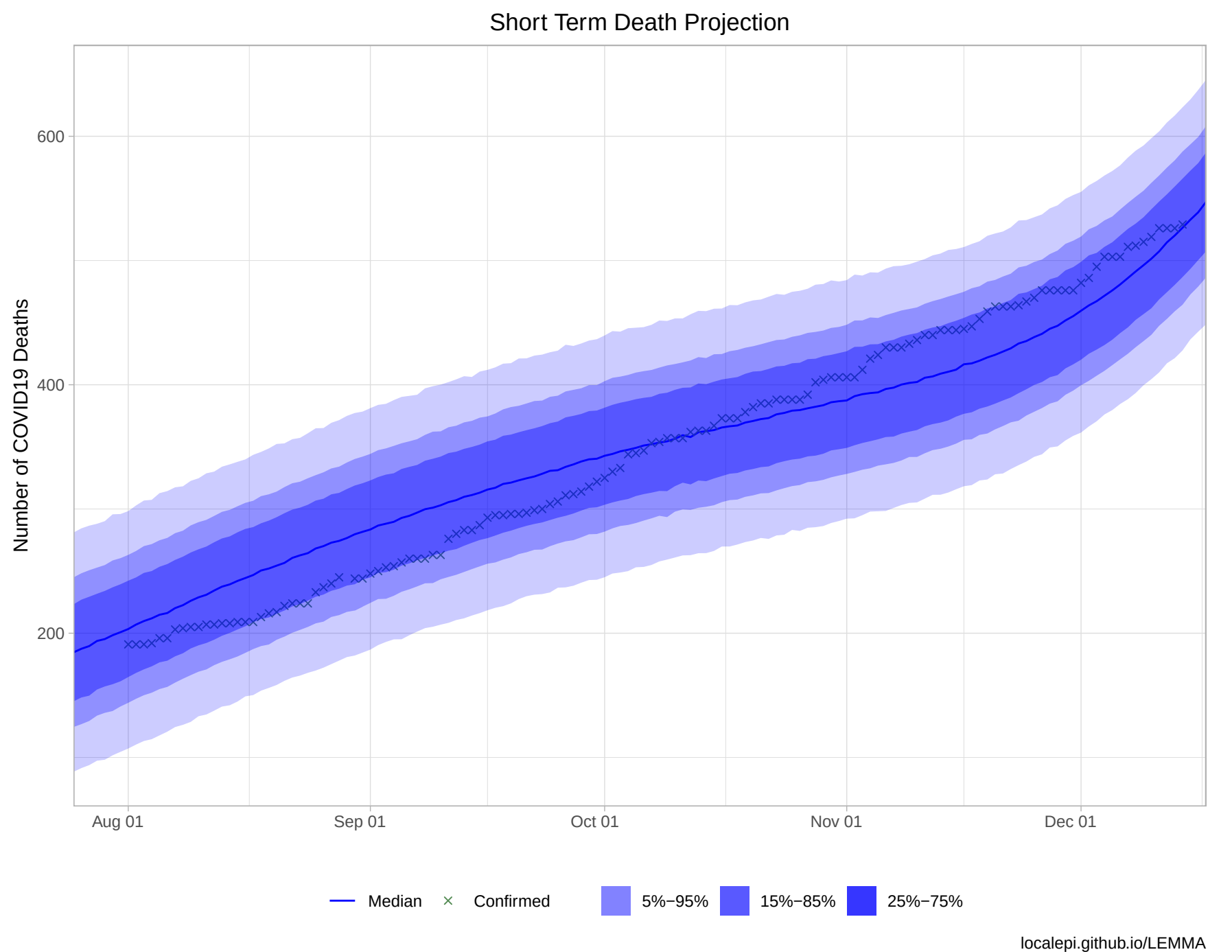
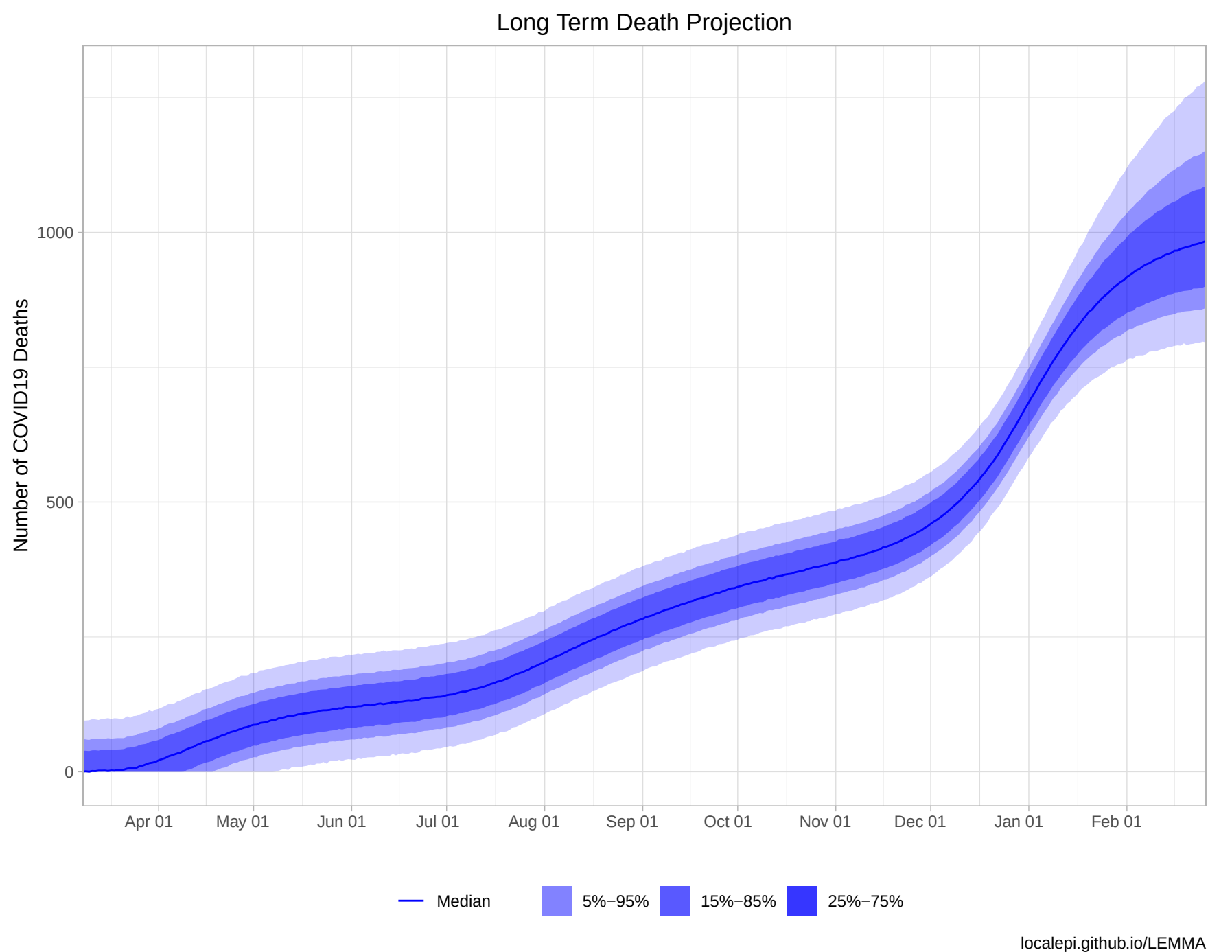

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
600
400
200
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

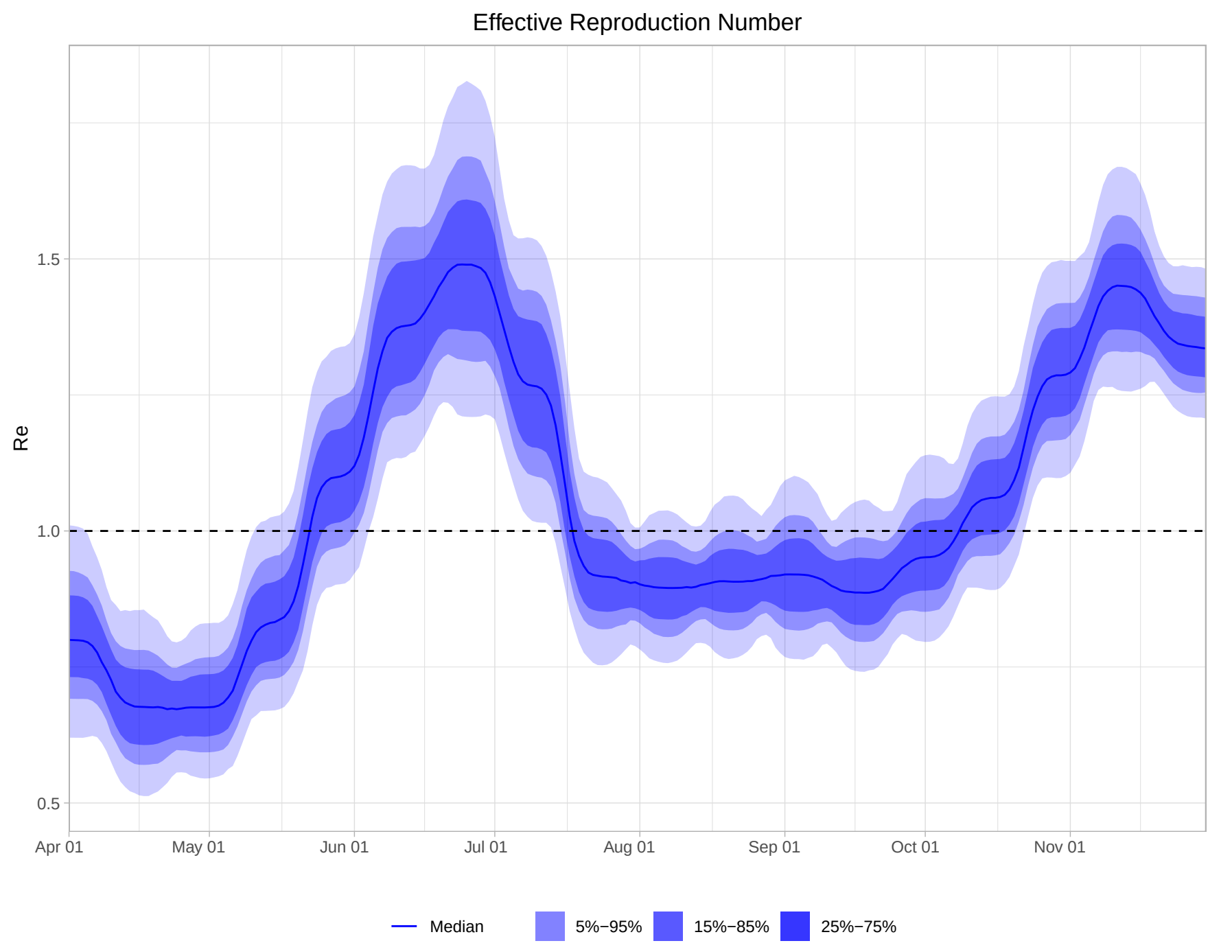

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1000
750
500
250
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
150
100
50
0
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Long Term ICU Projection
Number of COVID19 Patients in ICU
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

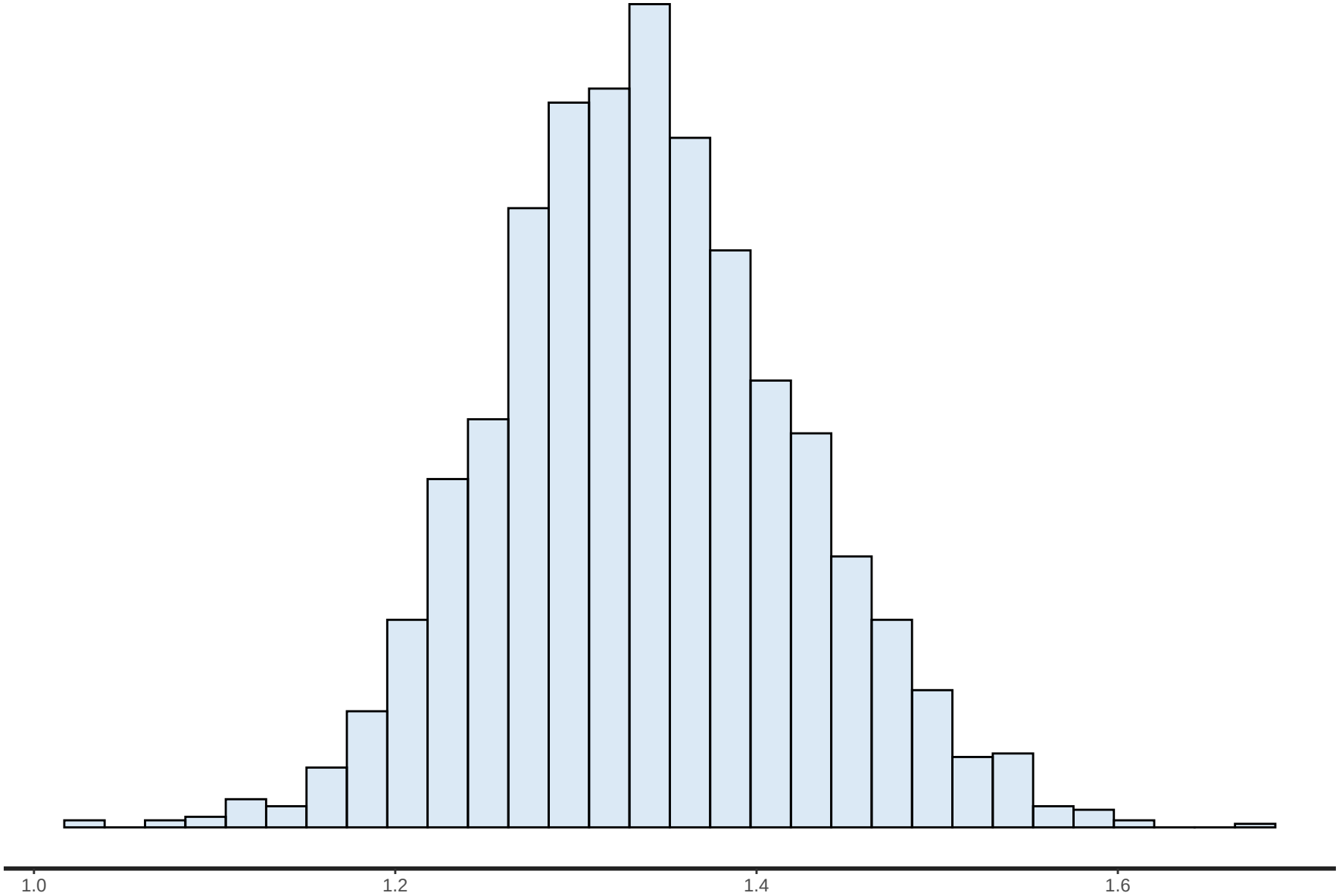

Short Term Death Projection
Number of COVID19 Deaths
600
400
200
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

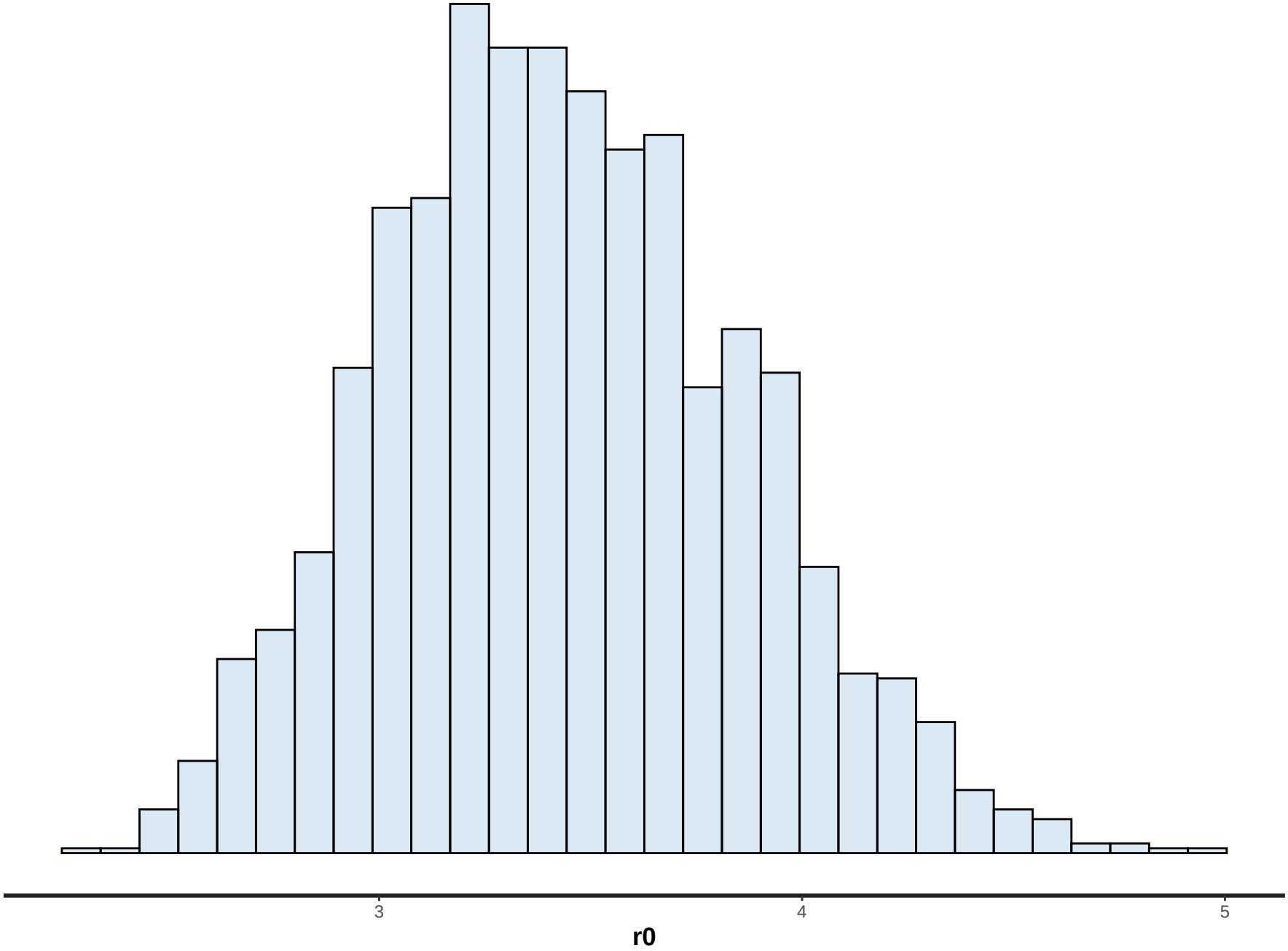

Long Term Death Projection
Number of COVID19 Deaths
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

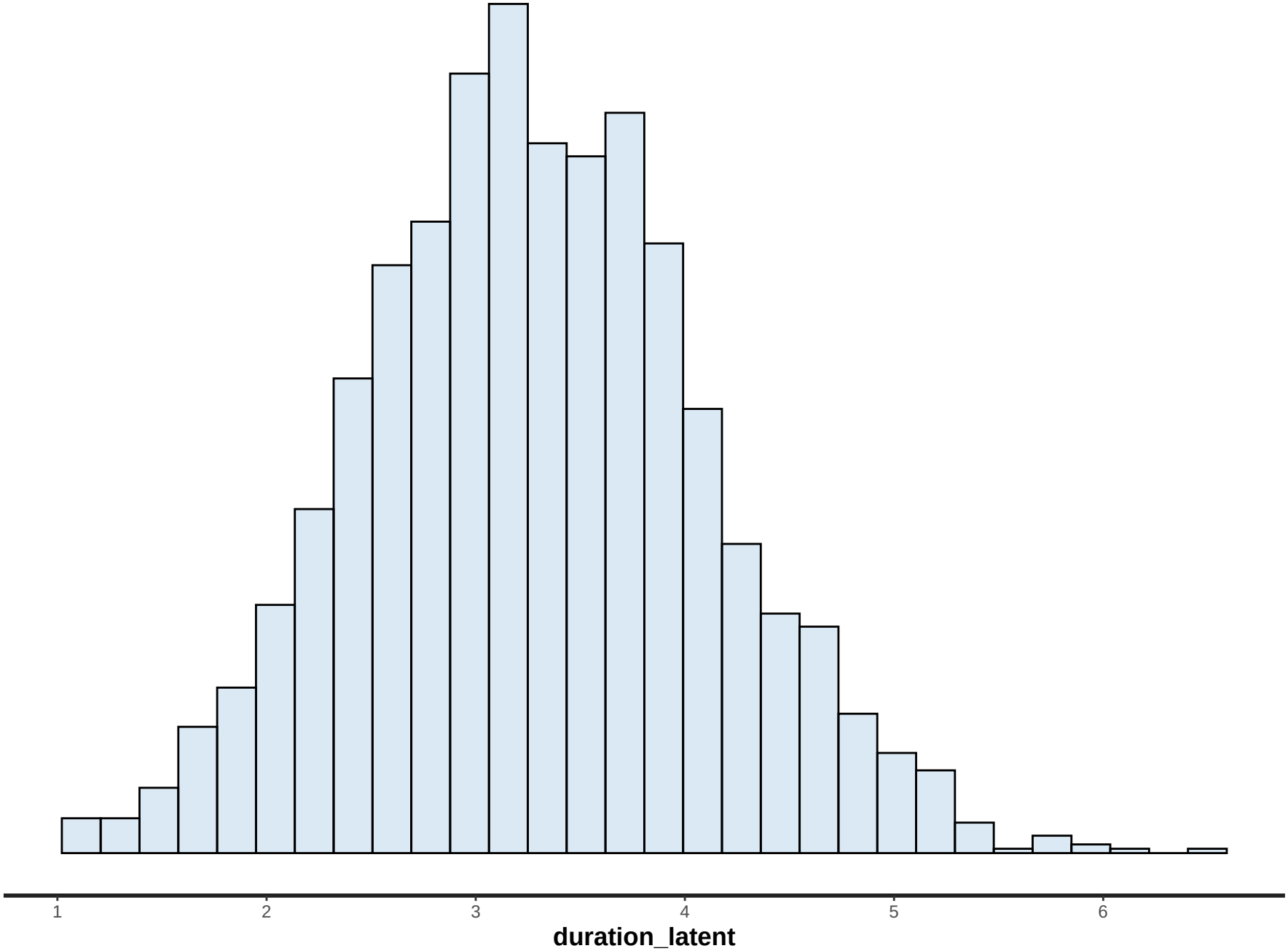

Effective Reproduction Number
Re
1.5
1.0
0.5
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

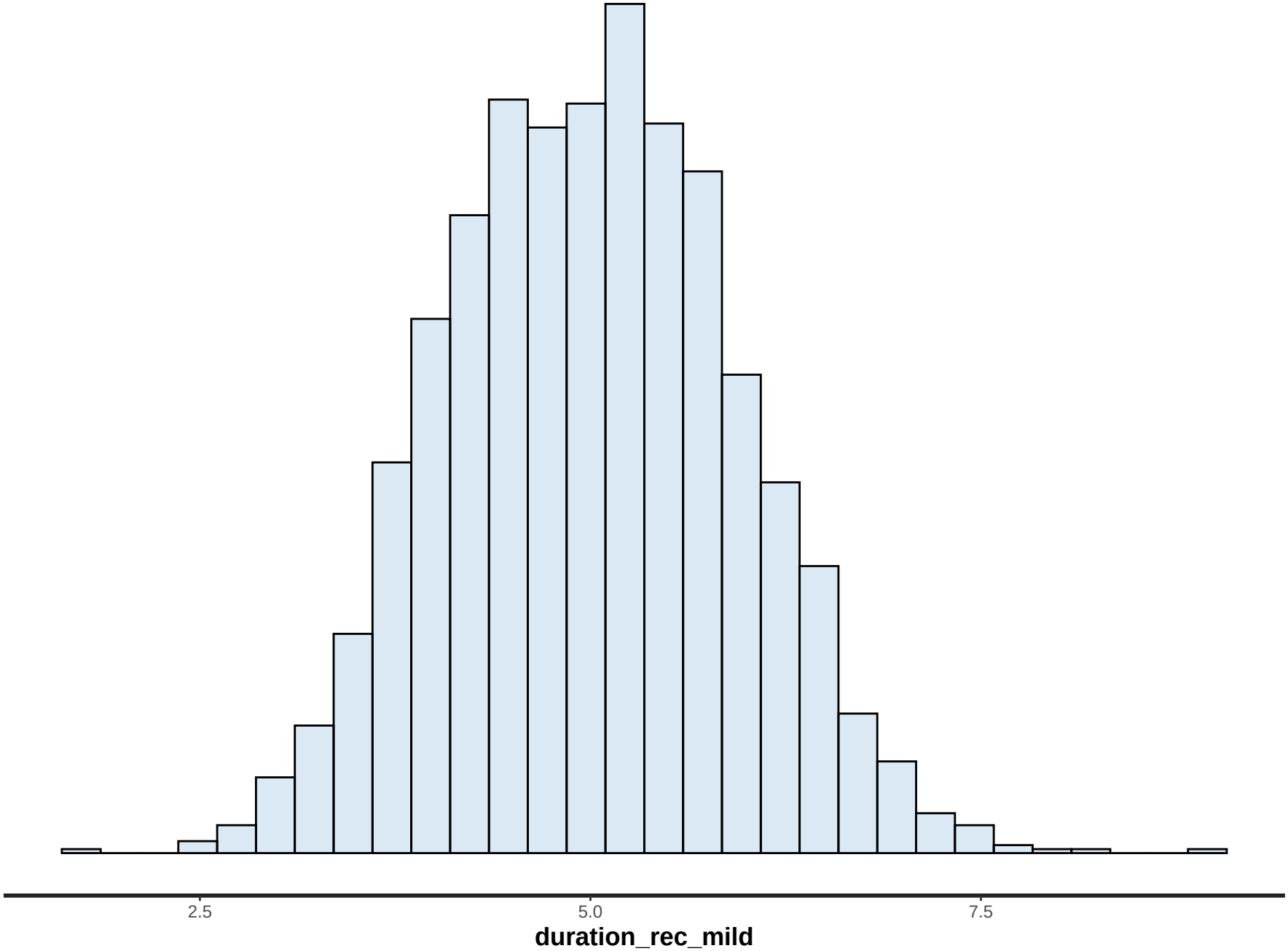
Rt as of 2020−11−30

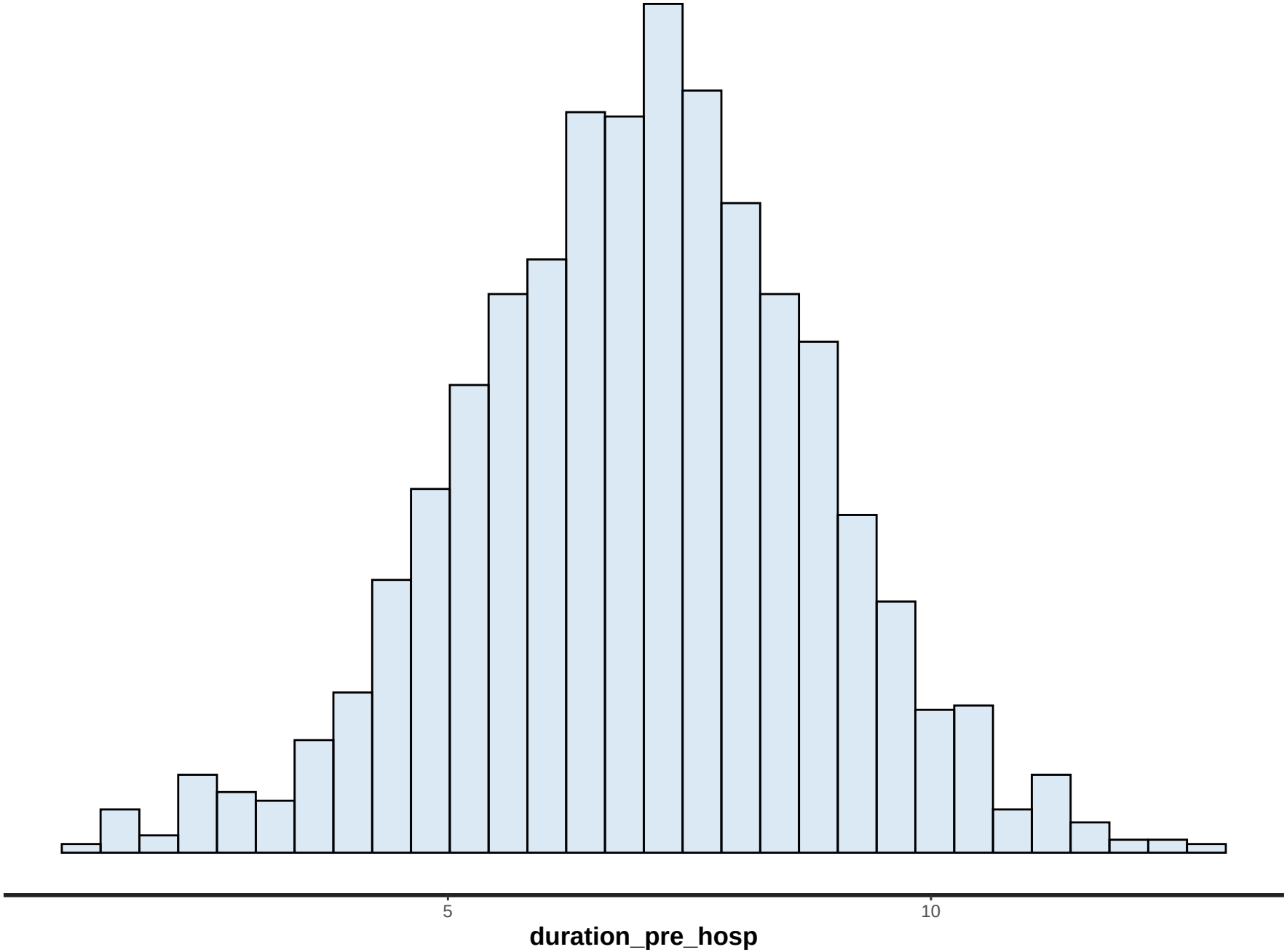
5%	10%	25%	50%	75%	90%	95%
1.21	1.23	1.28	1.34	1.39	1.45	1.48

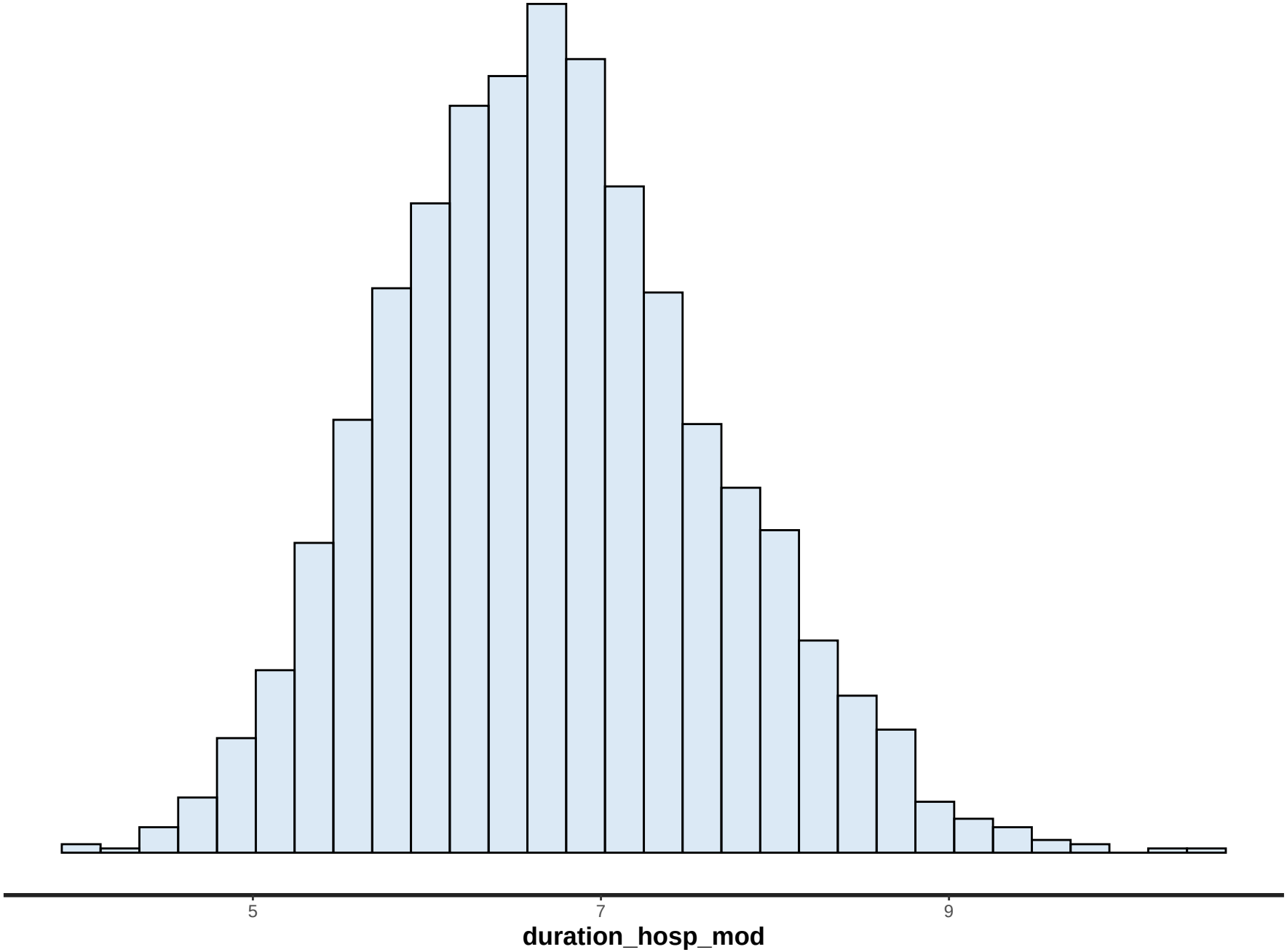


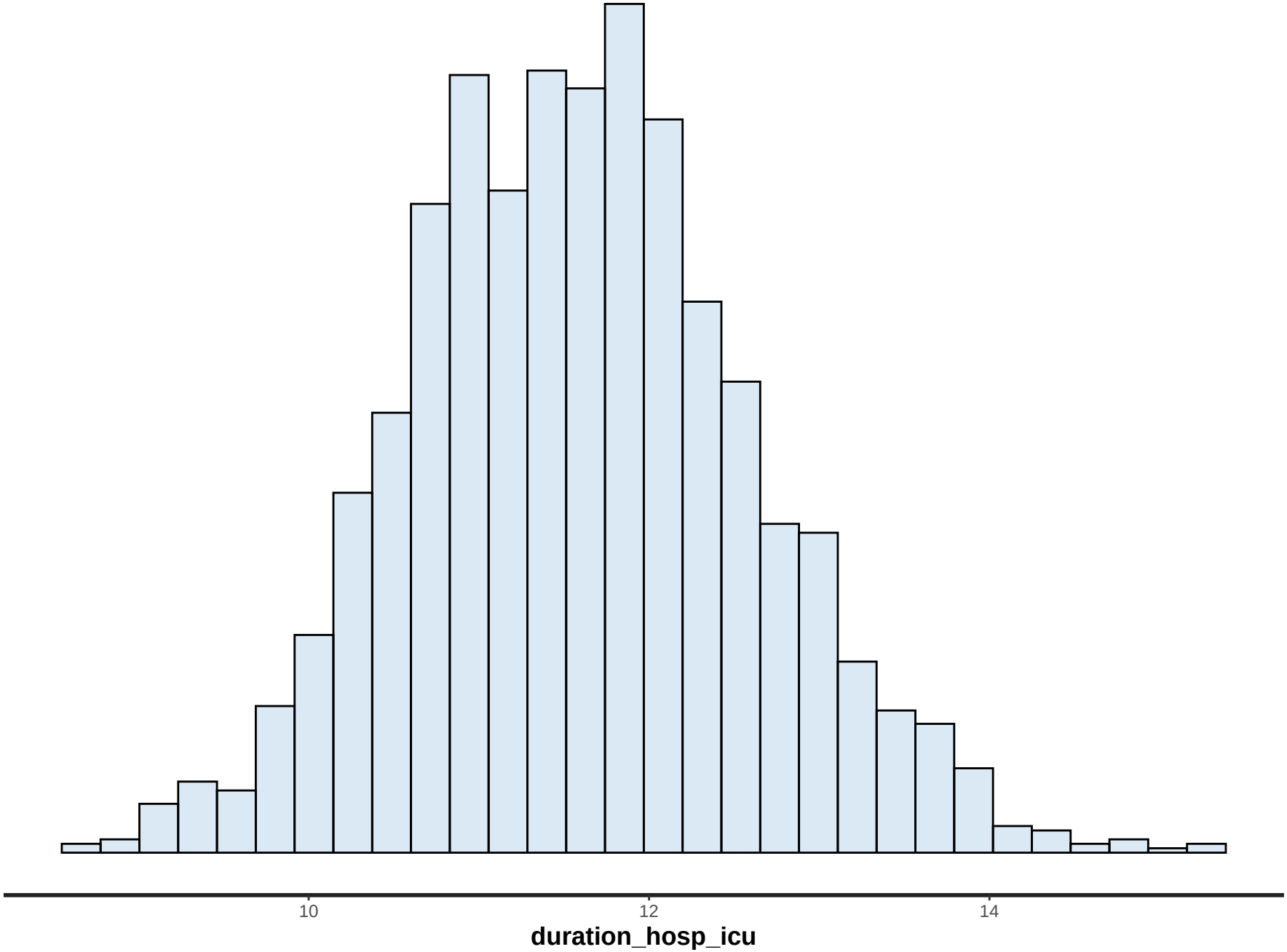

3
4
5
r0

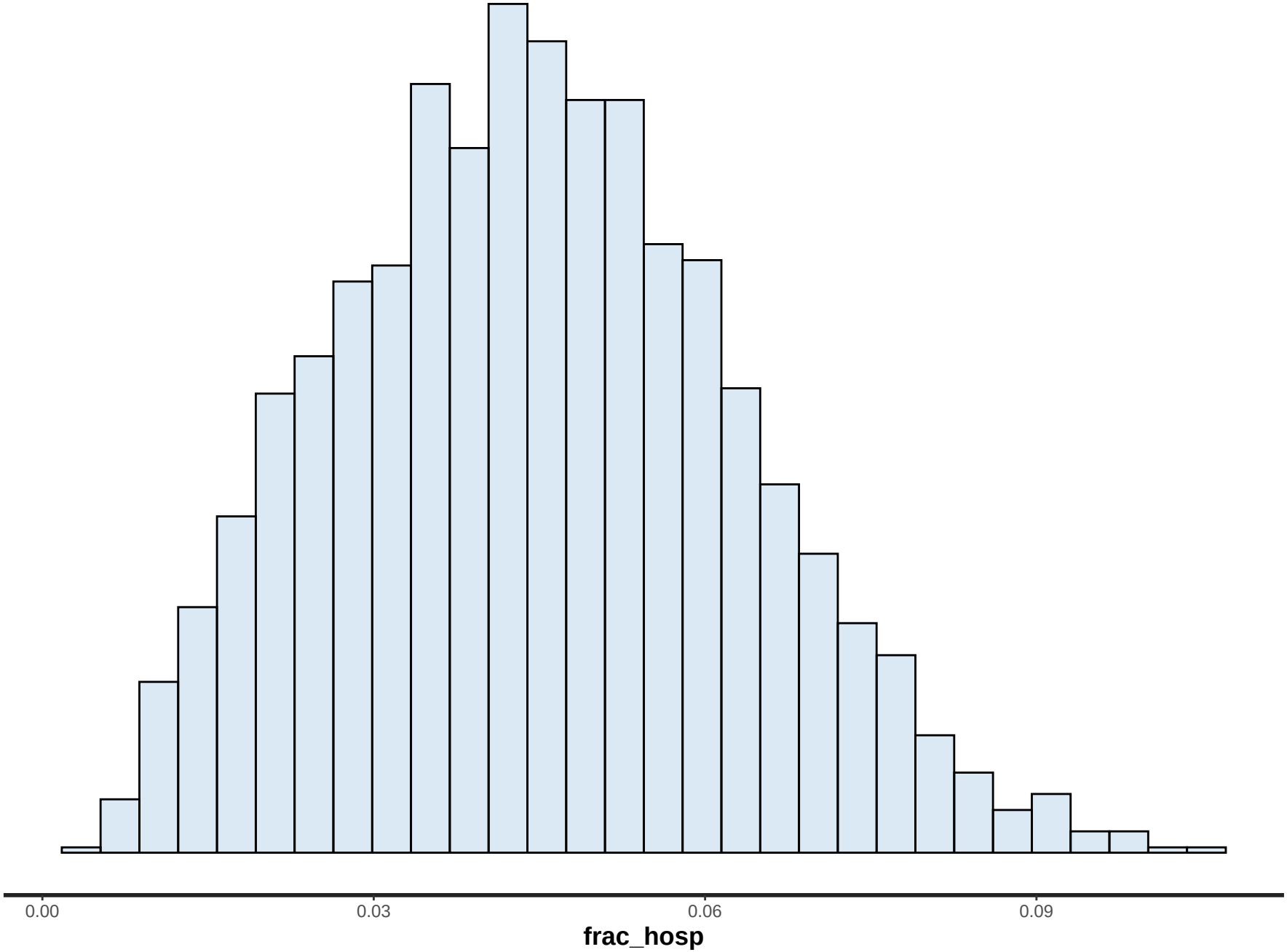

1
2
3
4
5
6
duration_latent

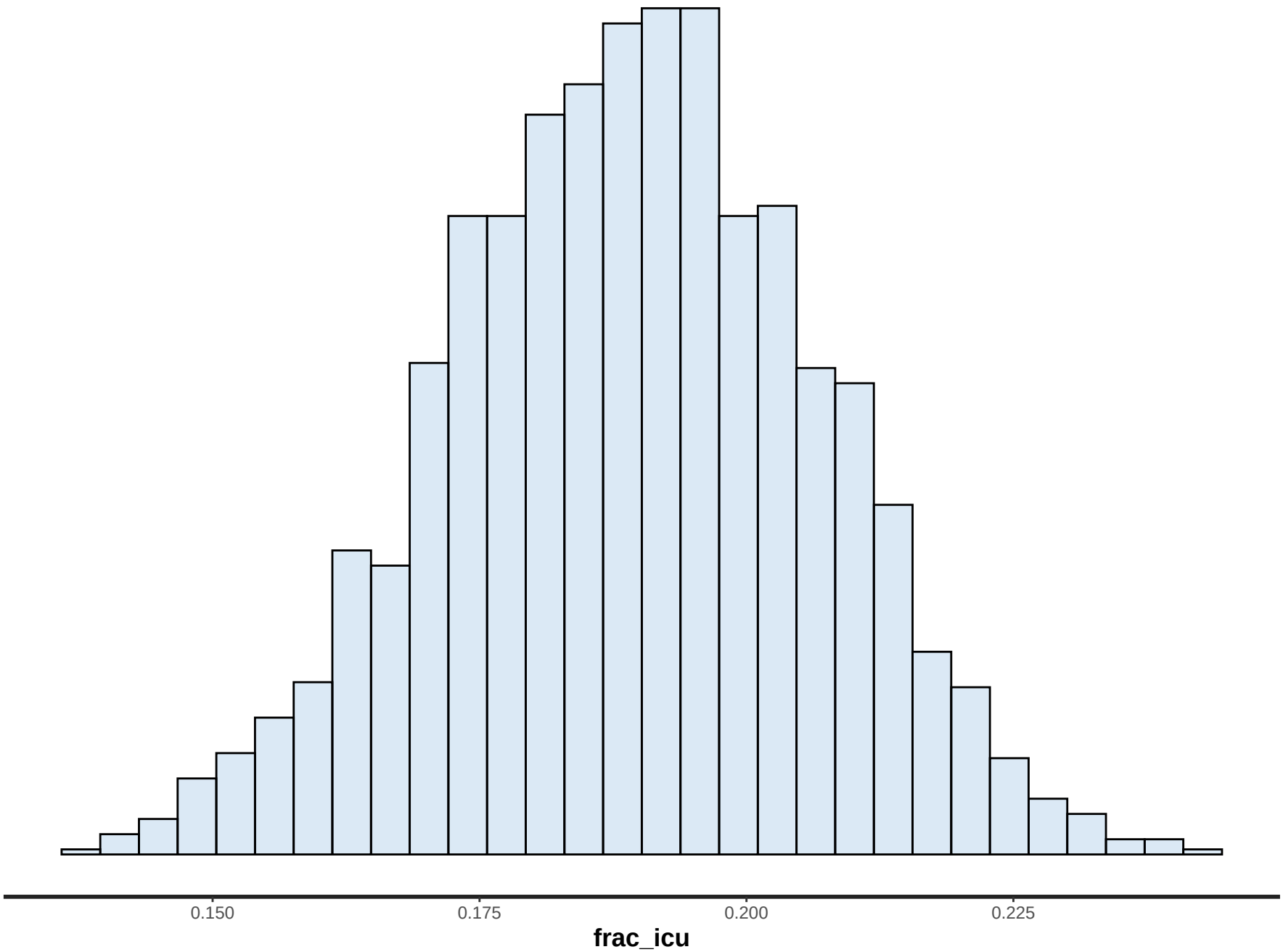

2.5
5.0
7.5
duration_rec_mild

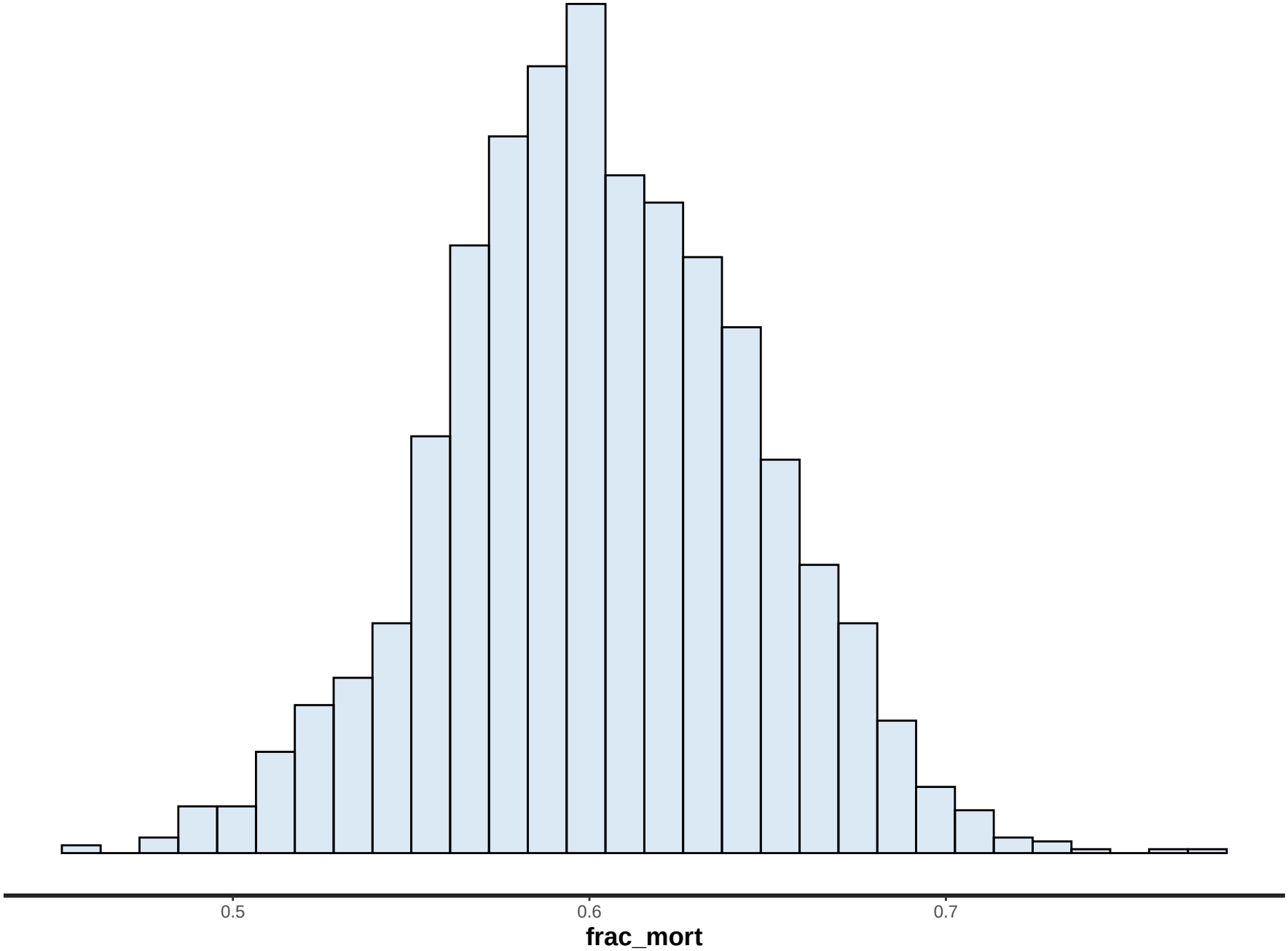

5
10
duration_pre_hosp

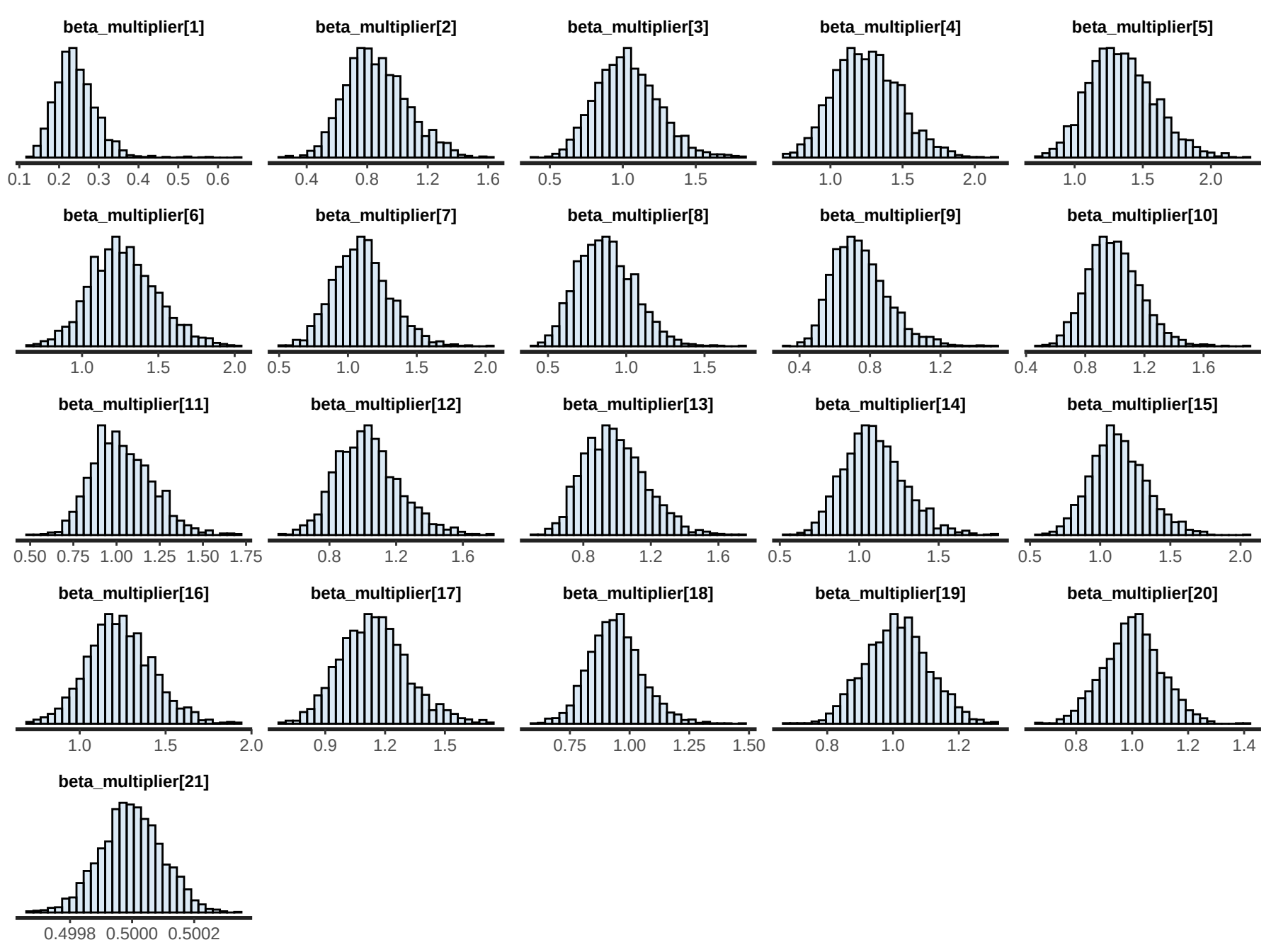

5
7
9
duration_hosp_mod

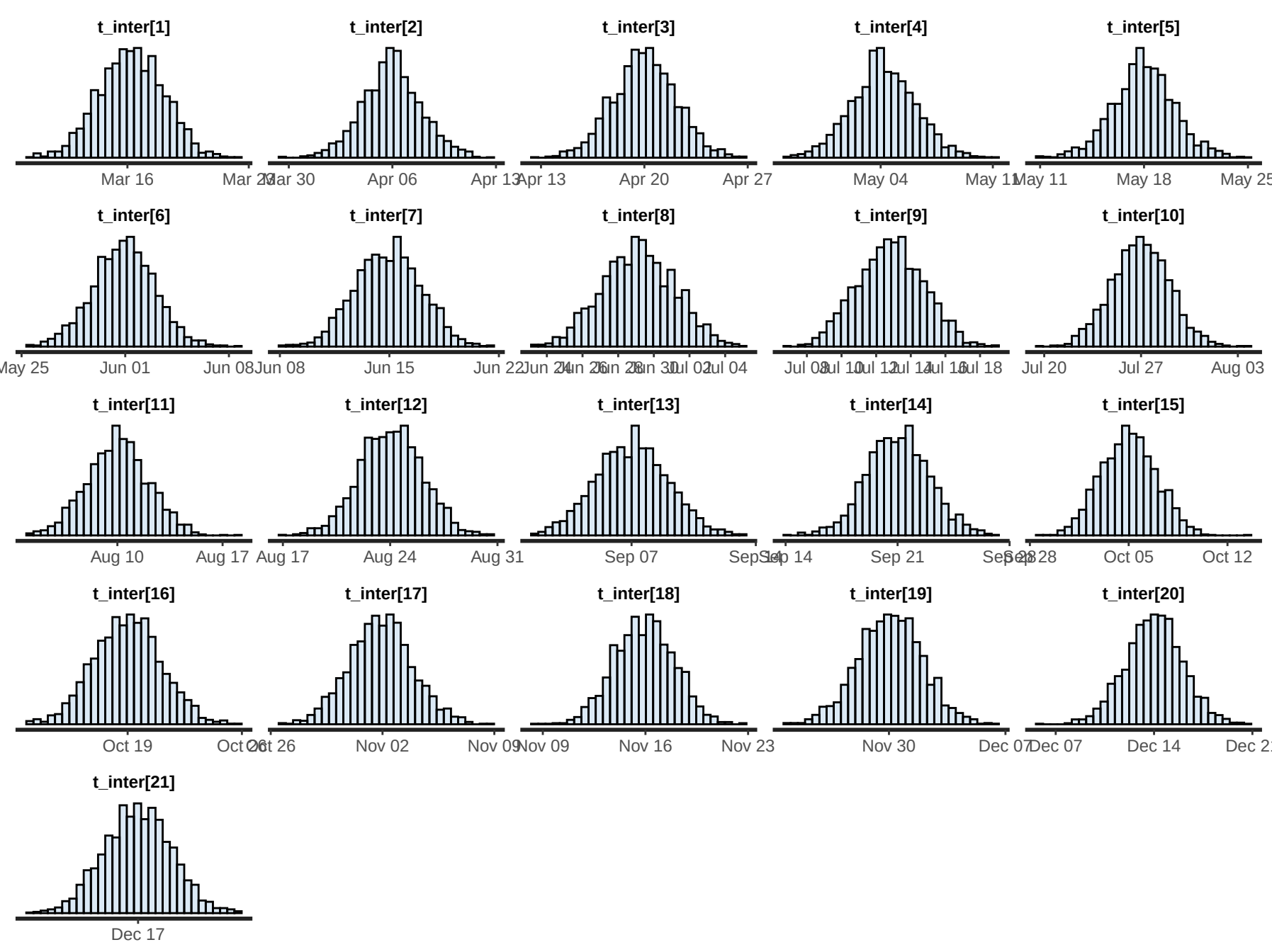

10
12
14
duration_hosp_icu


0.00
0.03
0.06
0.09
frac_hosp


0.150
0.175
0.200
0.225
frac_icu


0.5
0.6
0.7
frac_mort


beta_multiplier[1]
0.1 0.2 0.3 0.4 0.5 0.6
beta_multiplier[2]
0.4 0.8 1.2 1.6
beta_multiplier[3]
0.5 1.0 1.5
beta_multiplier[4]
1.0 1.5 2.0
beta_multiplier[5]
1.0 1.5 2.0
beta_multiplier[6]
1.0 1.5 2.0
beta_multiplier[7]
0.5 1.0 1.5 2.0
beta_multiplier[8]
0.5 1.0 1.5
beta_multiplier[9]
0.4 0.8 1.2
beta_multiplier[10]
0.4 0.8 1.2 1.6
beta_multiplier[11]
0.50 0.75 1.00 1.25 1.50 1.75
beta_multiplier[12]
0.8 1.2 1.6
beta_multiplier[13]
0.8 1.2 1.6
beta_multiplier[14]
0.5 1.0 1.5
beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
1.0 1.5 2.0
beta_multiplier[17]
0.9 1.2 1.5
beta_multiplier[18]
0.75 1.00 1.25 1.50
beta_multiplier[19]
0.8 1.0 1.2
beta_multiplier[20]
0.8 1.0 1.2 1.4
beta_multiplier[21]
0.4998 0.5000 0.5002


t_inter[1]
Mar 16
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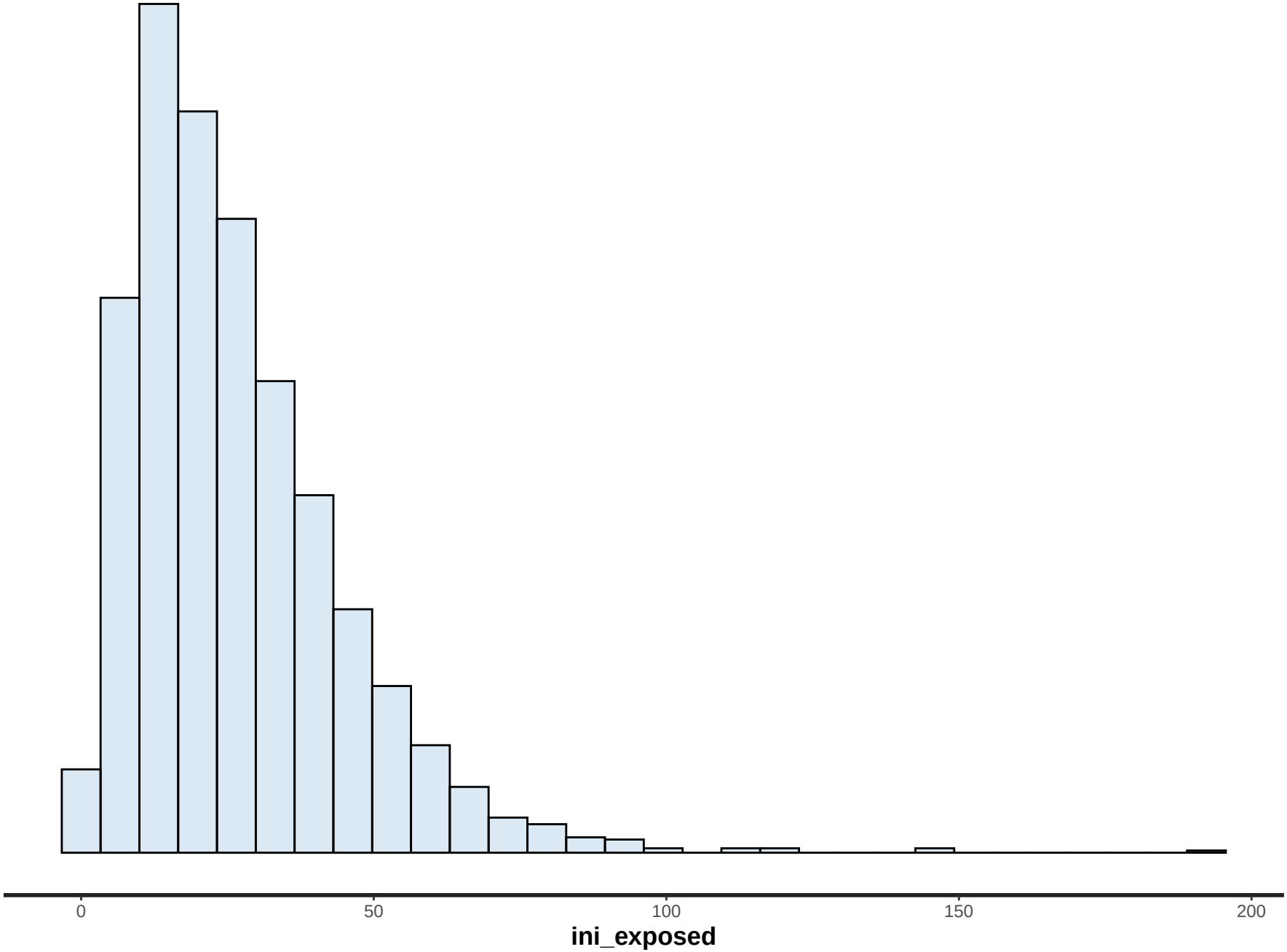
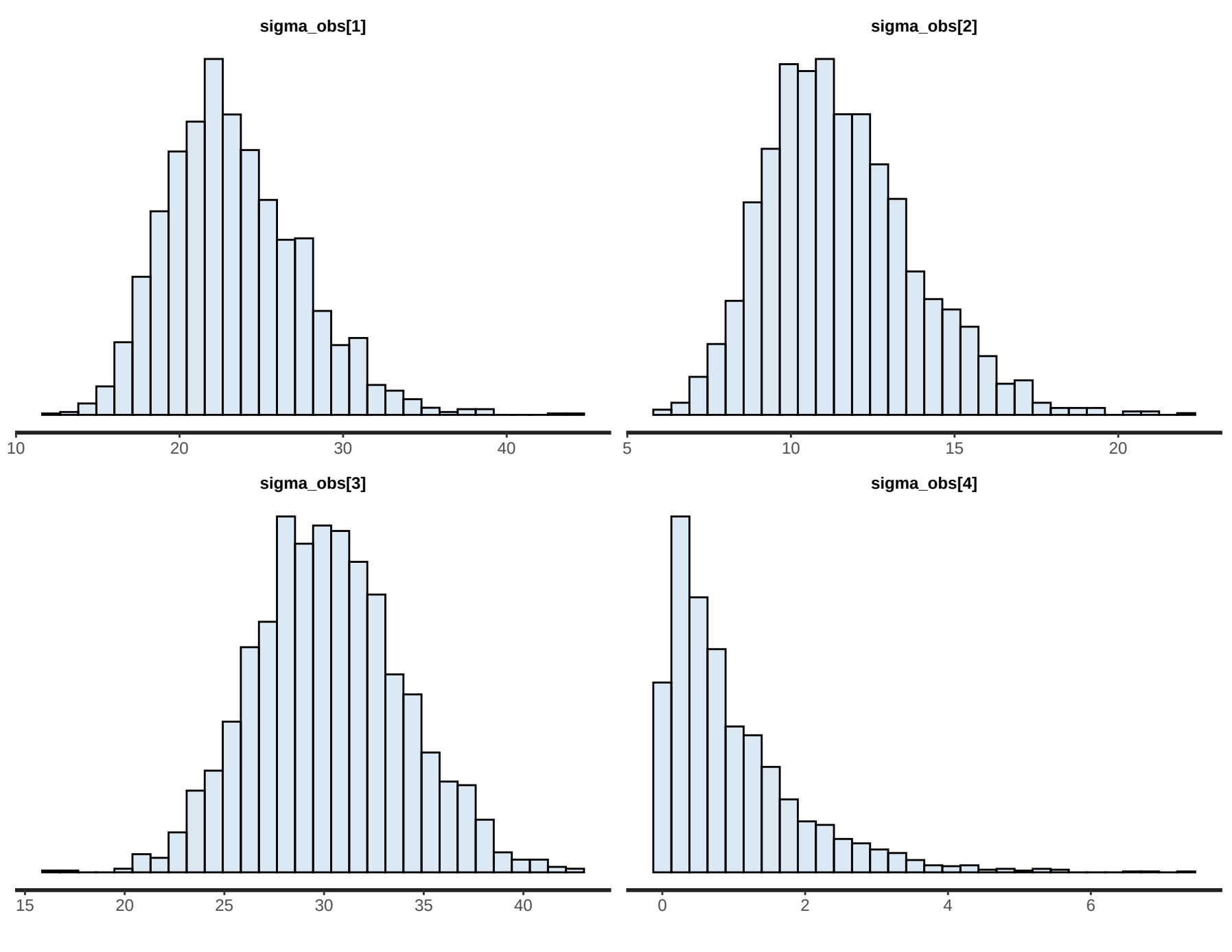
Mar 30
Apr 06
t_inter[3]
Apr 13
Apr 20
Apr 27
t_inter[4]
May 04
t_inter[5]
May 11
May 18
May 25
t_inter[6]
Jun 01
Jun 08
t_inter[7]
Jun 08
Jun 15
Jun 22
t_inter[8]
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Jul 04
t_inter[9]
Jul 08
Jul 10
Jul 12
Jul 14
Jul 16
Jul 18
t_inter[10]
Jul 20
Jul 27
Aug 03
t_inter[11]
Aug 10
Aug 17
t_inter[12]
Aug 17
Aug 24
Aug 31
t_inter[13]
Sep 07
t_inter[14]
Sep 14
Sep 21
t_inter[15]
Sep 28
Oct 05
Oct 12
t_inter[16]
Oct 19
t_inter[17]
Oct 26
Nov 02
Nov 09
t_inter[18]
Nov 09
Nov 16
Nov 23
t_inter[19]
Nov 30
Dec 07
t_inter[20]
Dec 07
Dec 14
t_inter[21]
Dec 17


0
50
100
150
200
ini_exposed


sigma_obs[1]
10
20
30
40
sigma_obs[2]
5
10
15
20
sigma_obs[3]
15
20
25
30
35
40
sigma_obs[4]
0
2
4
6