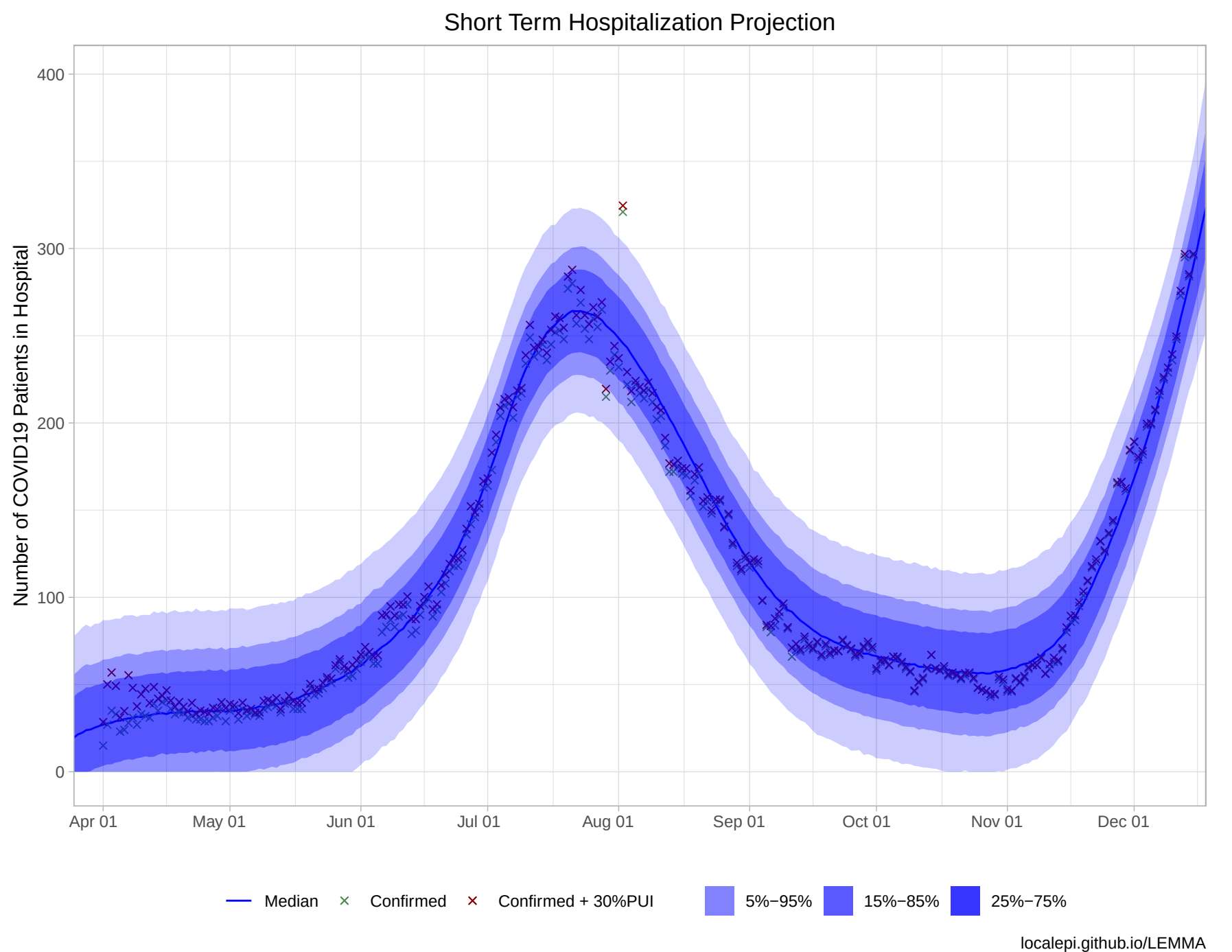
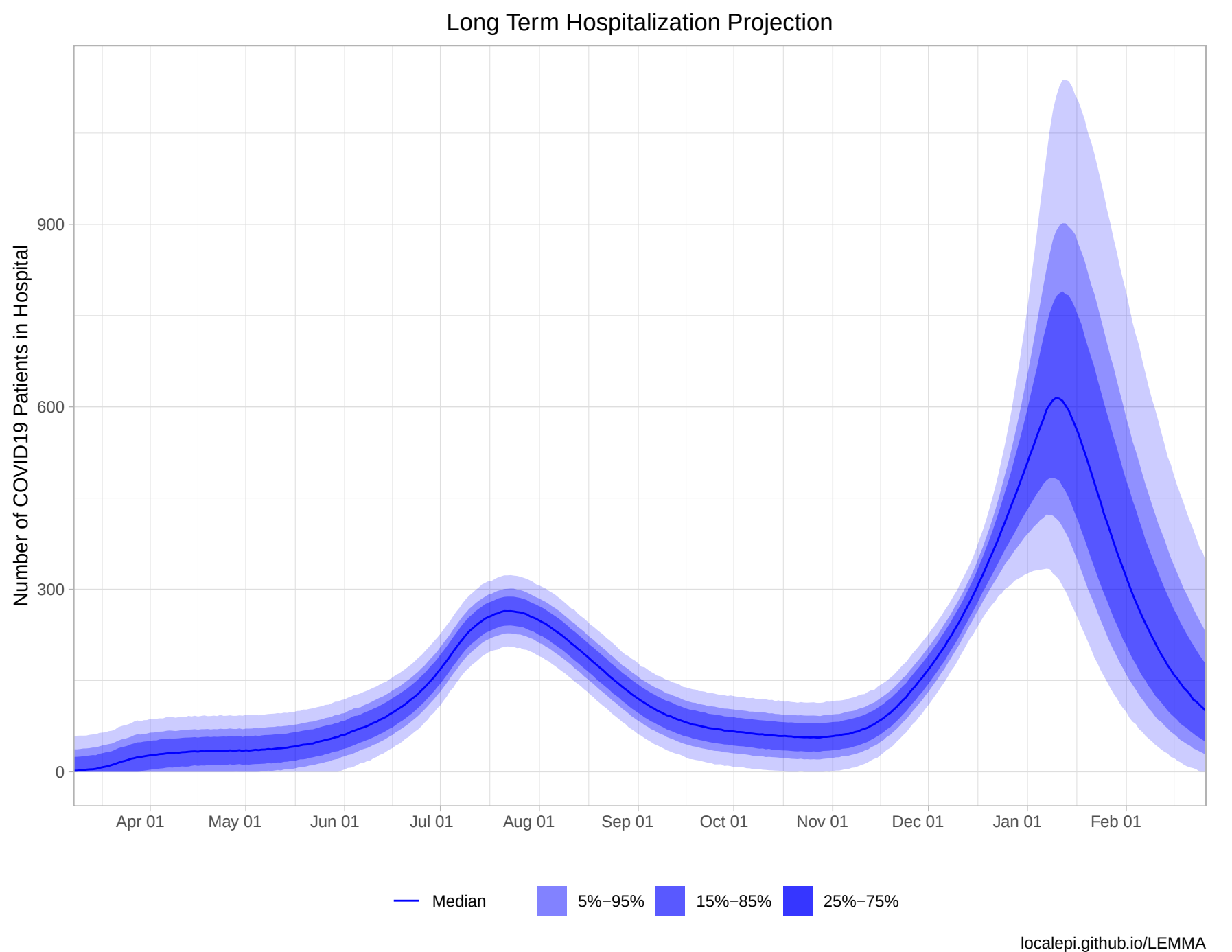
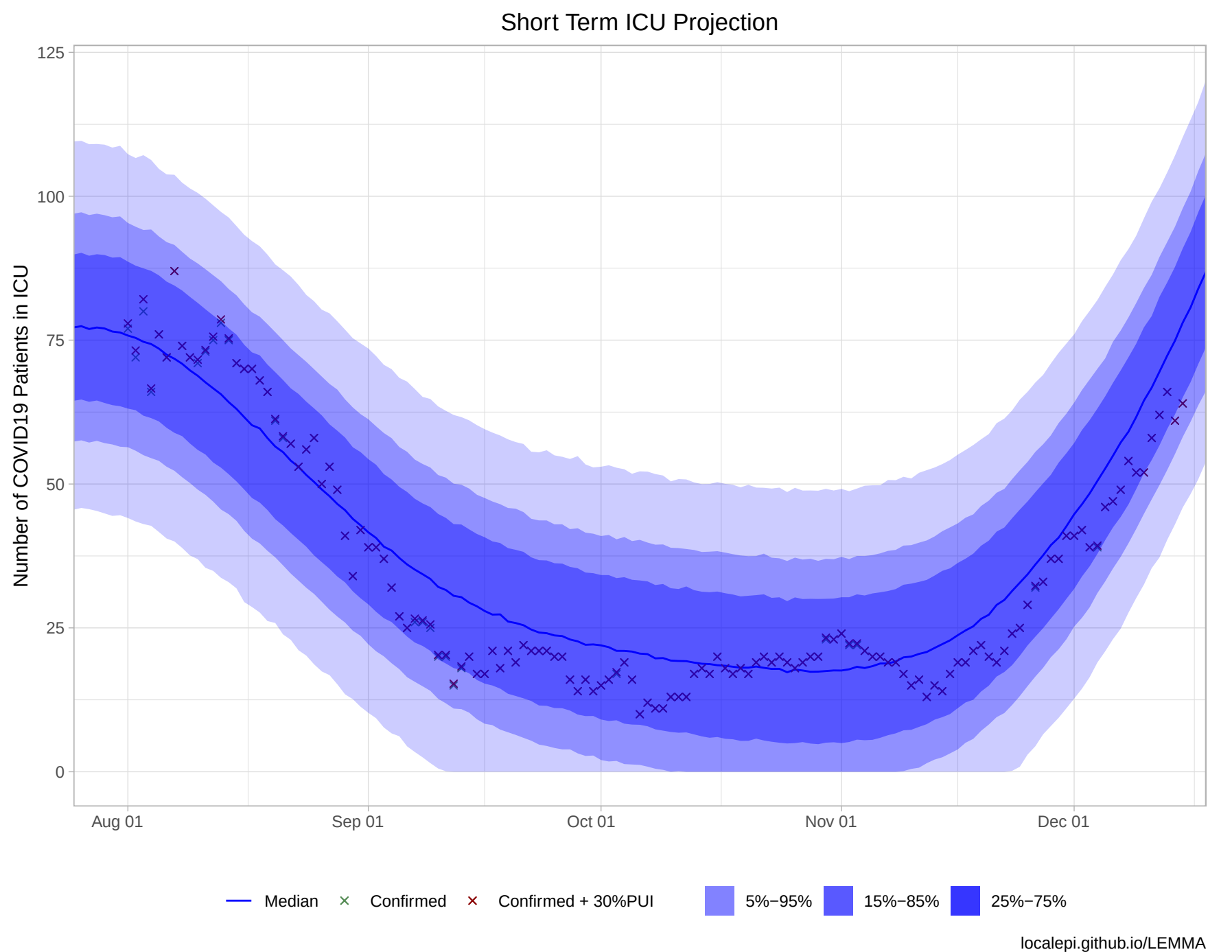
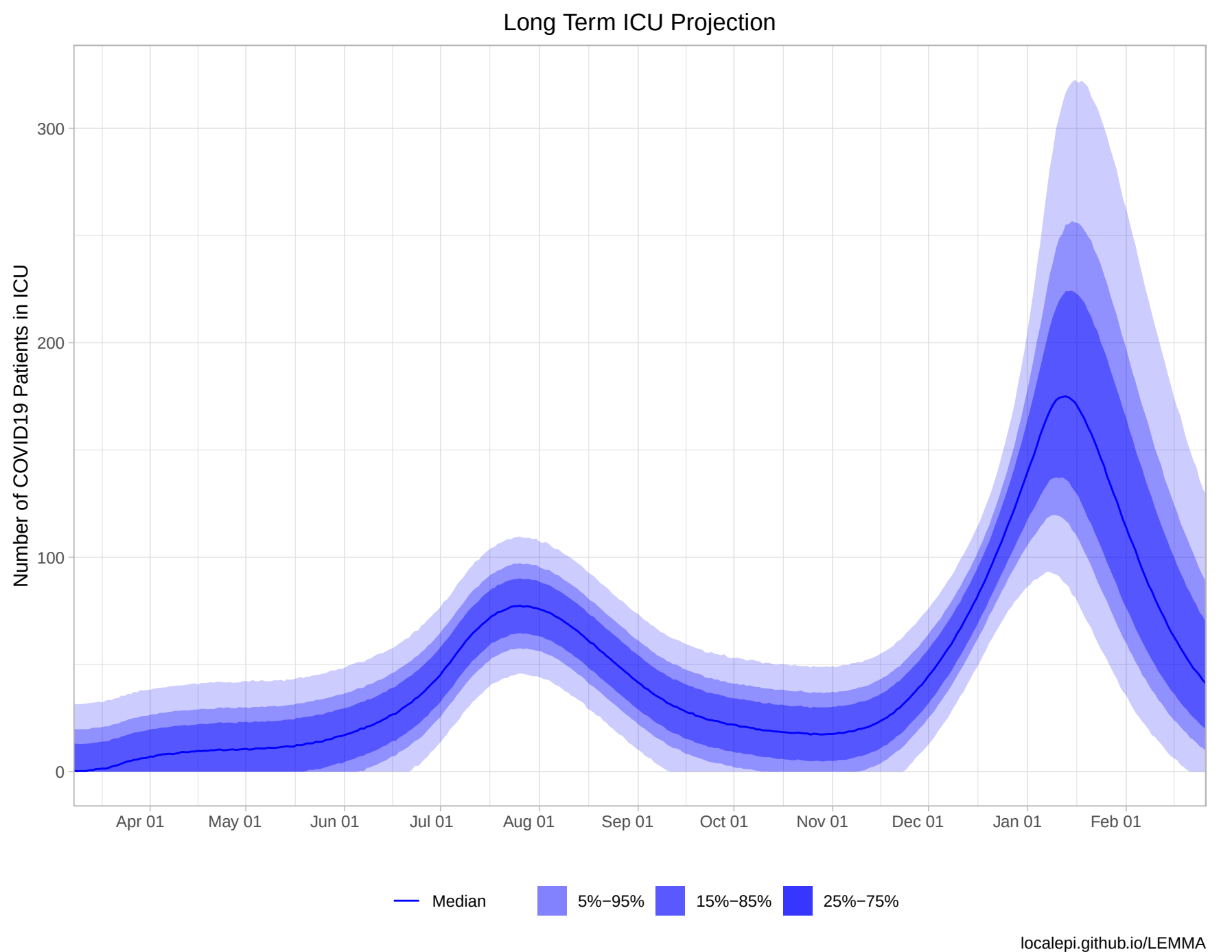
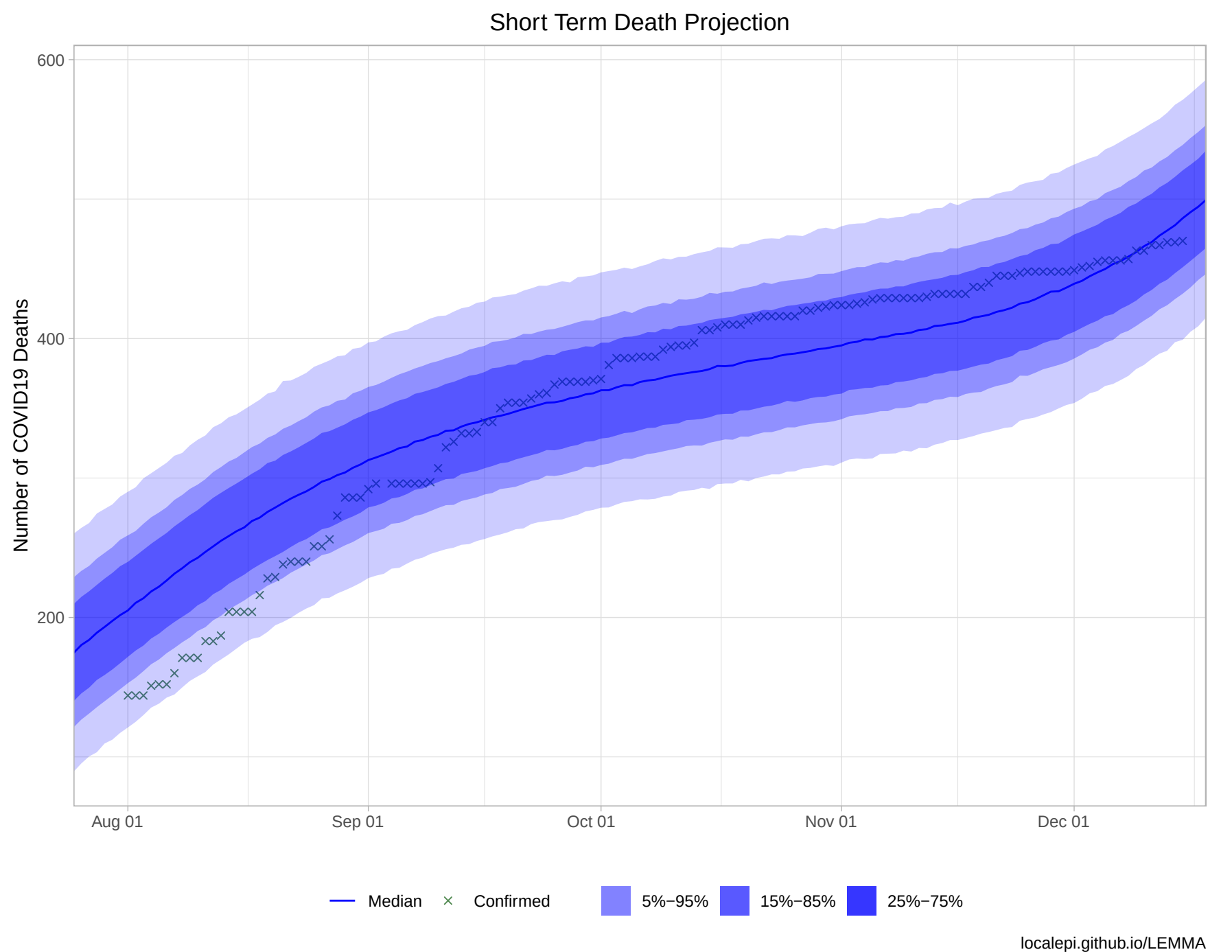
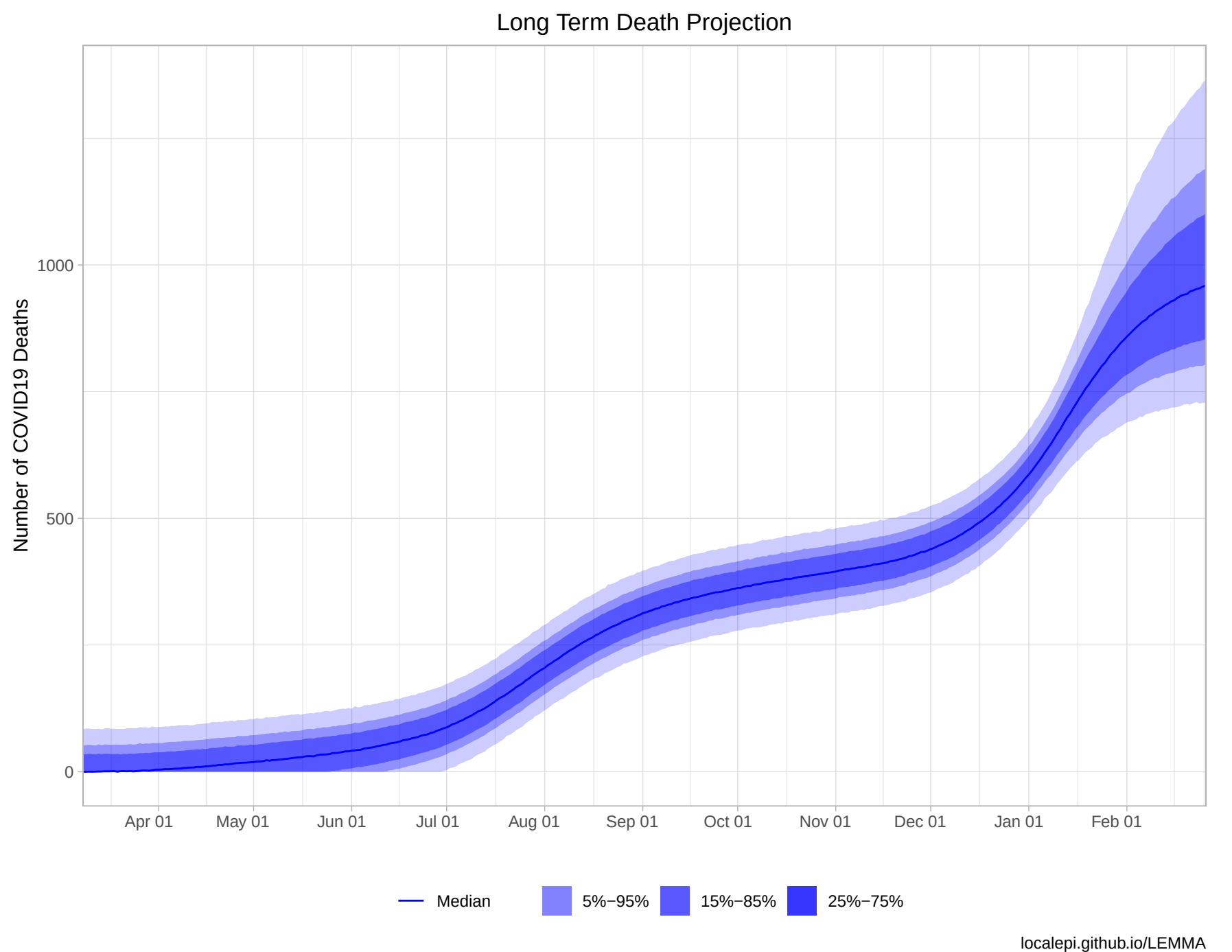

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
400
300
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

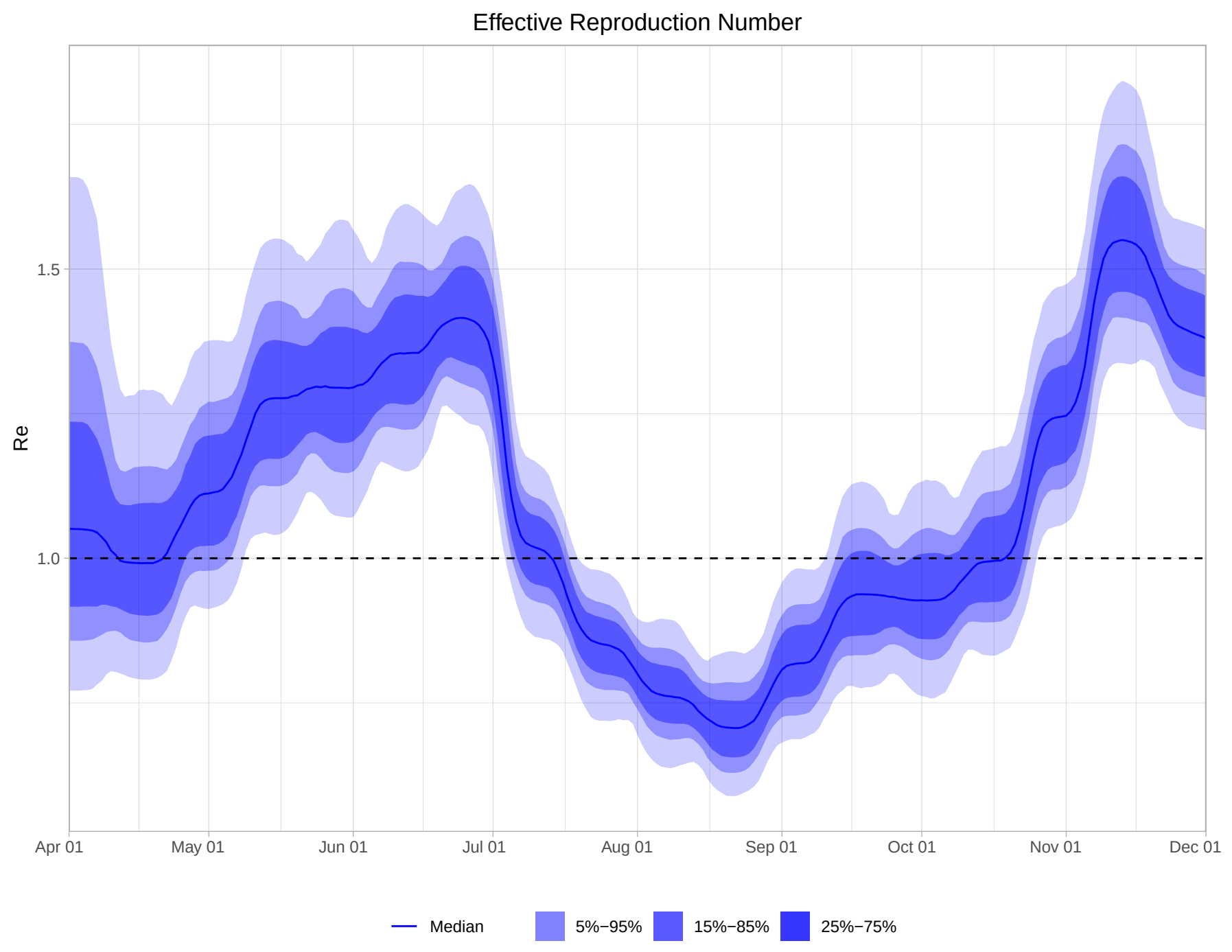

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
900
600
300
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
125
100
75
50
25
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
300
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

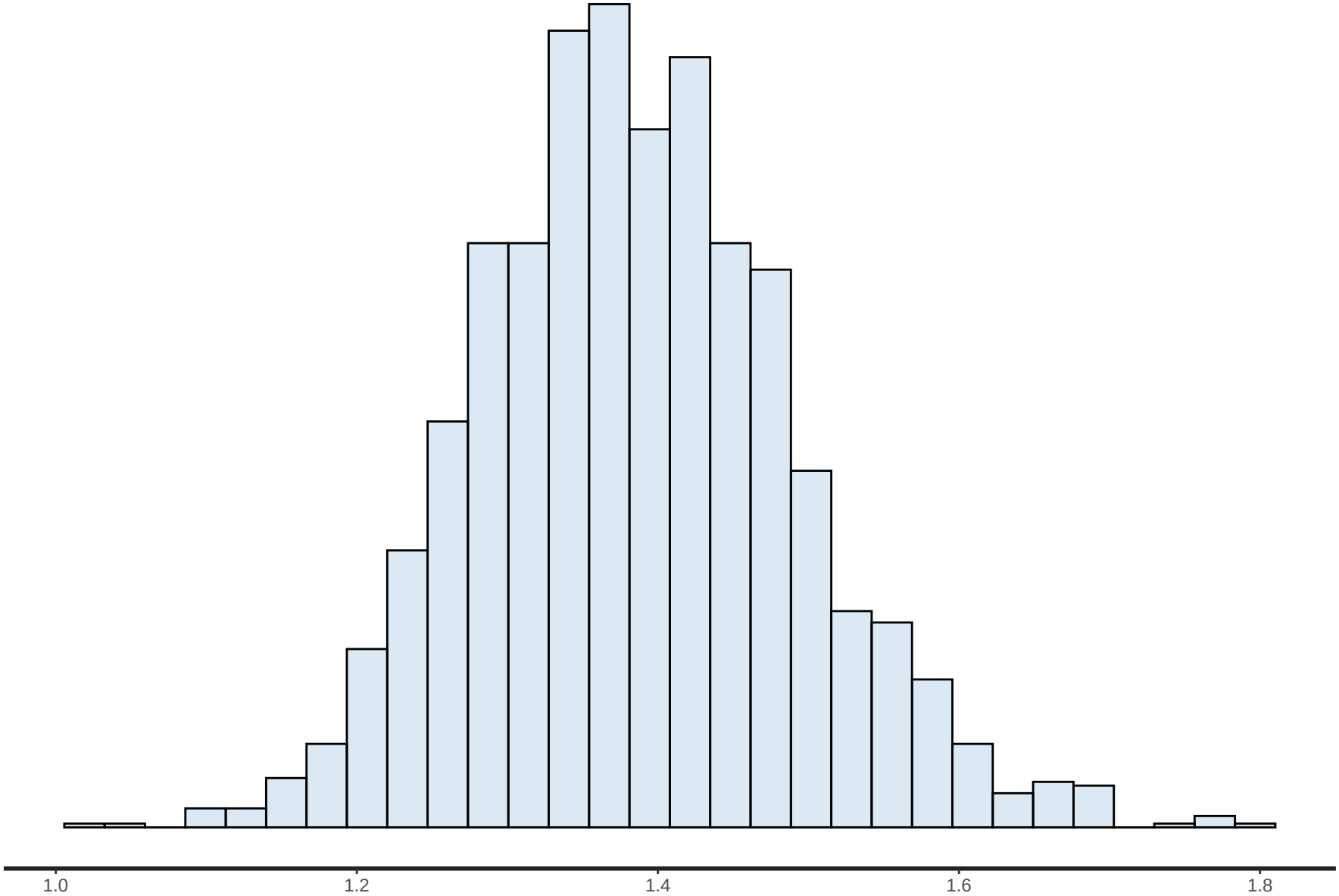

Short Term Death Projection
Number of COVID19 Deaths
600
400
200
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

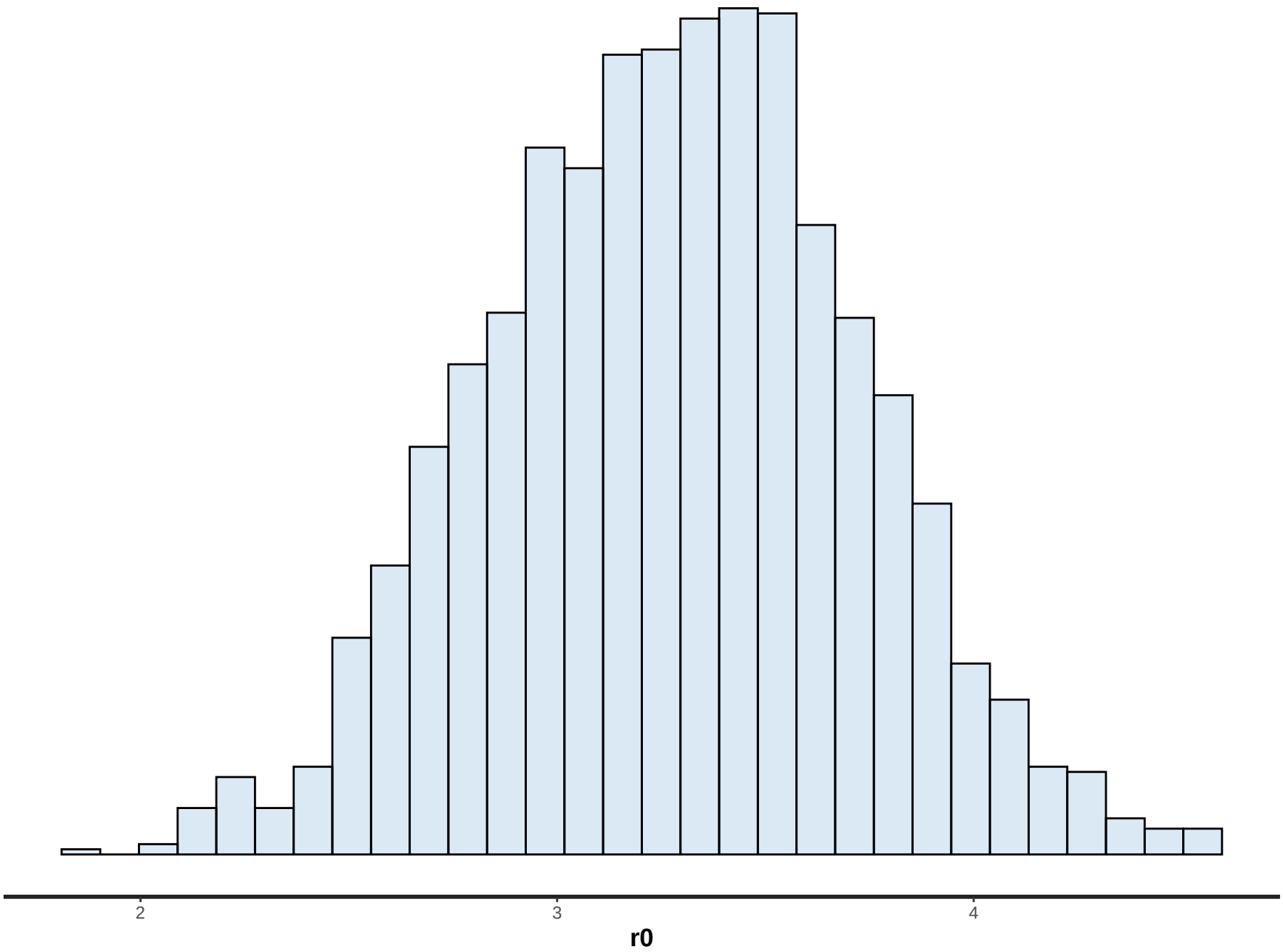

Long Term Death Projection
Number of COVID19 Deaths
0
500
1000
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

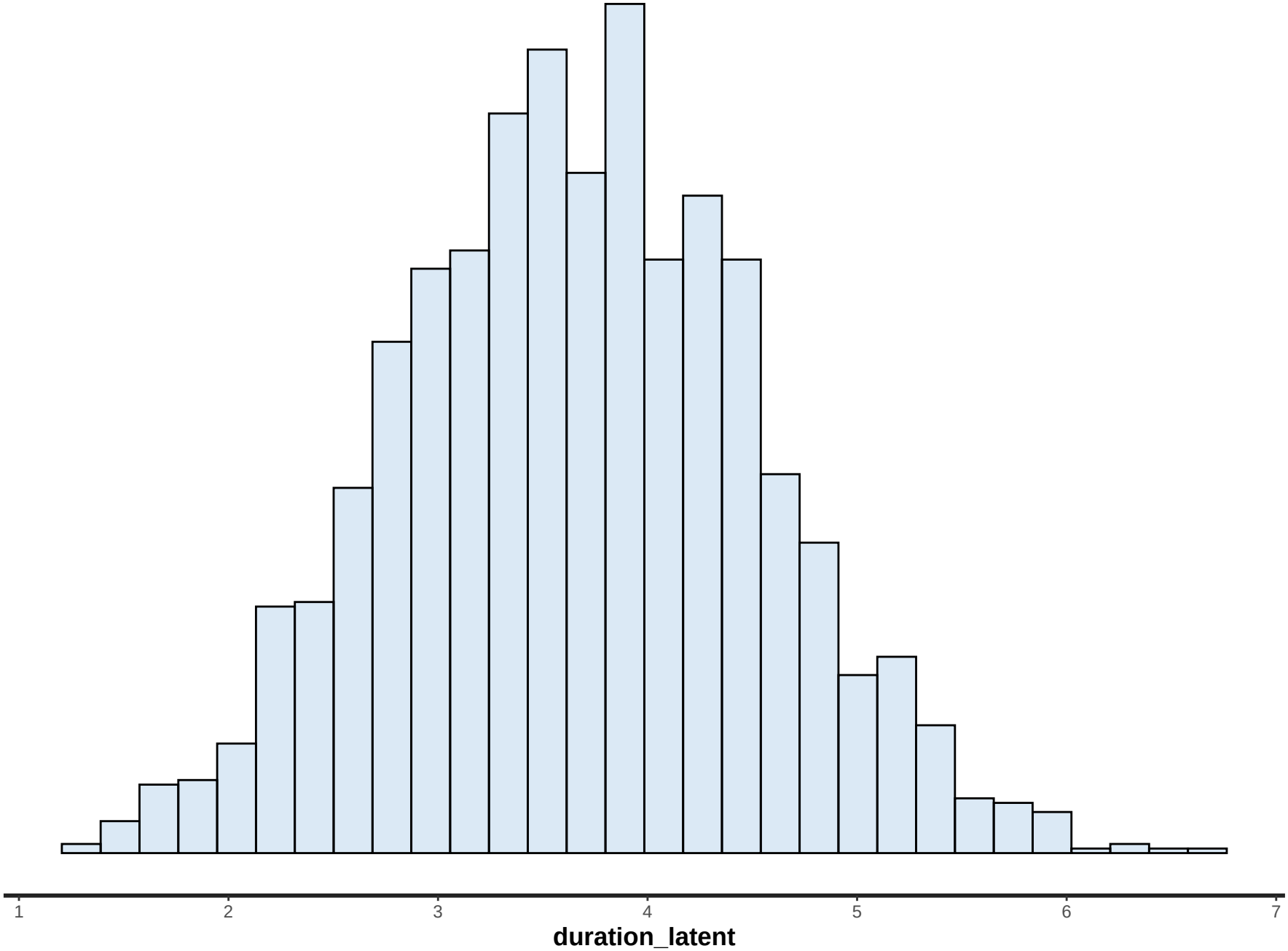

Effective Reproduction Number
Re
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

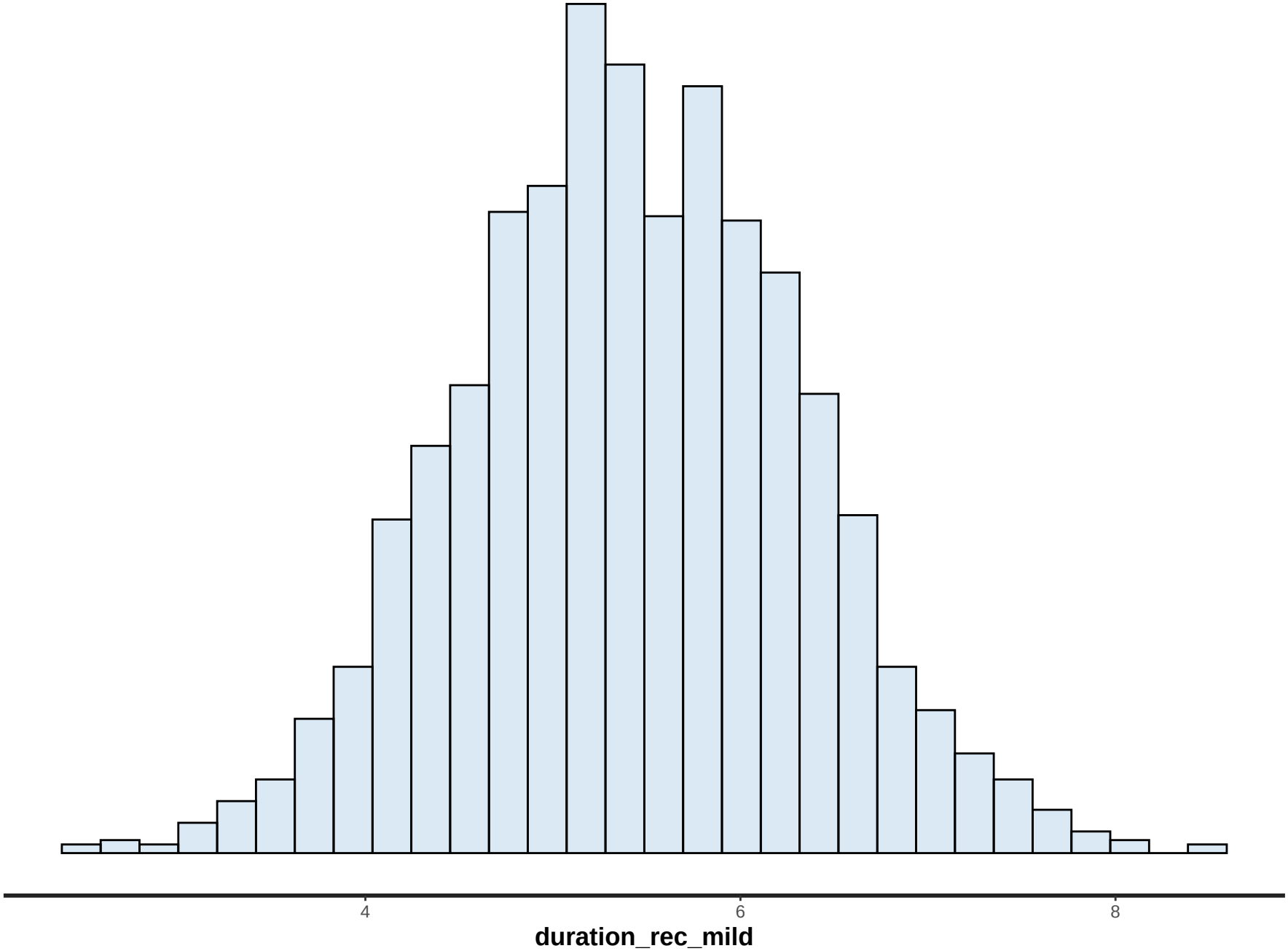
Rt as of 2020−12−01

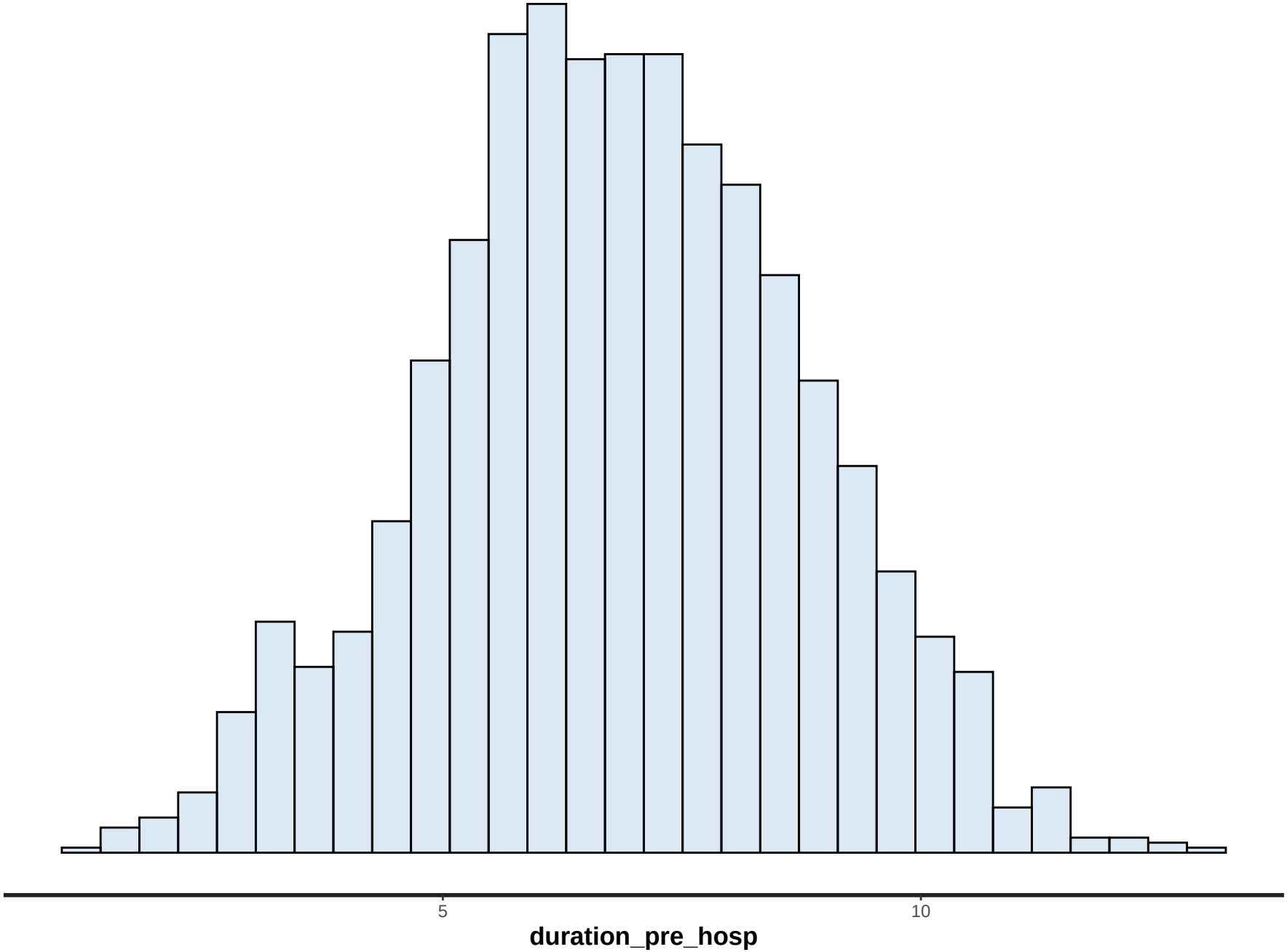
5%	10%	25%	50%	75%	90%	95%
1.22	1.26	1.31	1.38	1.45	1.52	1.57

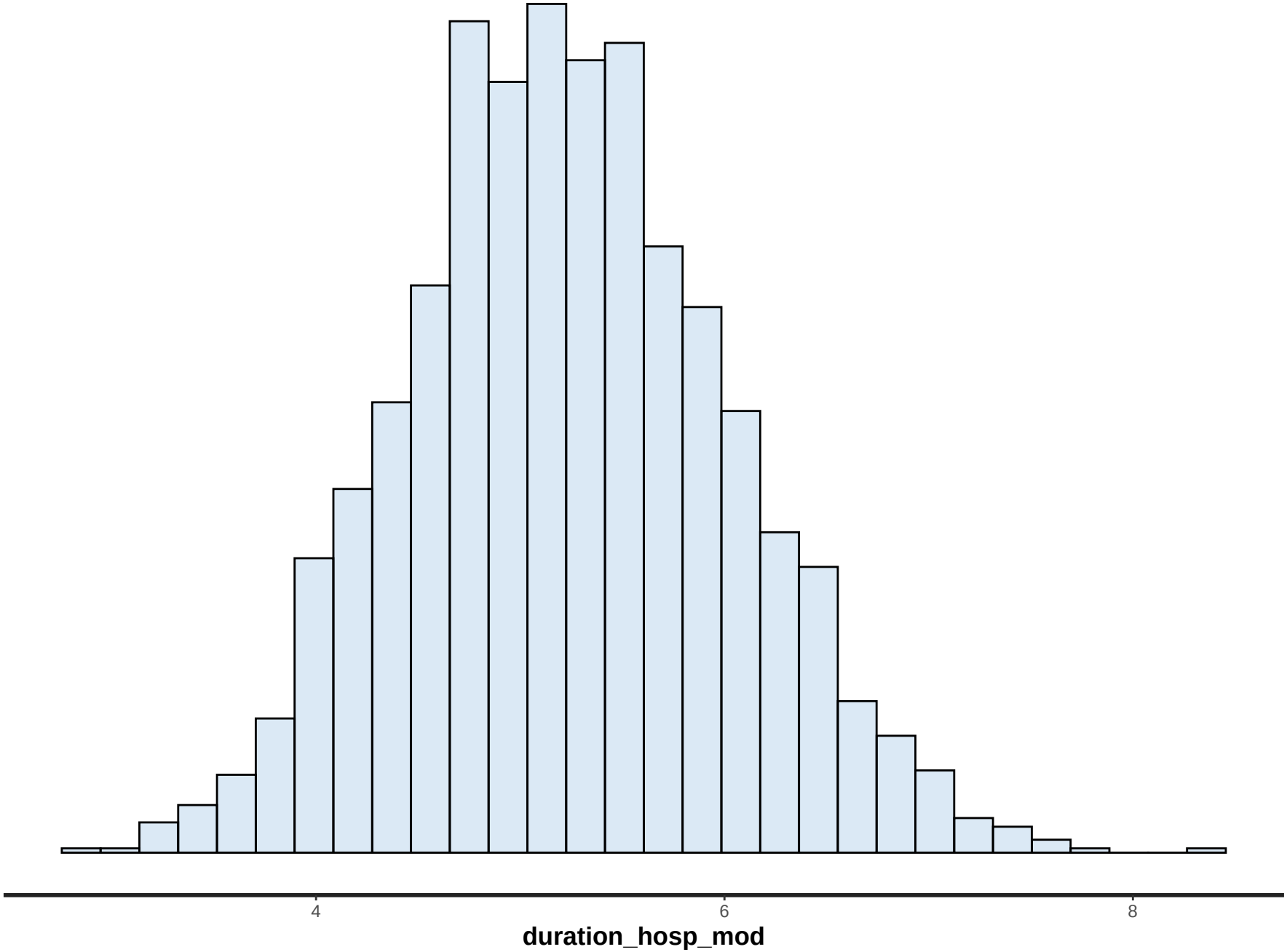


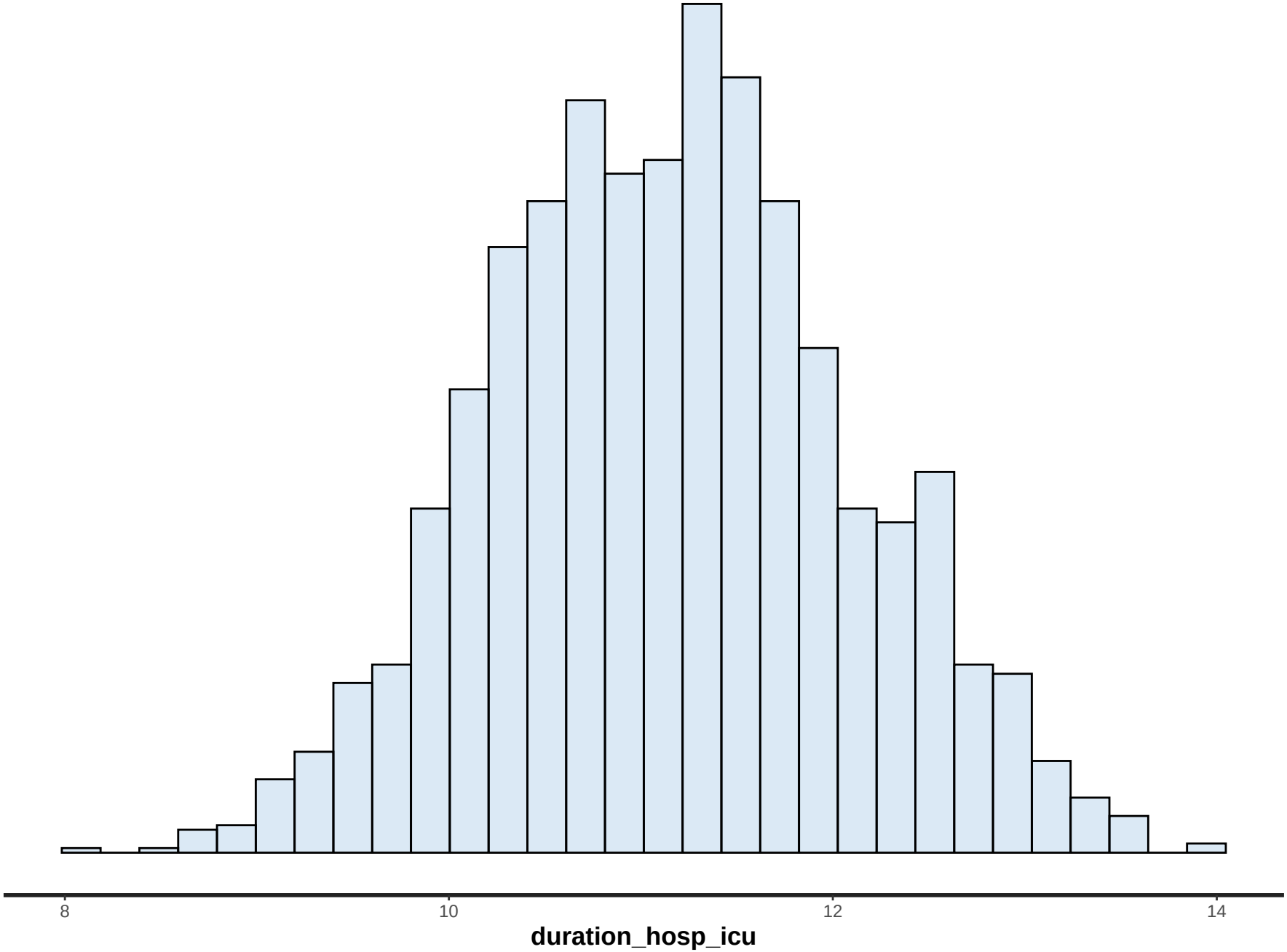

2
3
4
r0

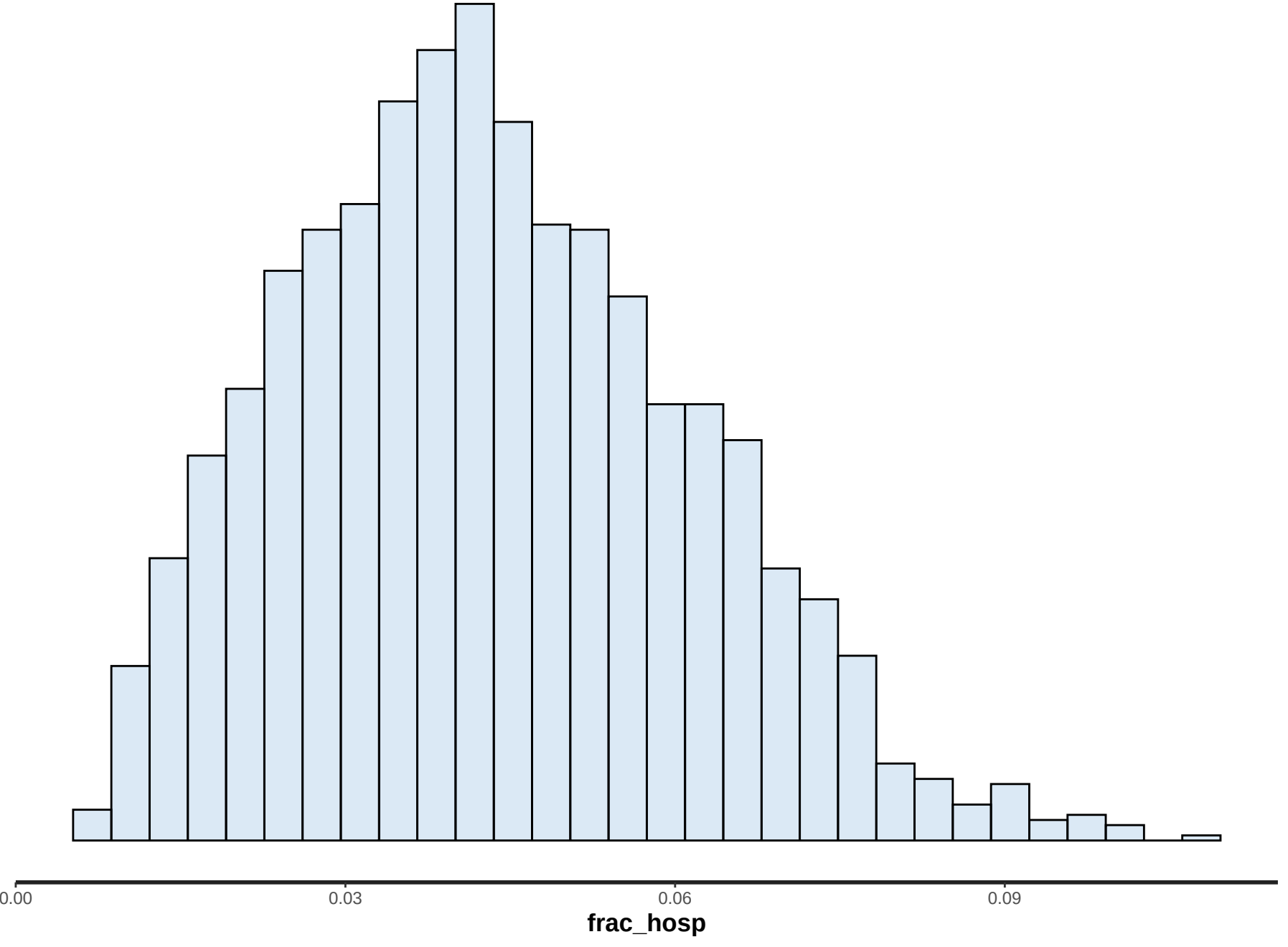

1
2
3
4
5
6
7
duration_latent

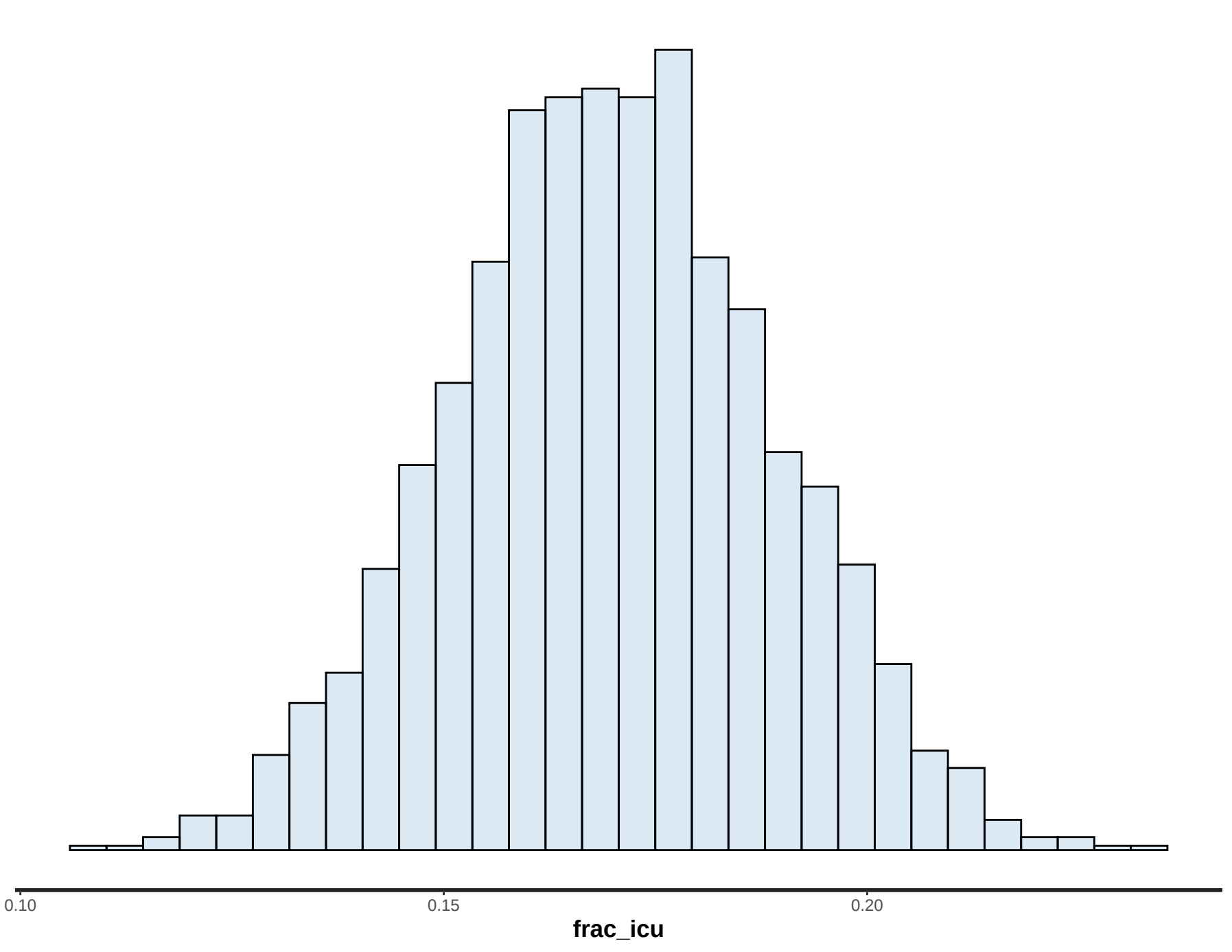

4
6
8
duration_rec_mild

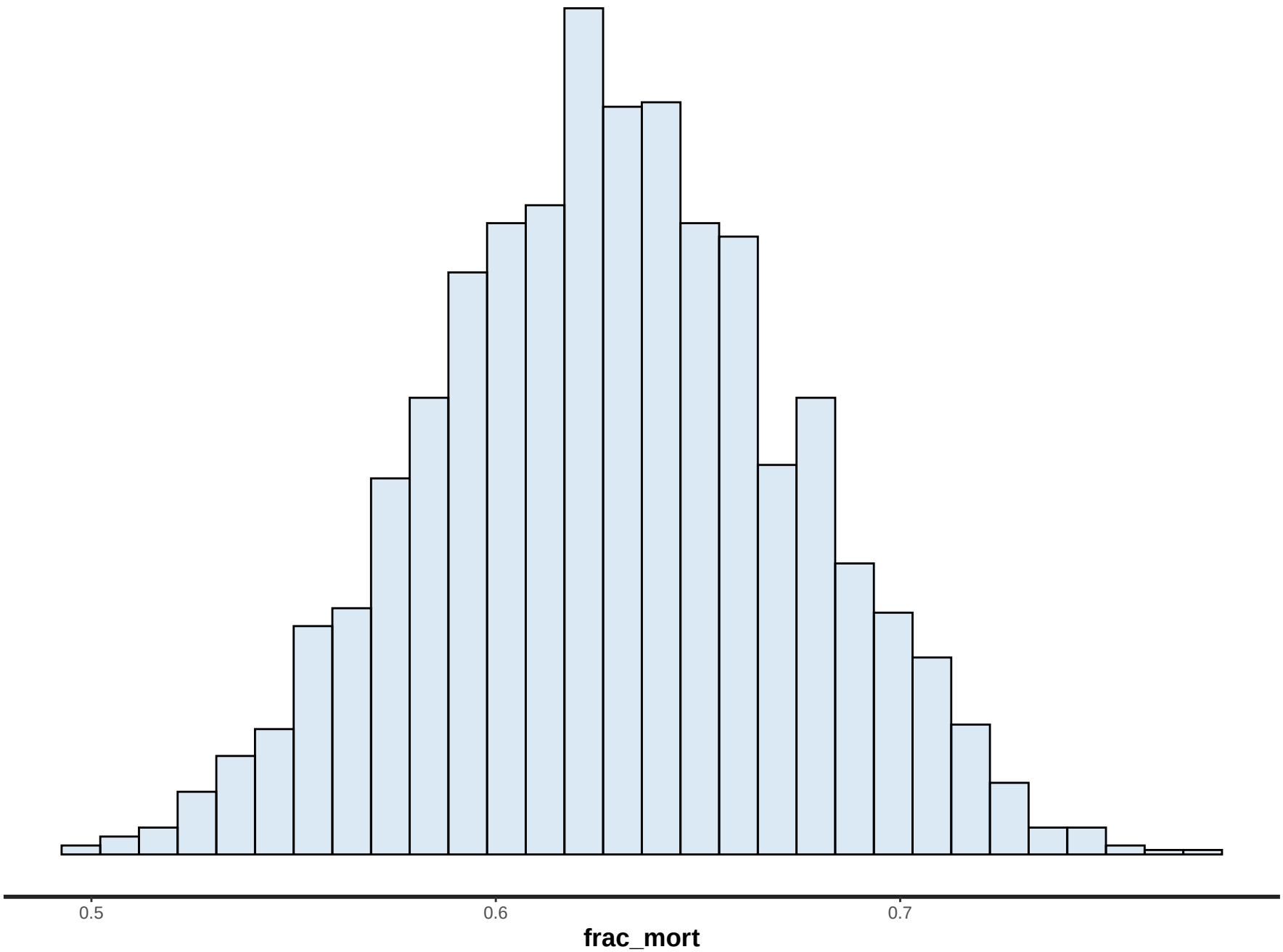

5
10
duration_pre_hosp

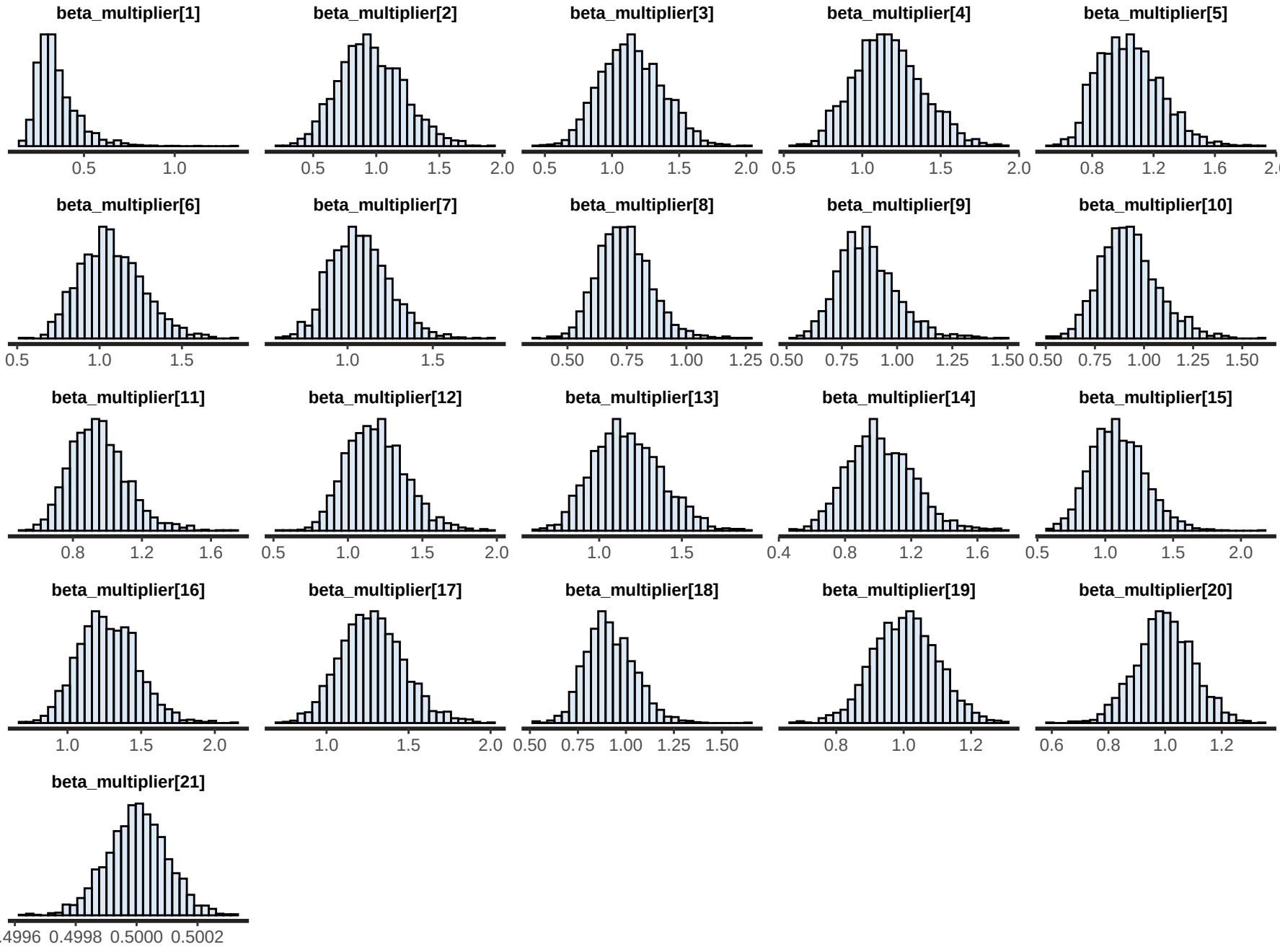

4
6
8
duration_hosp_mod

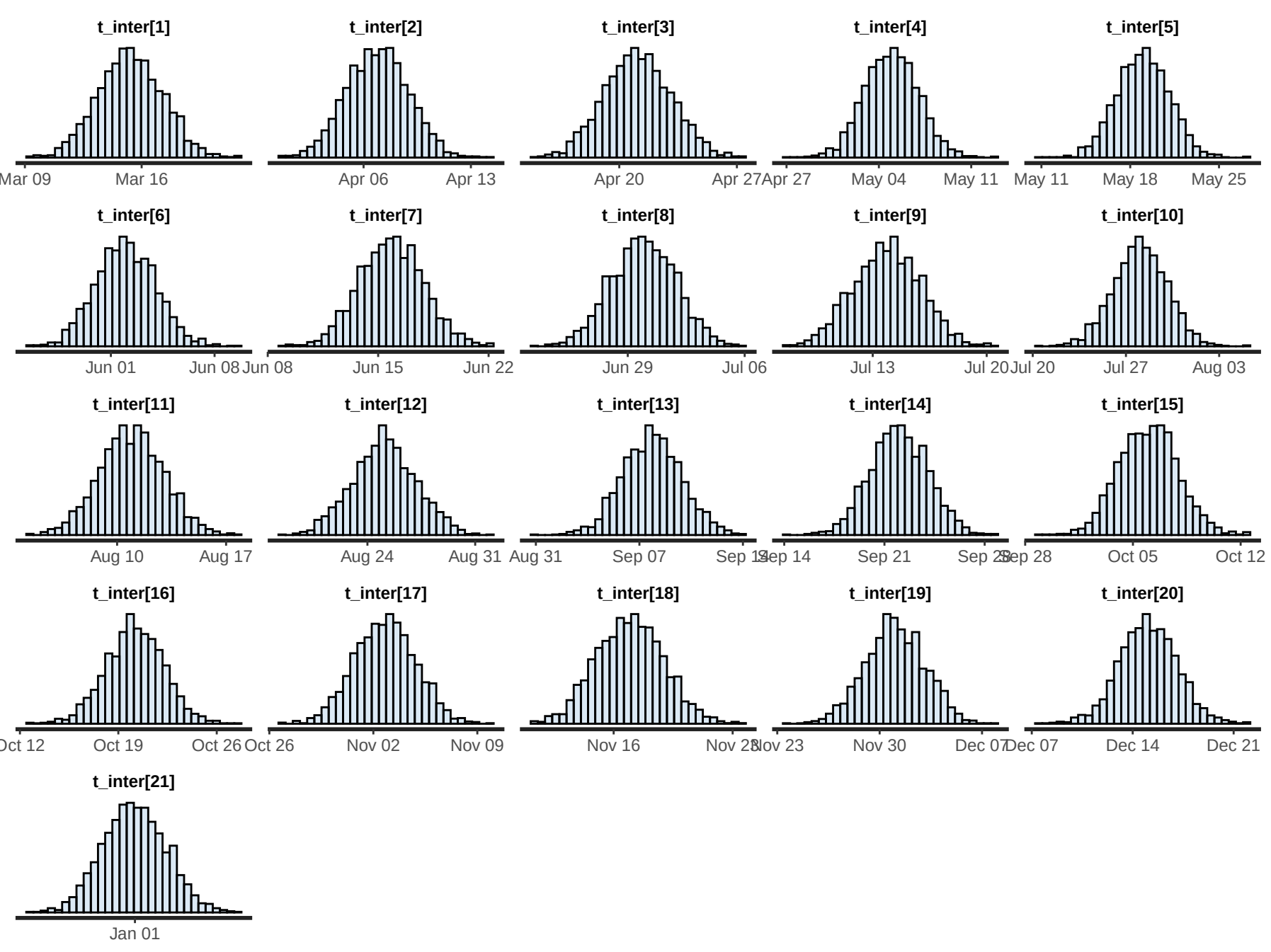

8
10
12
14
duration_hosp_icu

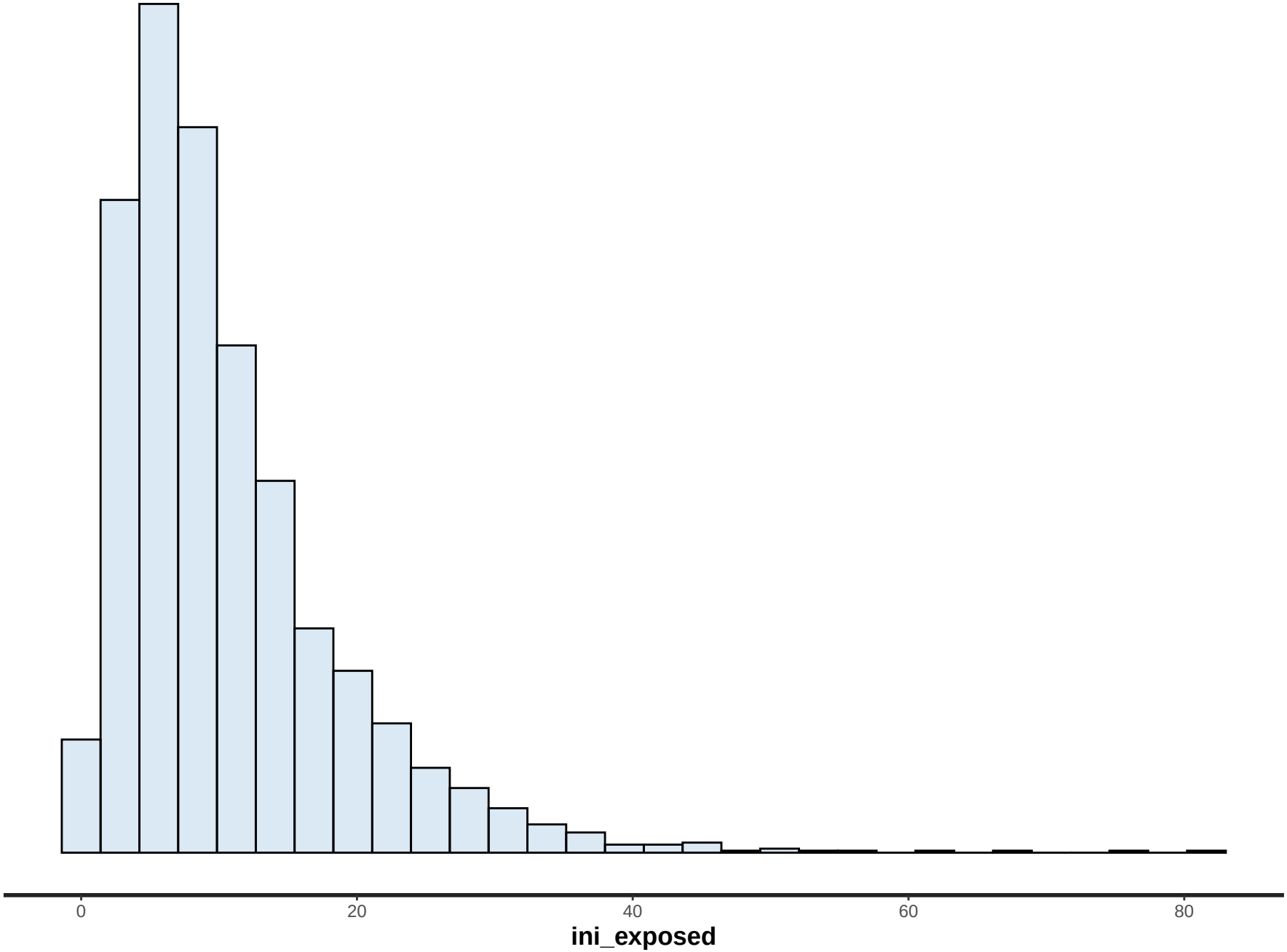

0.00
0.03
0.06
0.09
frac_hosp

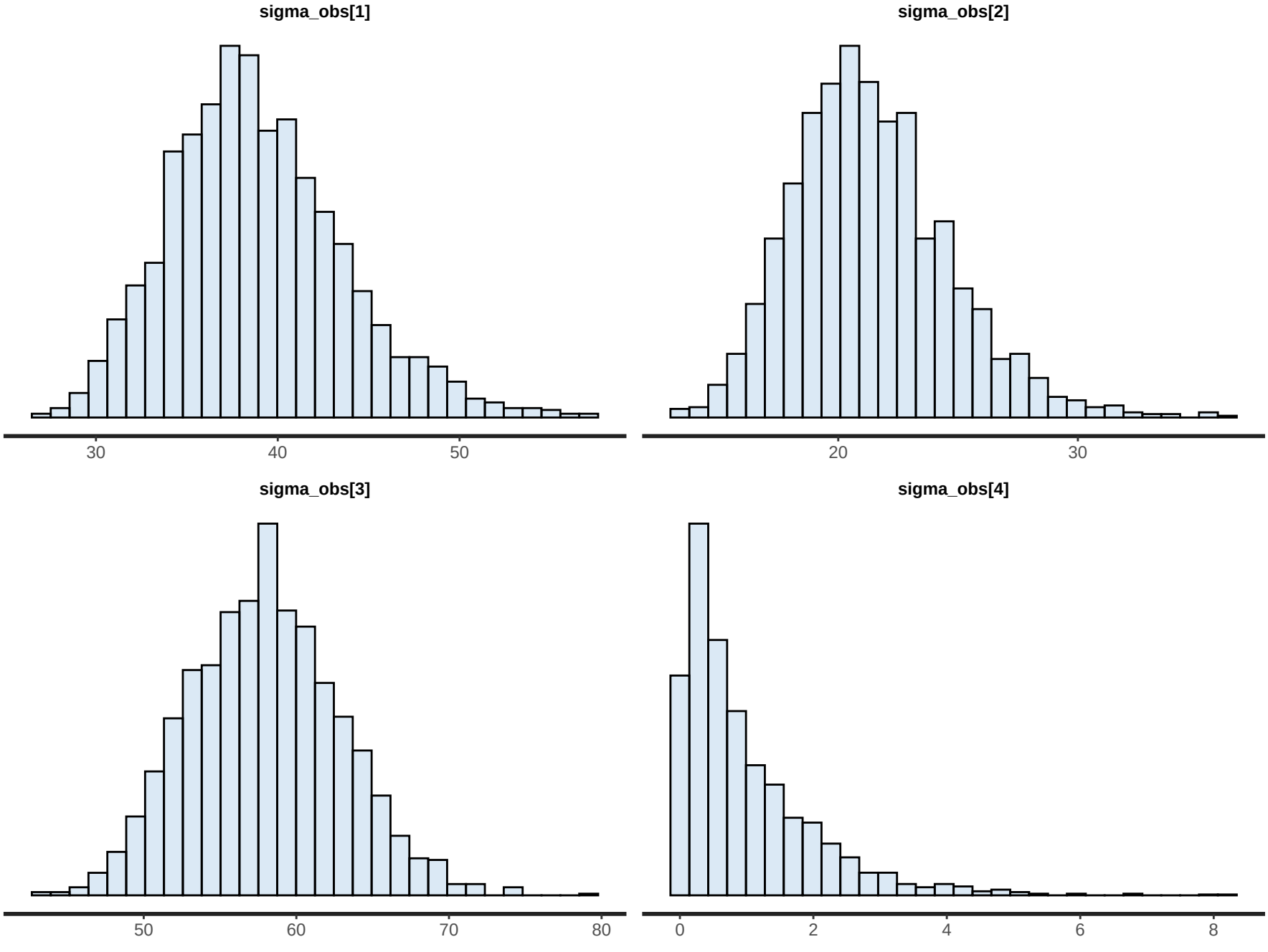

0.10
0.15
0.20
frac_icu


0.5
0.6
0.7
frac_mort


beta_multiplier[1]
0.5
1.0
beta_multiplier[2]
0.5
1.0
1.5
2.0
beta_multiplier[3]
0.5
1.0
1.5
2.0
beta_multiplier[4]
0.5
1.0
1.5
2.0
beta_multiplier[5]
0.8
1.2
1.6
2.0
beta_multiplier[6]
0.5
1.0
1.5
beta_multiplier[7]
1.0
1.5
beta_multiplier[8]
0.50
0.75
1.00
1.25
beta_multiplier[9]
0.50
0.75
1.00
1.25
1.50
beta_multiplier[10]
0.50
0.75
1.00
1.25
1.50
beta_multiplier[11]
0.8
1.2
1.6
beta_multiplier[12]
0.5
1.0
1.5
2.0
beta_multiplier[13]
1.0
1.5
beta_multiplier[14]
0.4
0.8
1.2
1.6
beta_multiplier[15]
0.5
1.0
1.5
2.0
beta_multiplier[16]
1.0
1.5
2.0
beta_multiplier[17]
1.0
1.5
2.0
beta_multiplier[18]
0.50
0.75
1.00
1.25
1.50
beta_multiplier[19]
0.8
1.0
1.2
beta_multiplier[20]
0.6
0.8
1.0
1.2
beta_multiplier[21]
0.4996
0.4998
0.5000
0.5002


t_inter[1]
Mar 09
Mar 16
t_inter[2]
Apr 06
Apr 13
t_inter[3]
Apr 20
Apr 27
t_inter[4]
Apr 27
May 04
May 11
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 29
Jul 06
t_inter[9]
Jul 13
Jul 20
t_inter[10]
Jul 20
Jul 27
Aug 03
t_inter[11]
Aug 10
Aug 17
t_inter[12]
Aug 24
Aug 31
t_inter[13]
Aug 31
Sep 07
t_inter[14]
Sep 14
Sep 21
t_inter[15]
Sep 28
Oct 05
Oct 12
t_inter[16]
Oct 12
Oct 19
Oct 26
t_inter[17]
Oct 26
Nov 02
Nov 09
t_inter[18]
Nov 16
t_inter[19]
Nov 23
Nov 30
Dec 07
t_inter[20]
Dec 07
Dec 14
Dec 21
t_inter[21]
Jan 01


0
20
40
60
80
ini_exposed


sigma_obs[1]
30
40
50
sigma_obs[2]
20
30
sigma_obs[3]
50
60
70
80
sigma_obs[4]
0
2
4
6
8