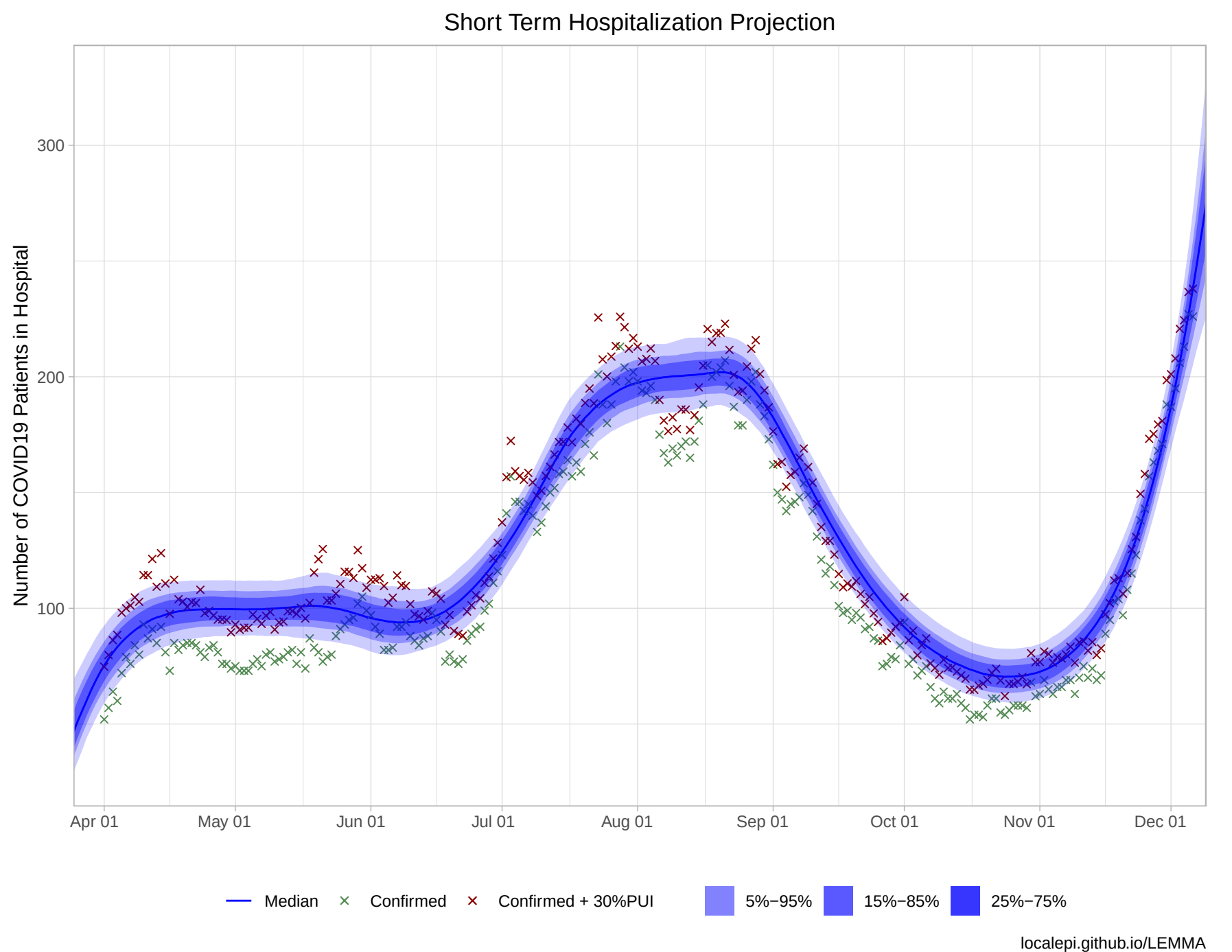
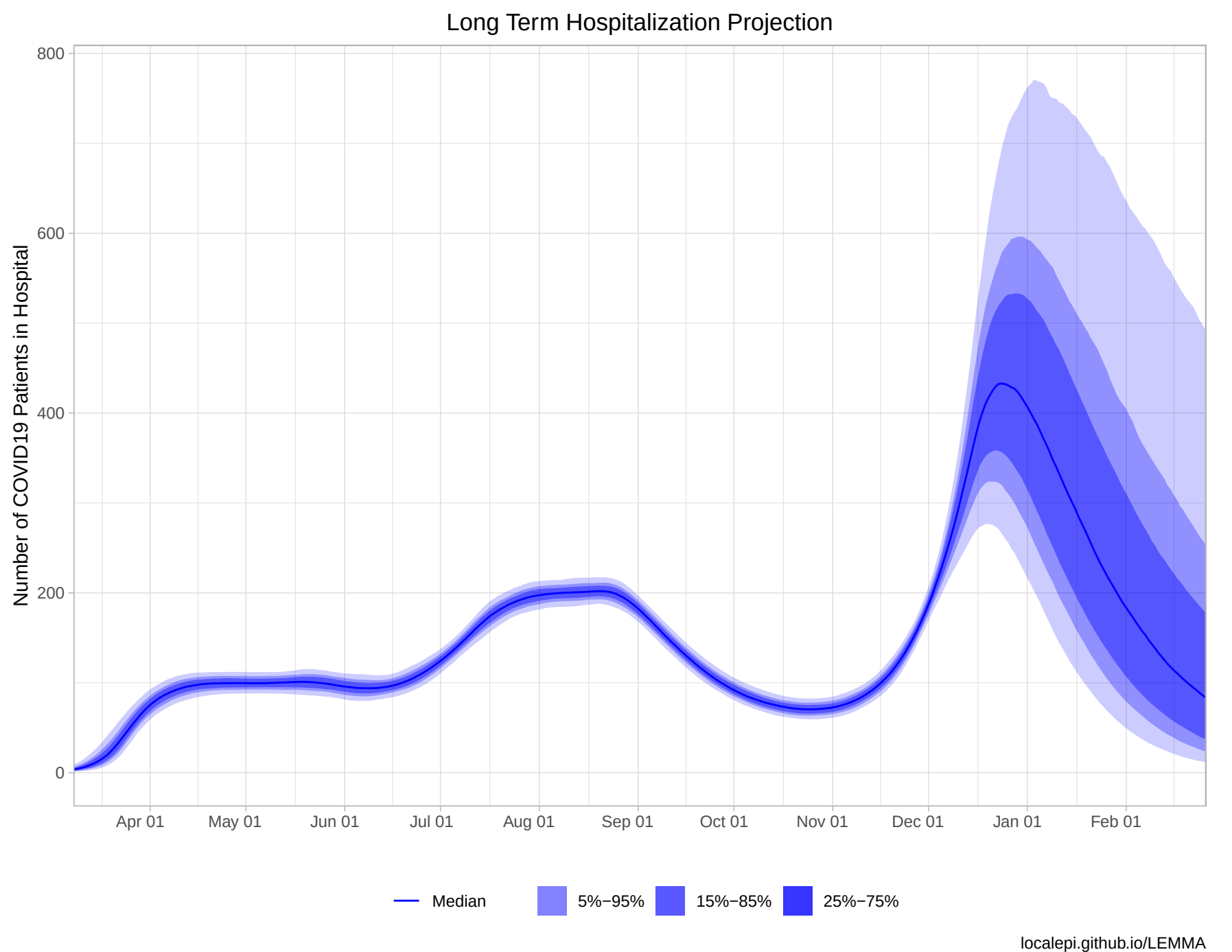
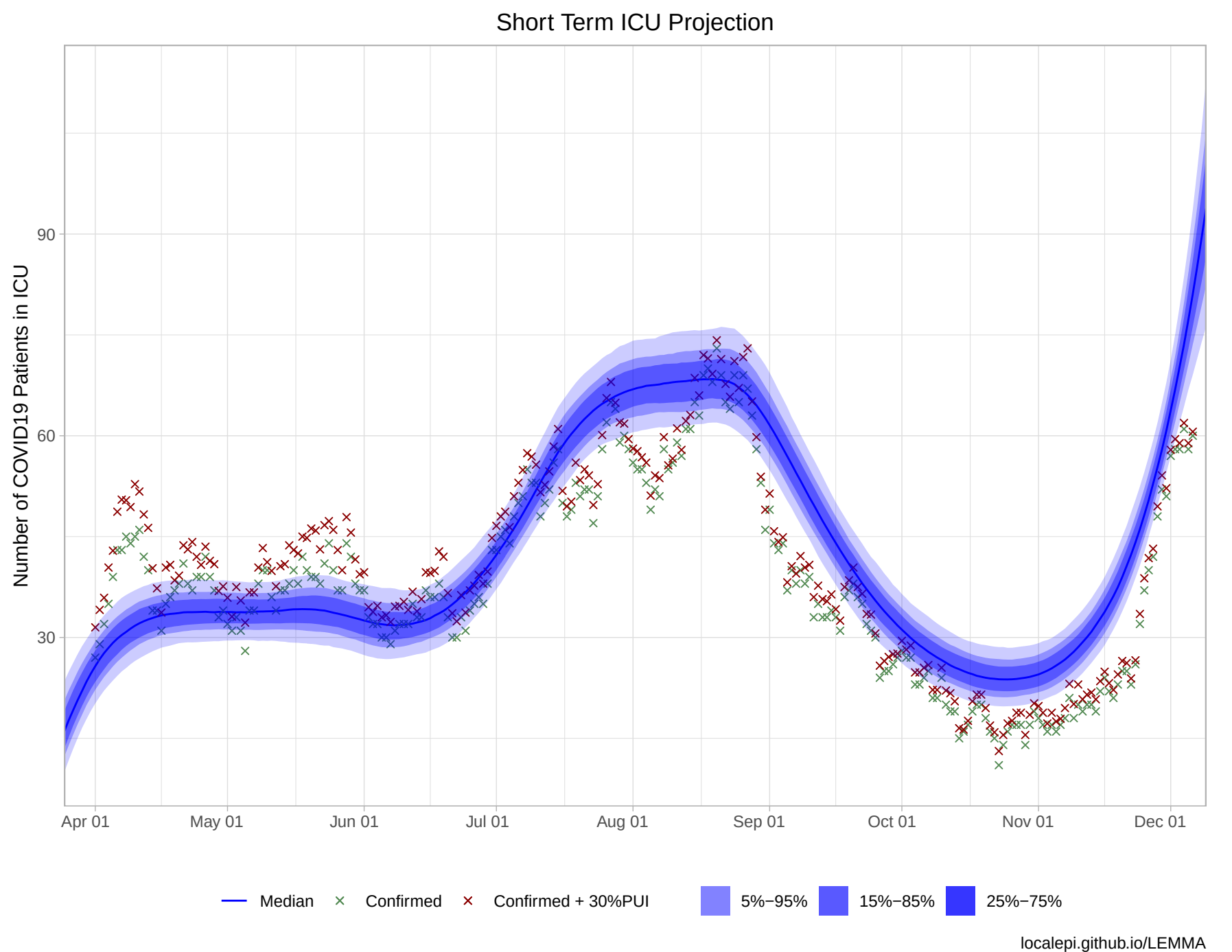
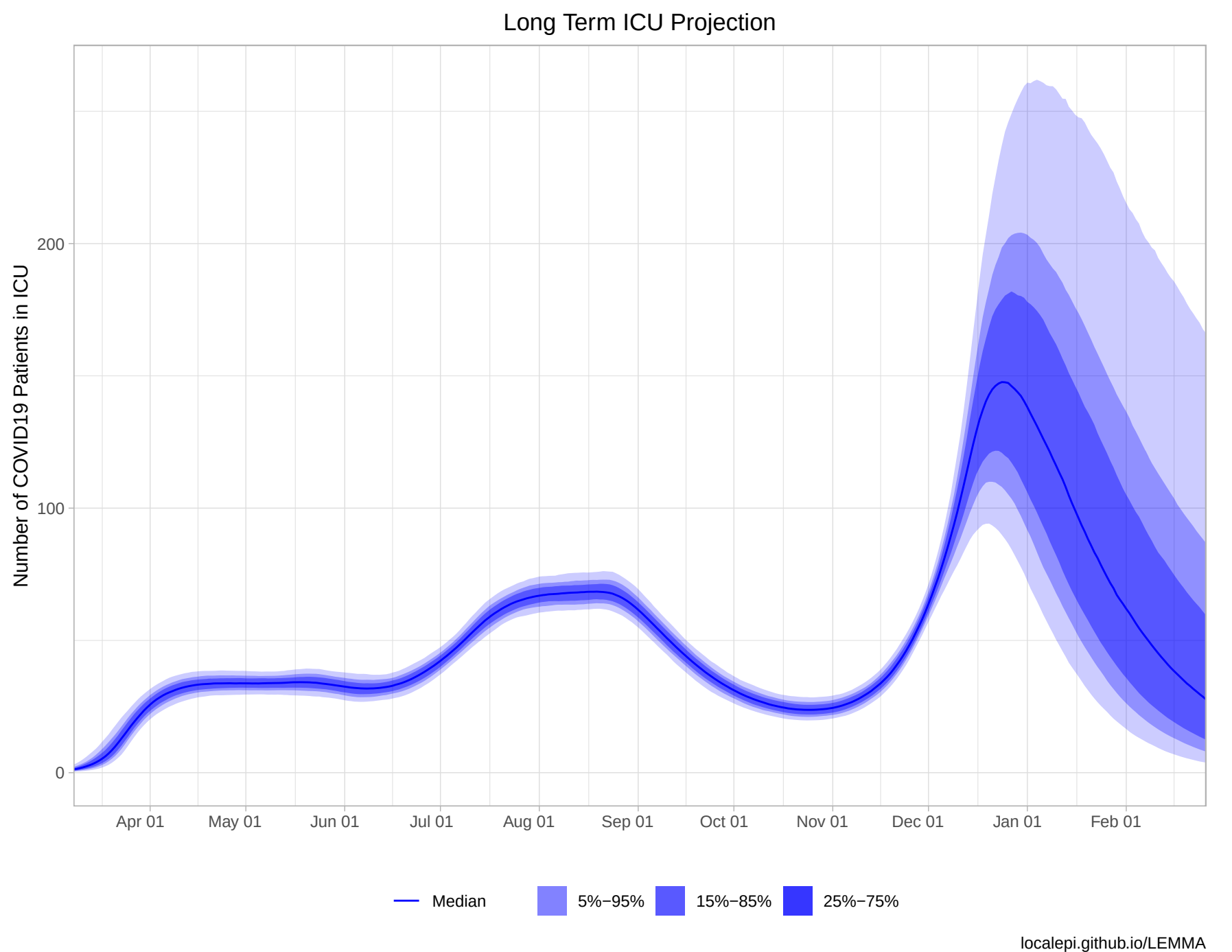
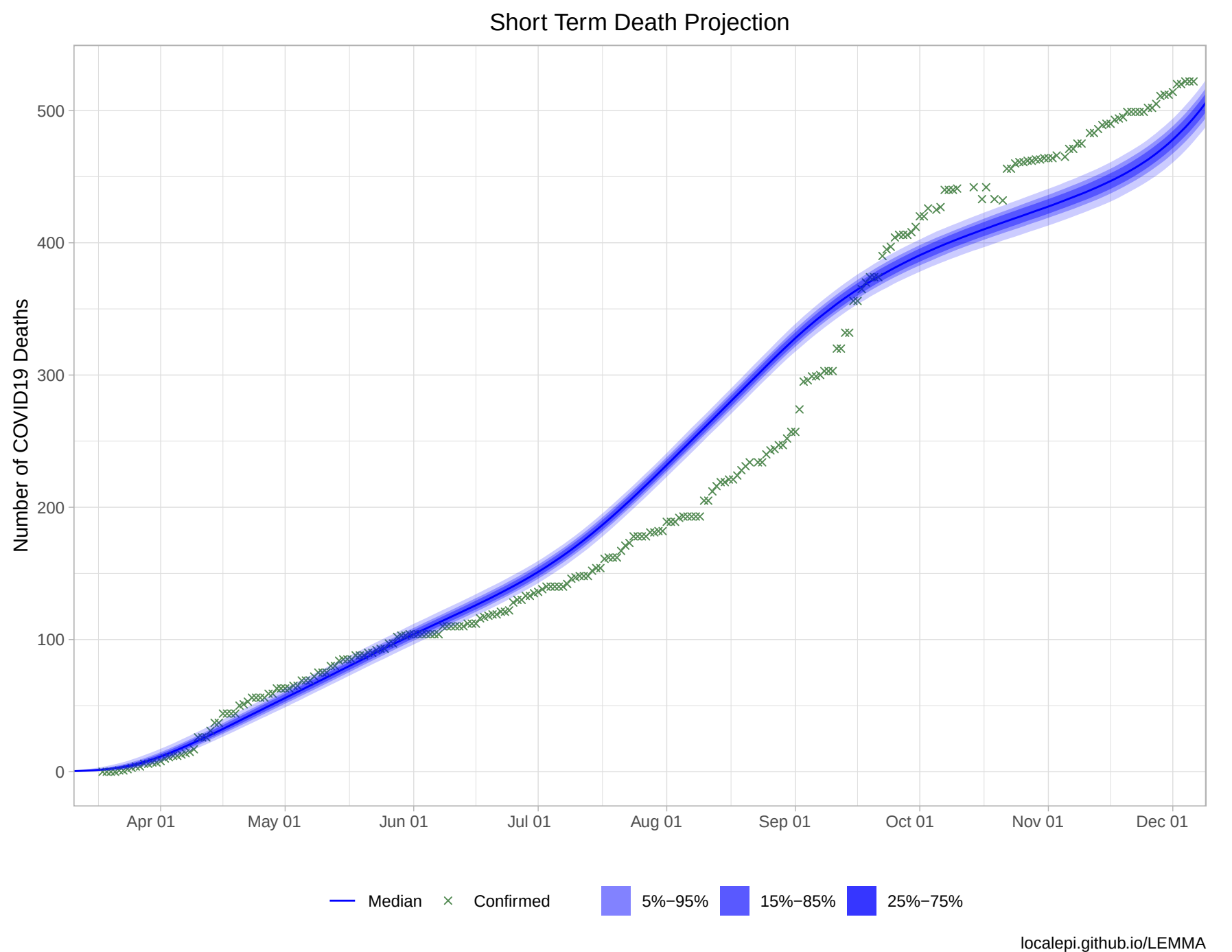
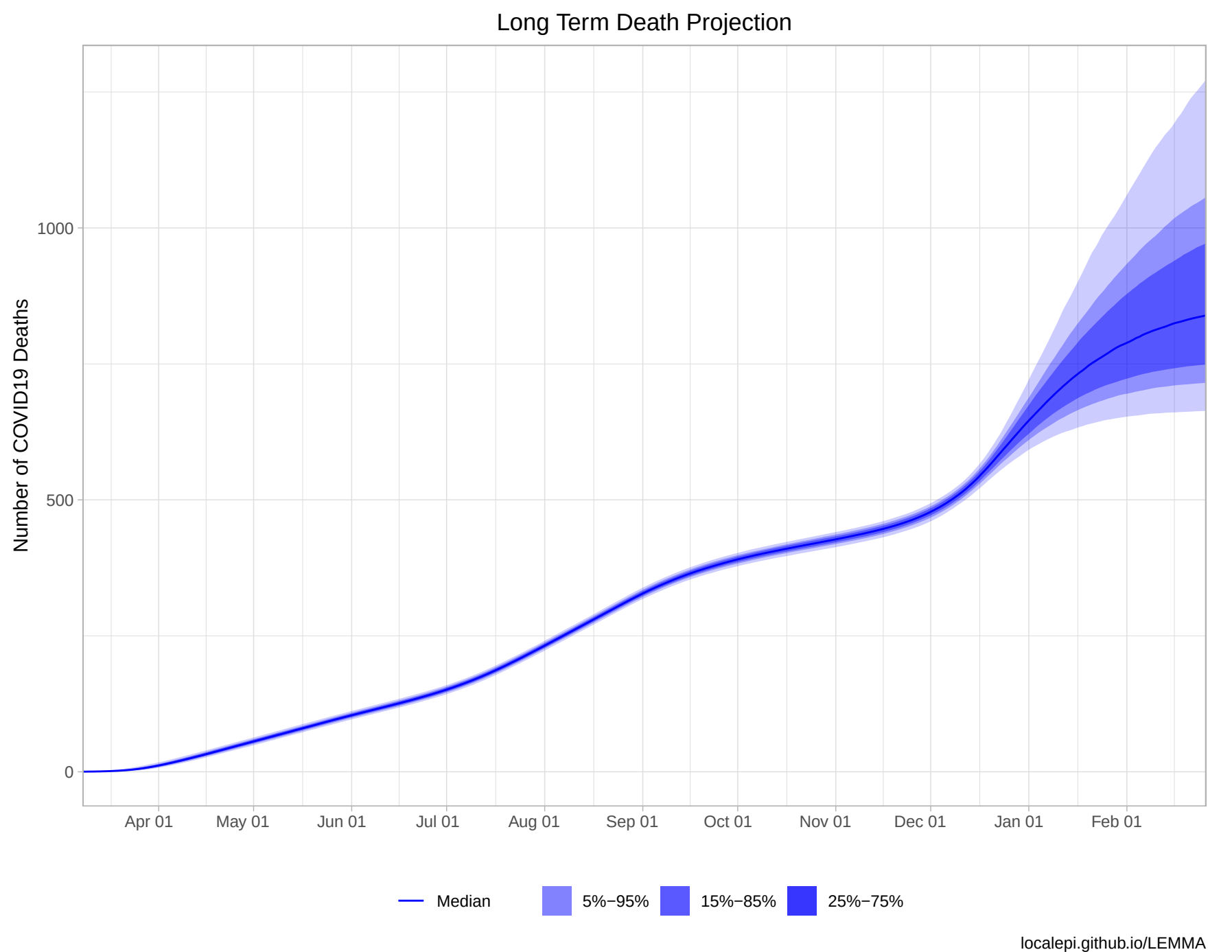

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
300
200
100
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

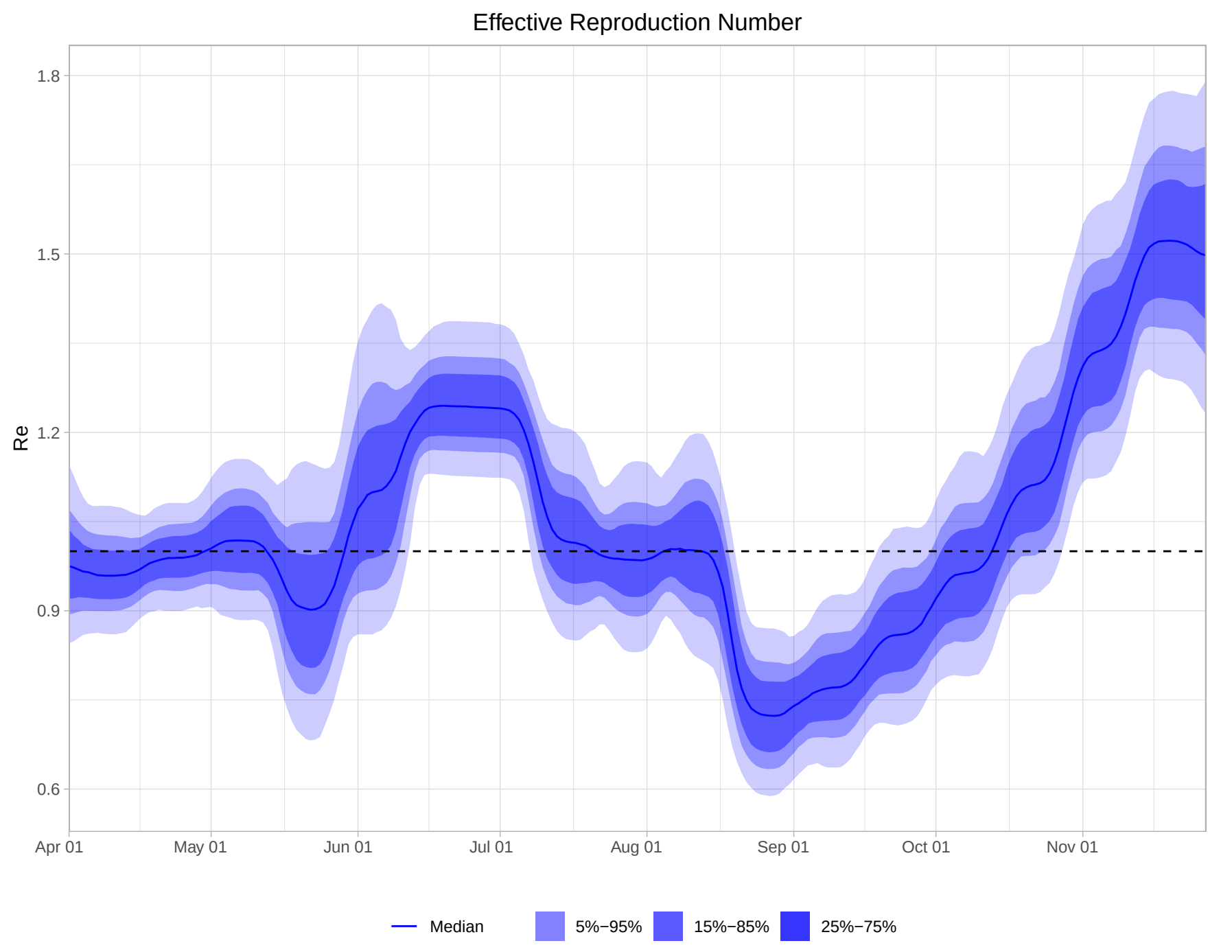

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
800
600
400
200
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
90
60
30
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 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

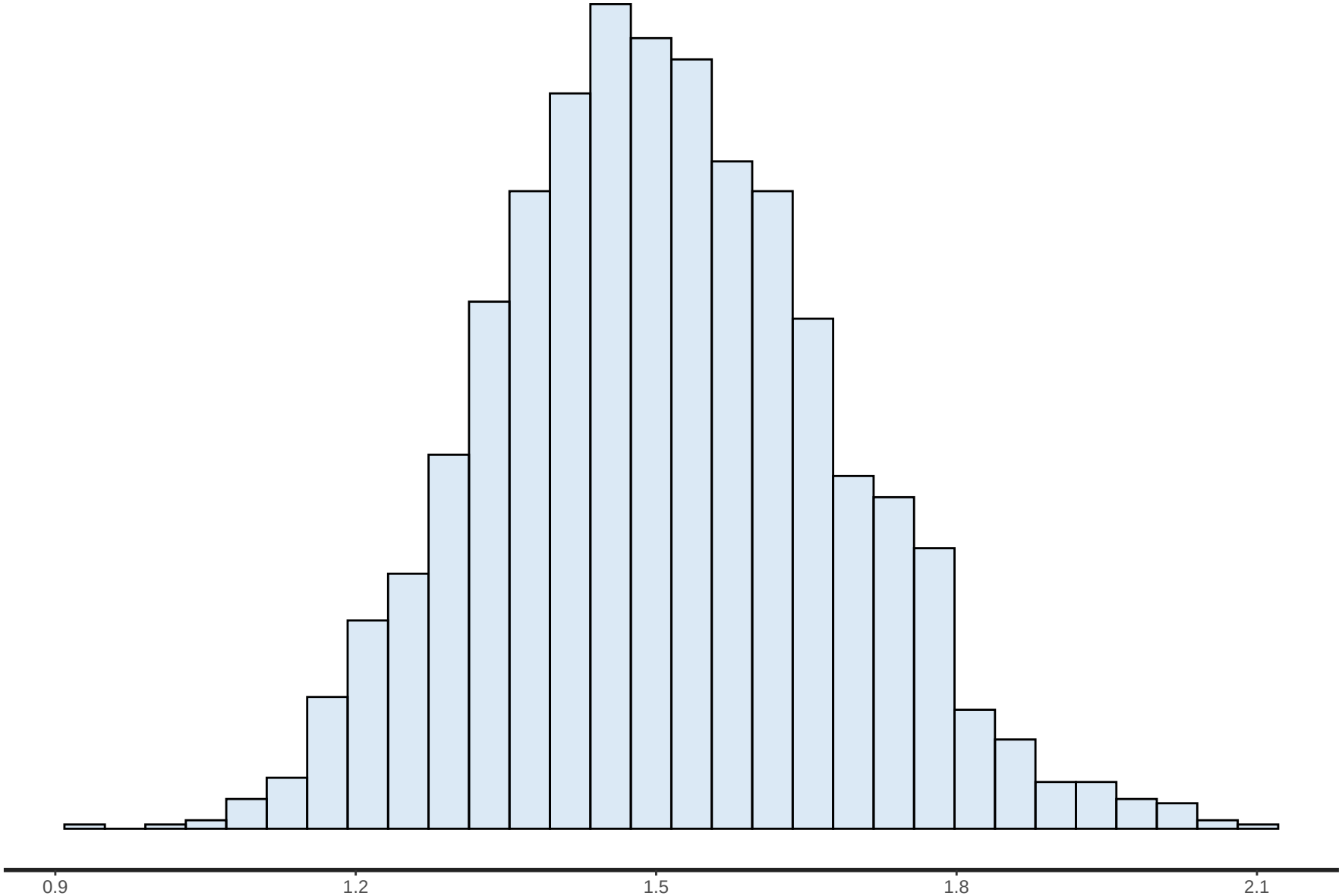

Short Term Death Projection
Number of COVID19 Deaths
0
100
200
300
400
500
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

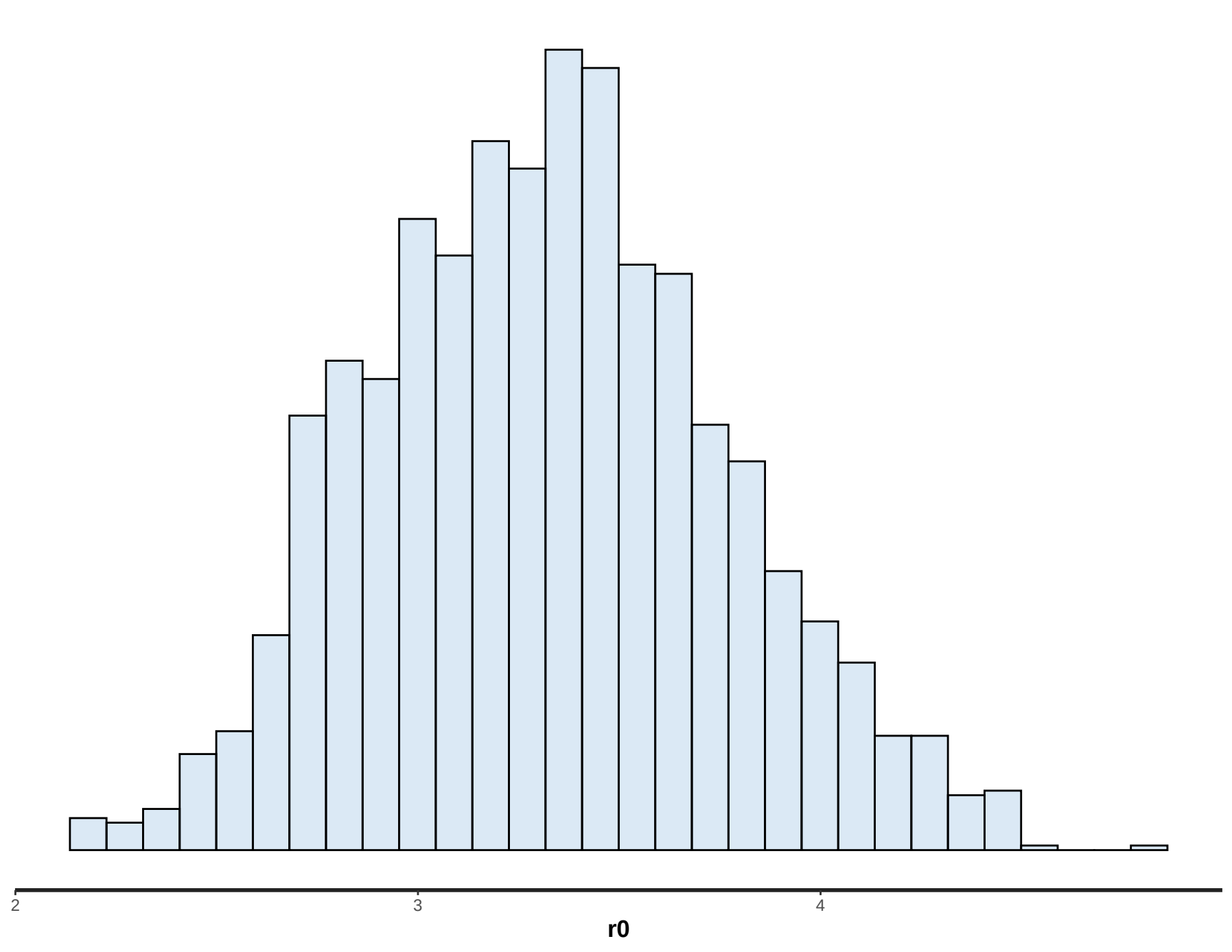

Long Term Death Projection
Number of COVID19 Deaths
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

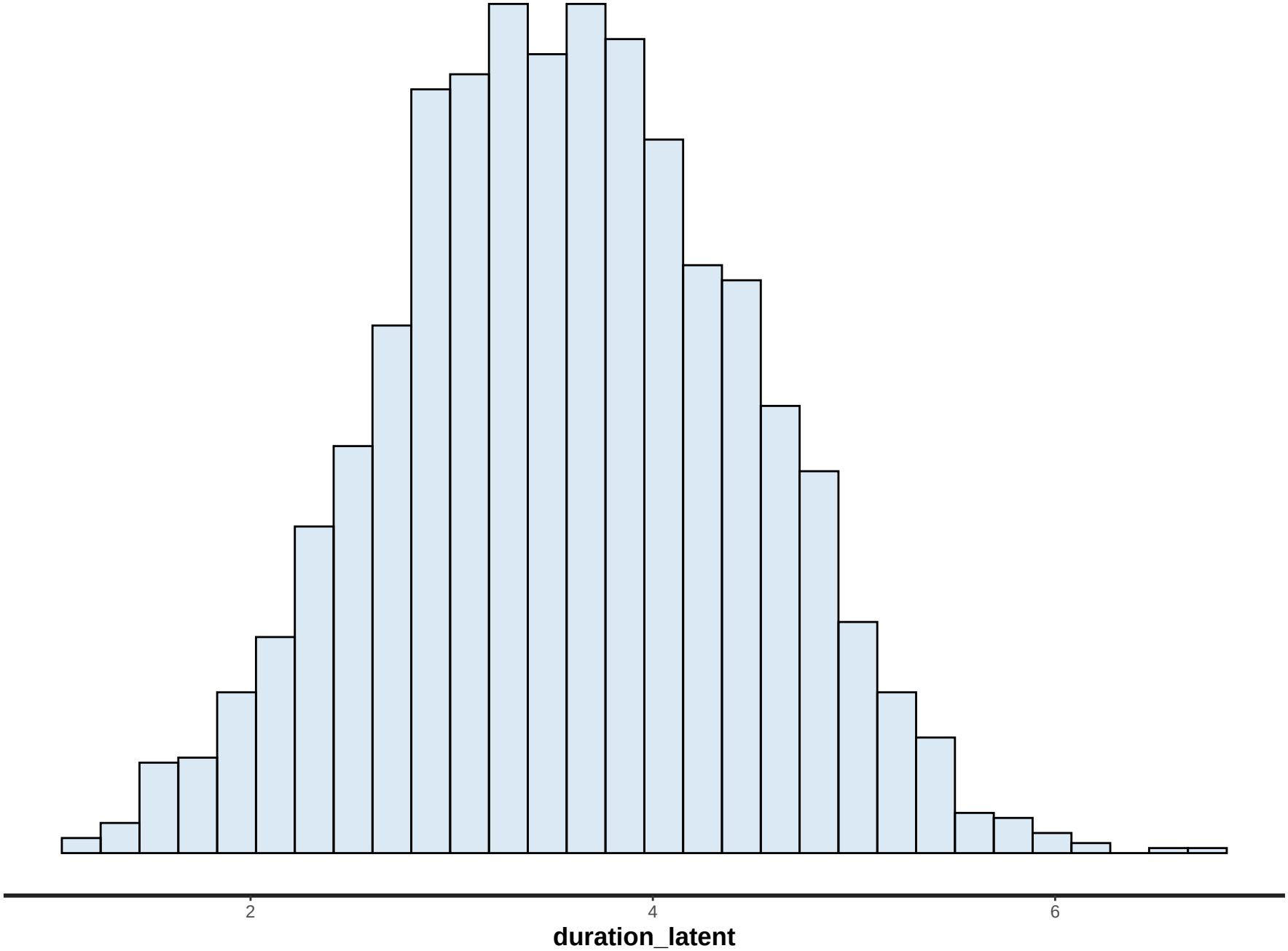

Effective Reproduction Number
Re
1.8
1.5
1.2
0.9
0.6
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

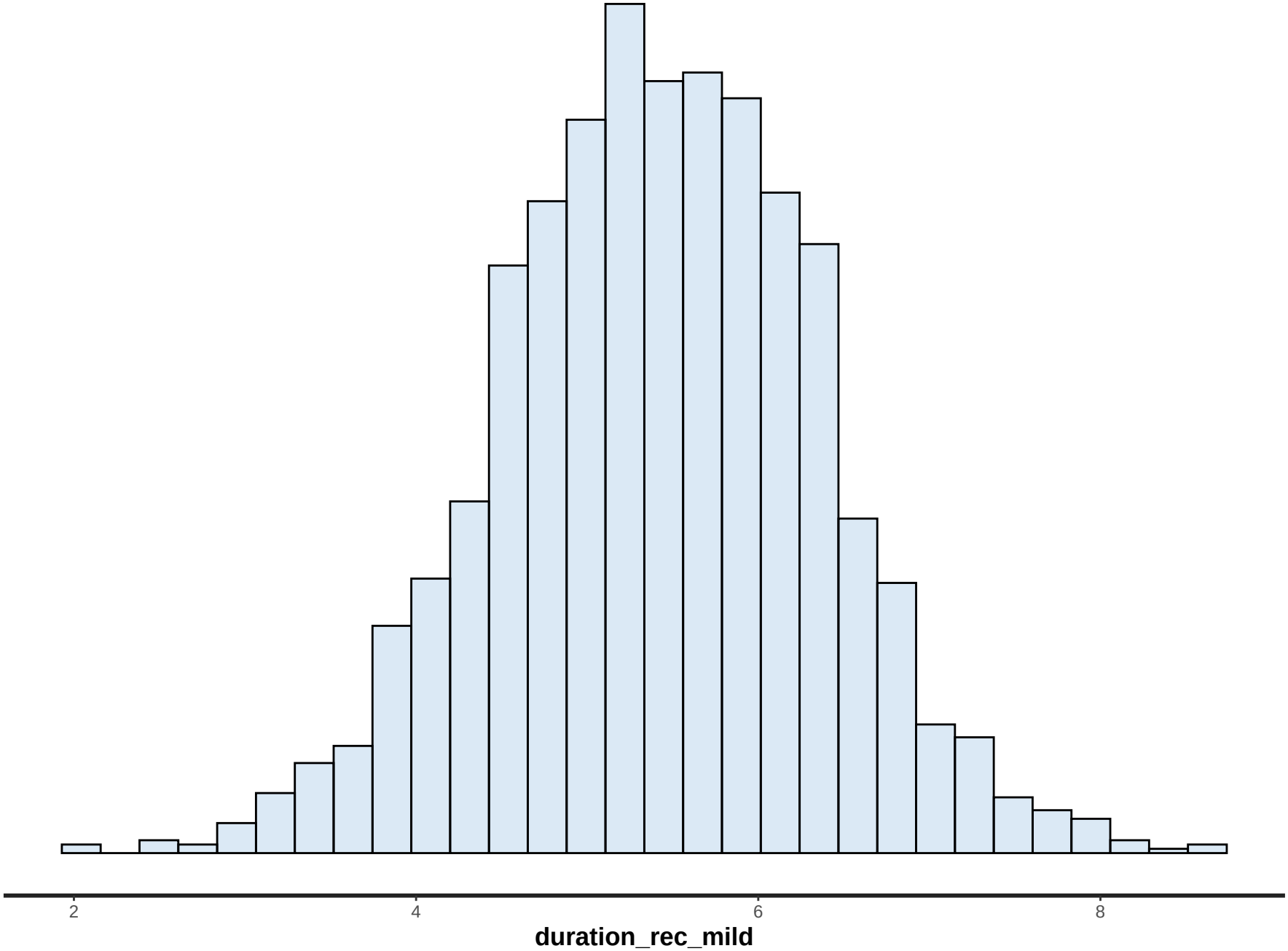
Rt as of 2020−11−27

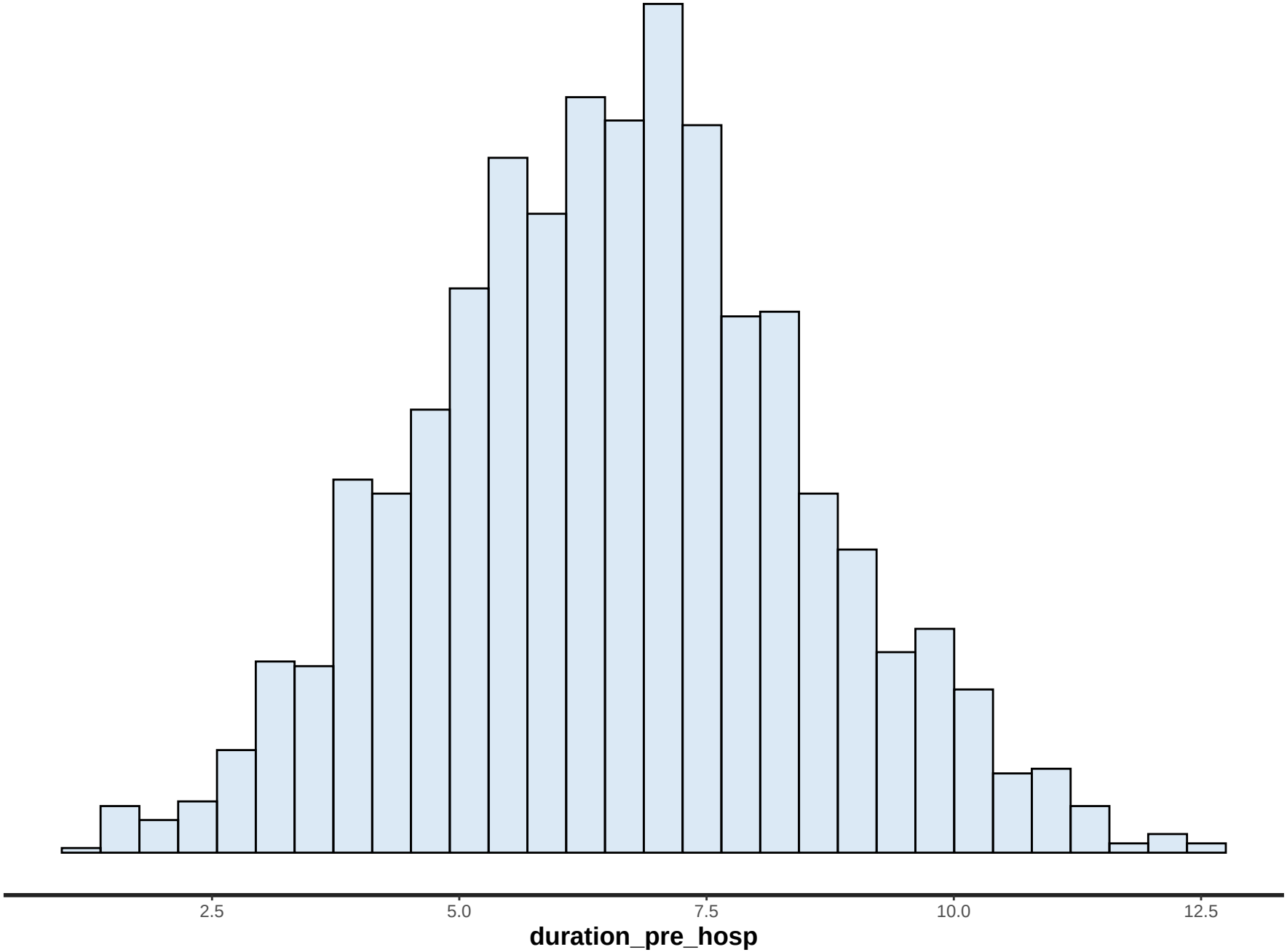
5%	10%	25%	50%	75%	90%	95%
1.23	1.30	1.39	1.50	1.62	1.73	1.79

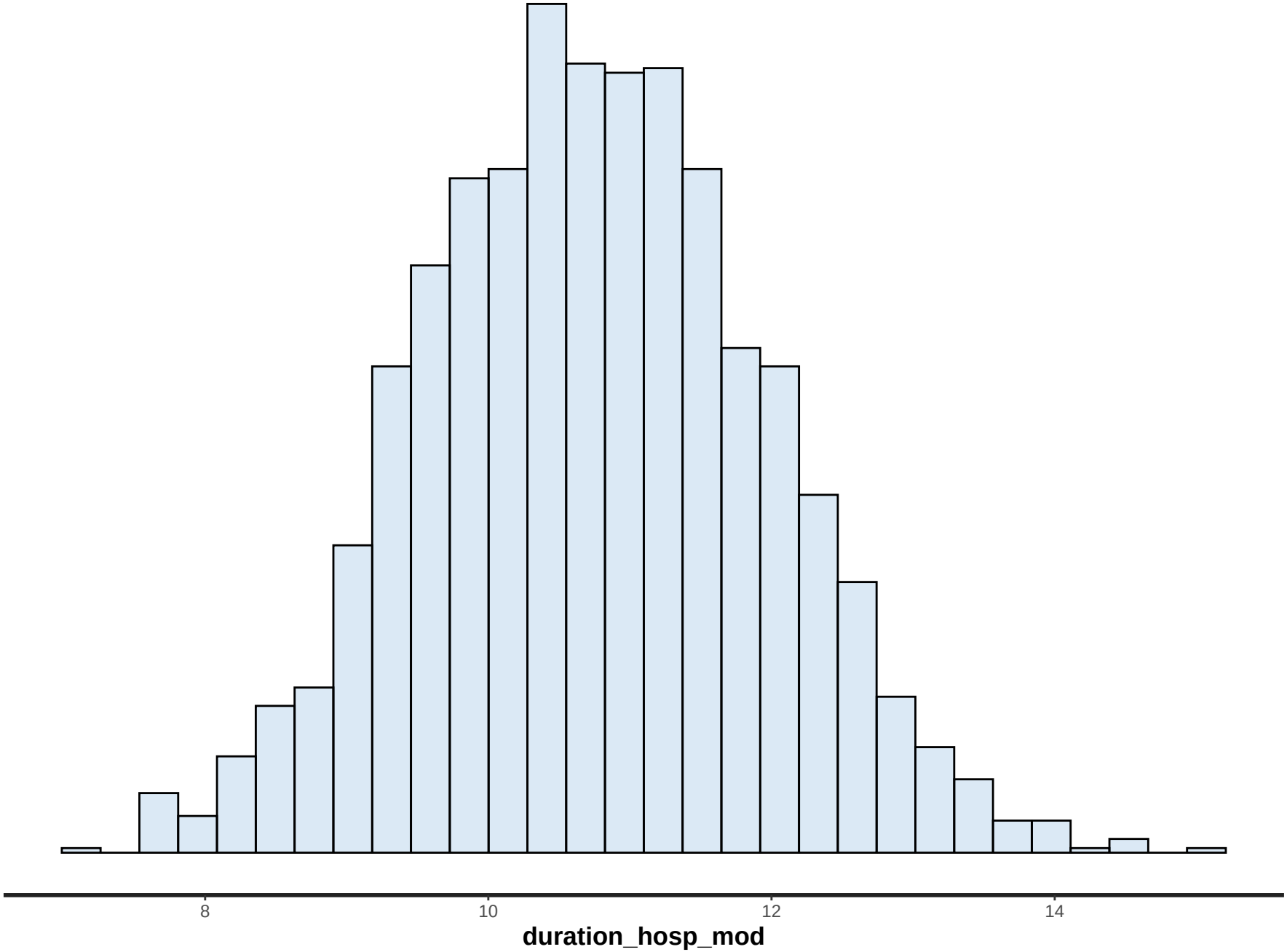


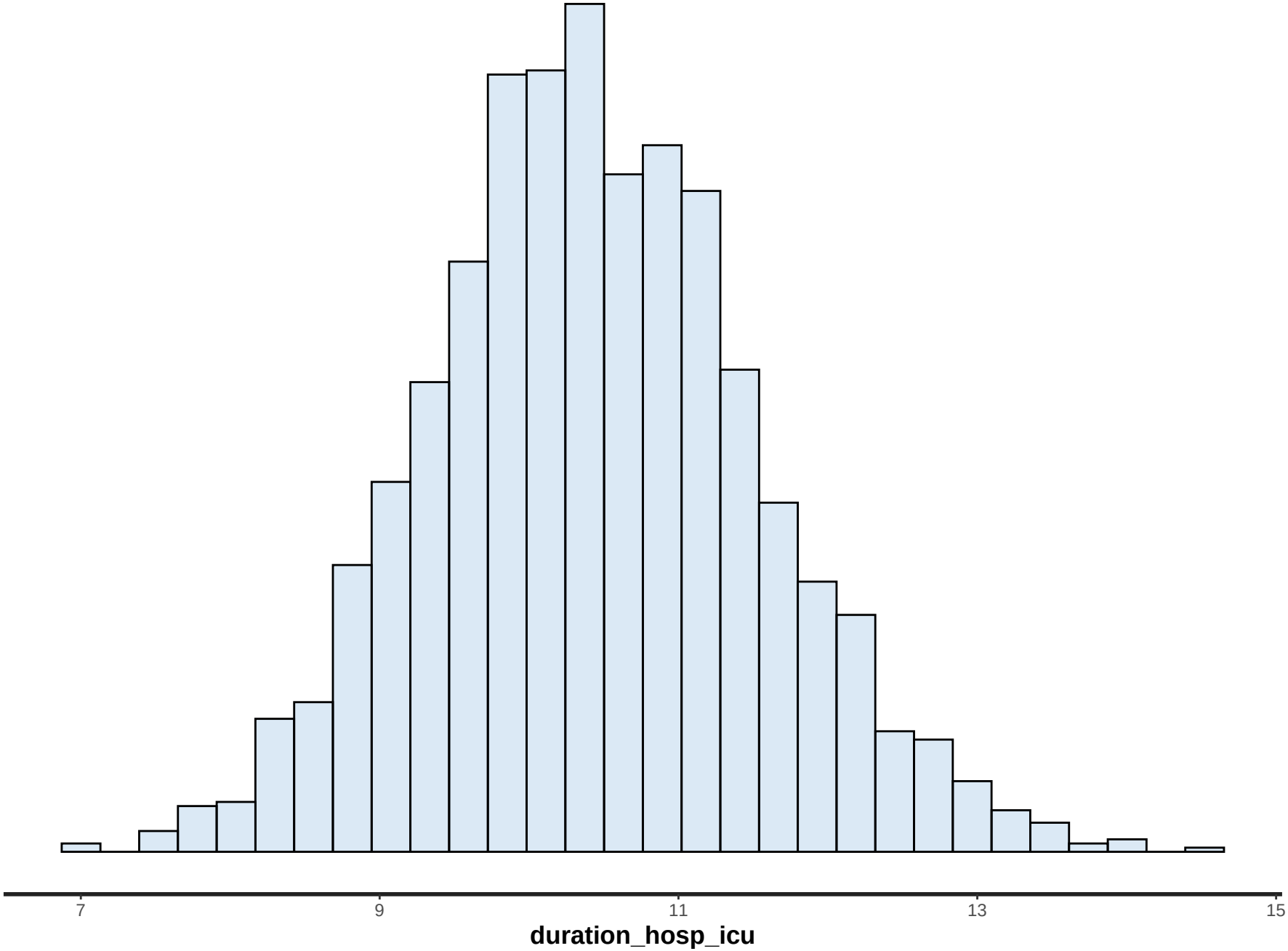

2
3
4
r0

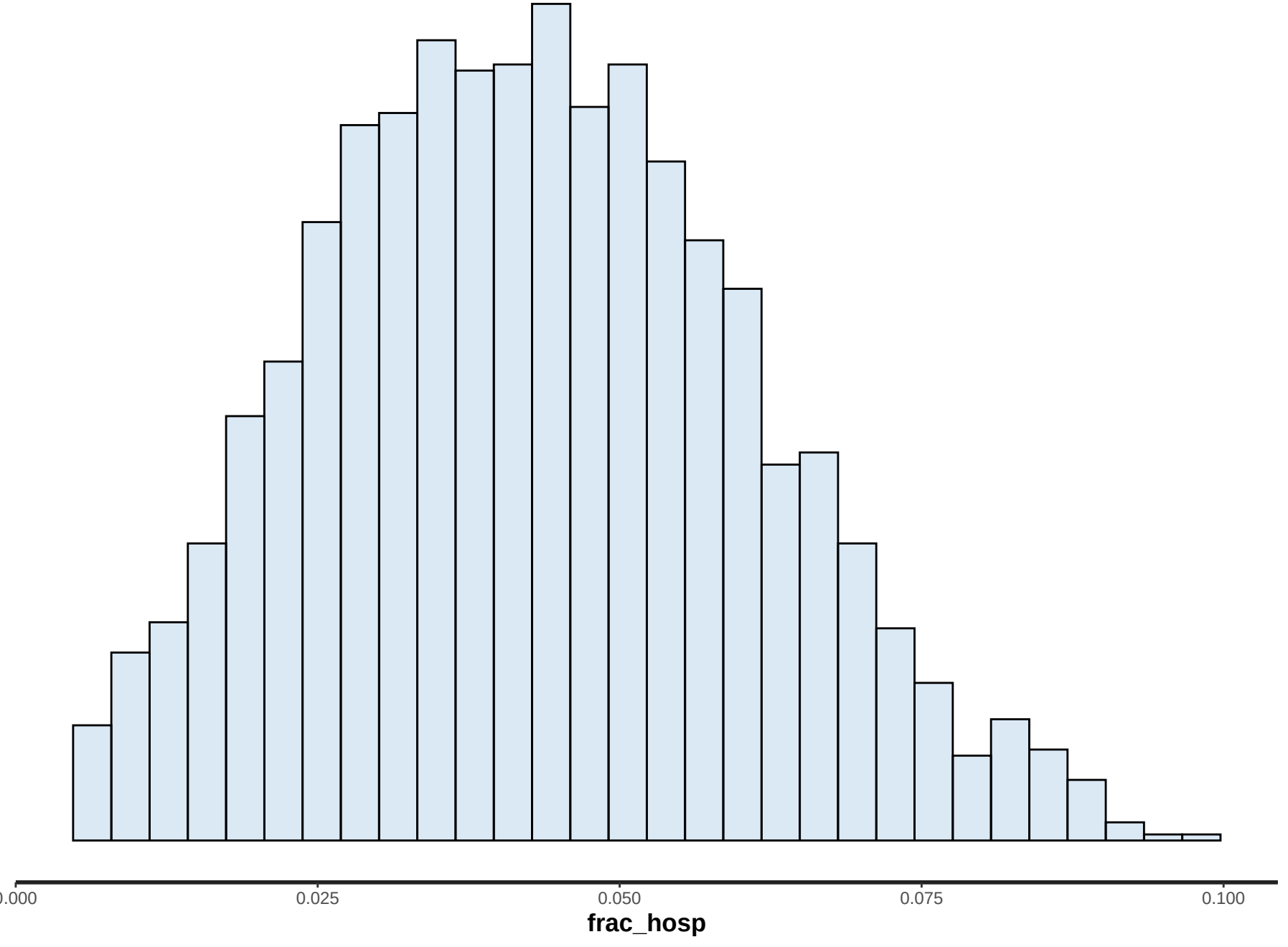

2
4
6
duration_latent

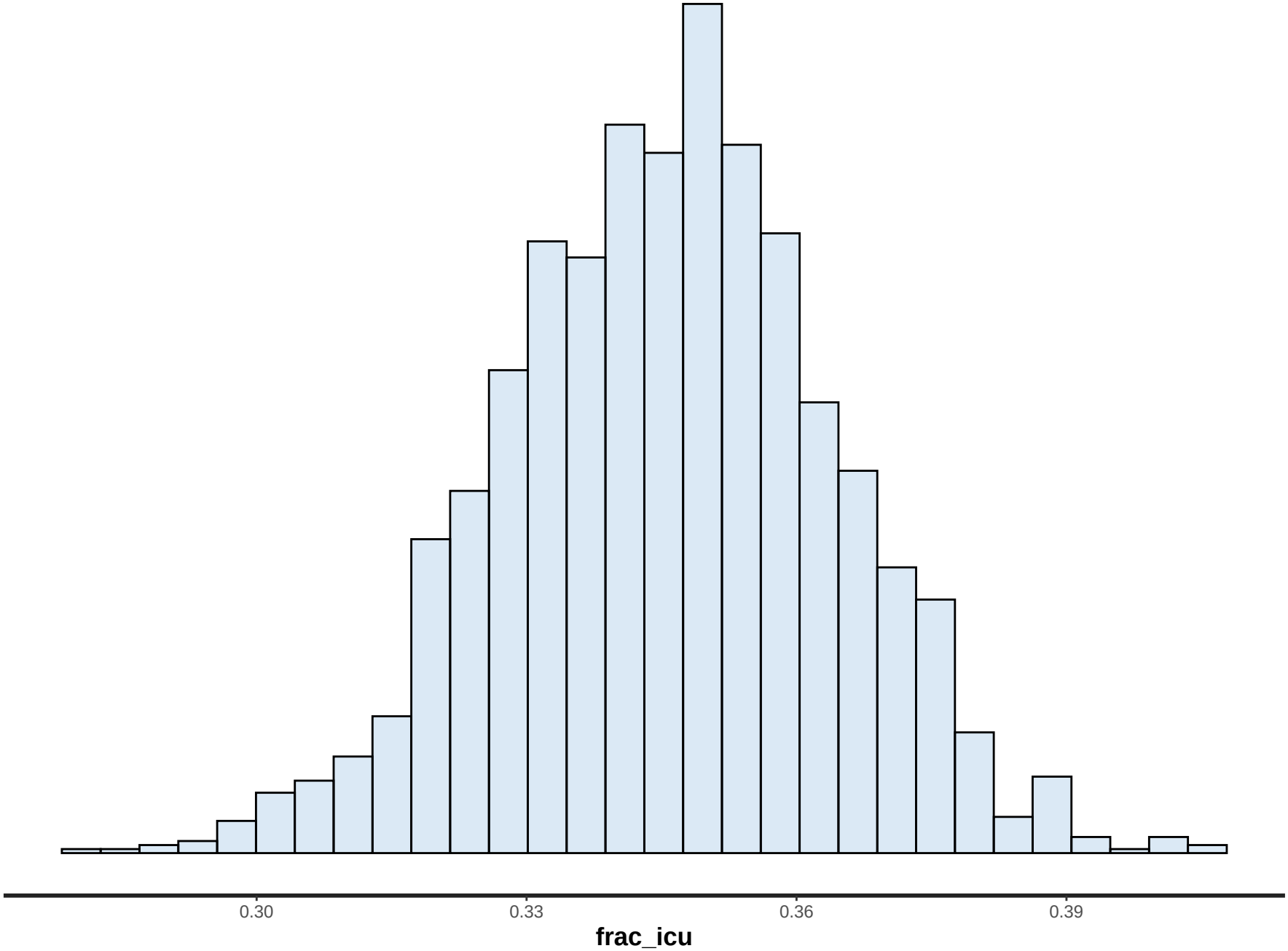

2
4
6
8
duration_rec_mild

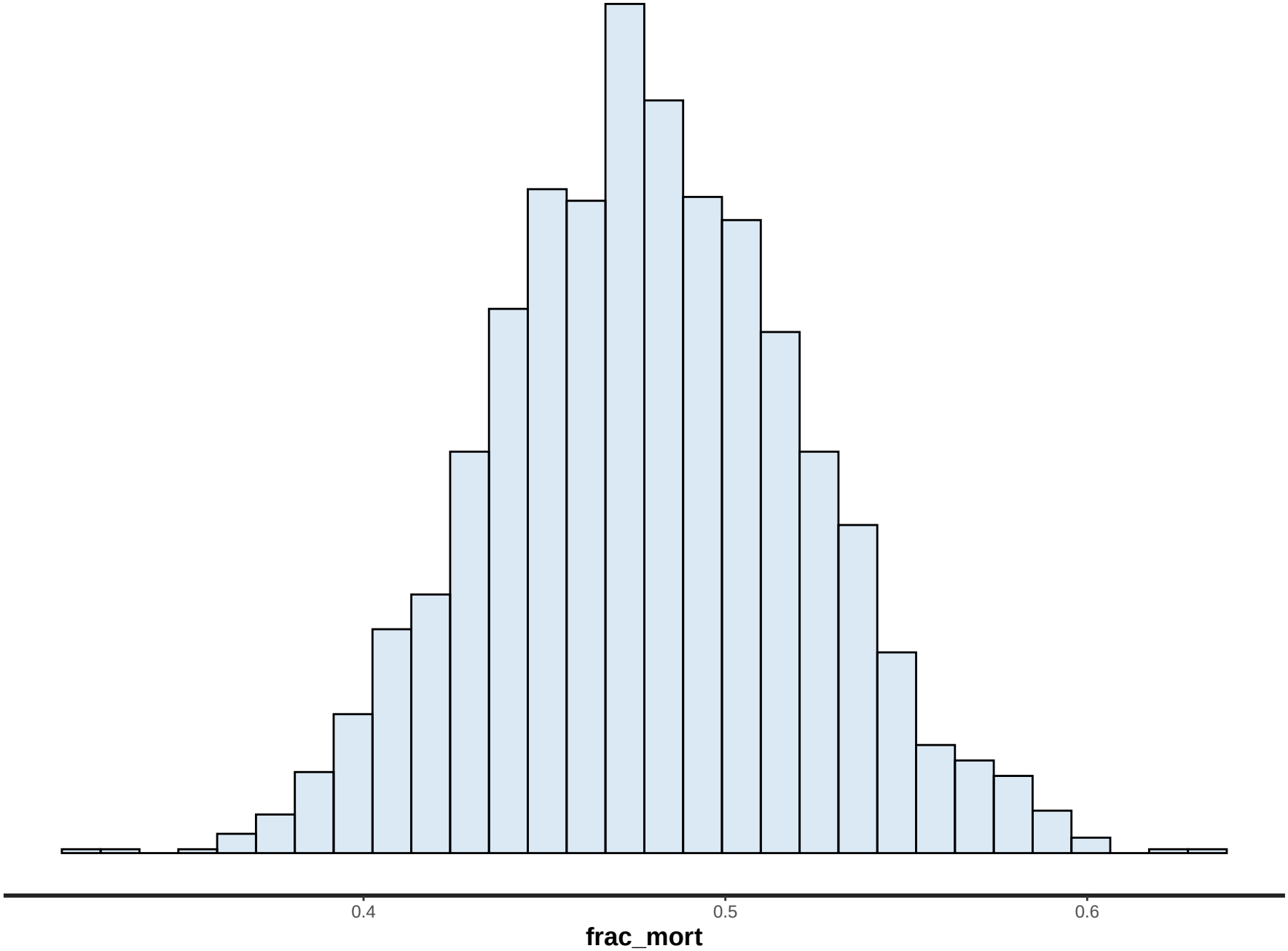

2.5
5.0
7.5
10.0
12.5
duration_pre_hosp

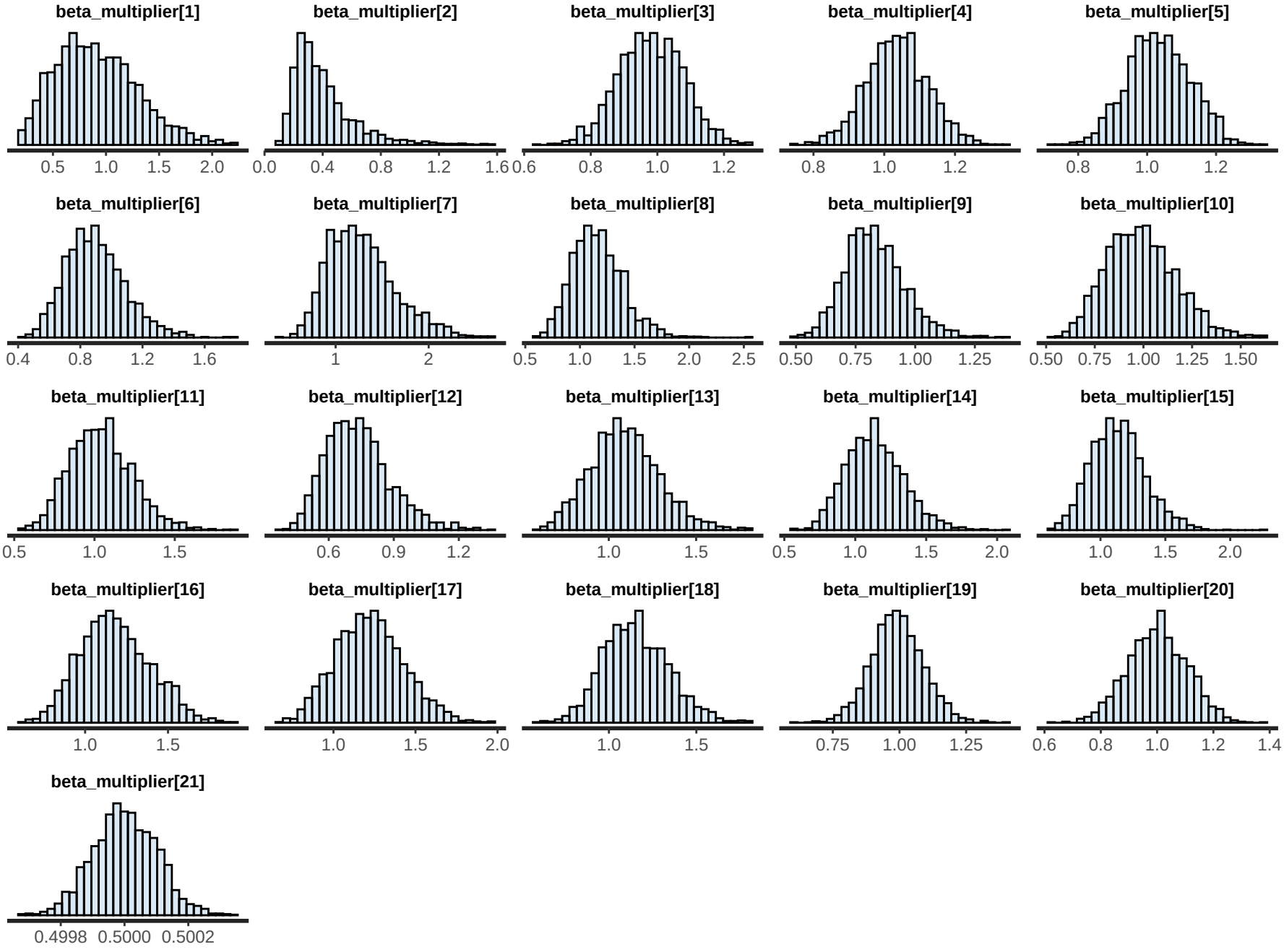

8
10
12
14
duration_hosp_mod

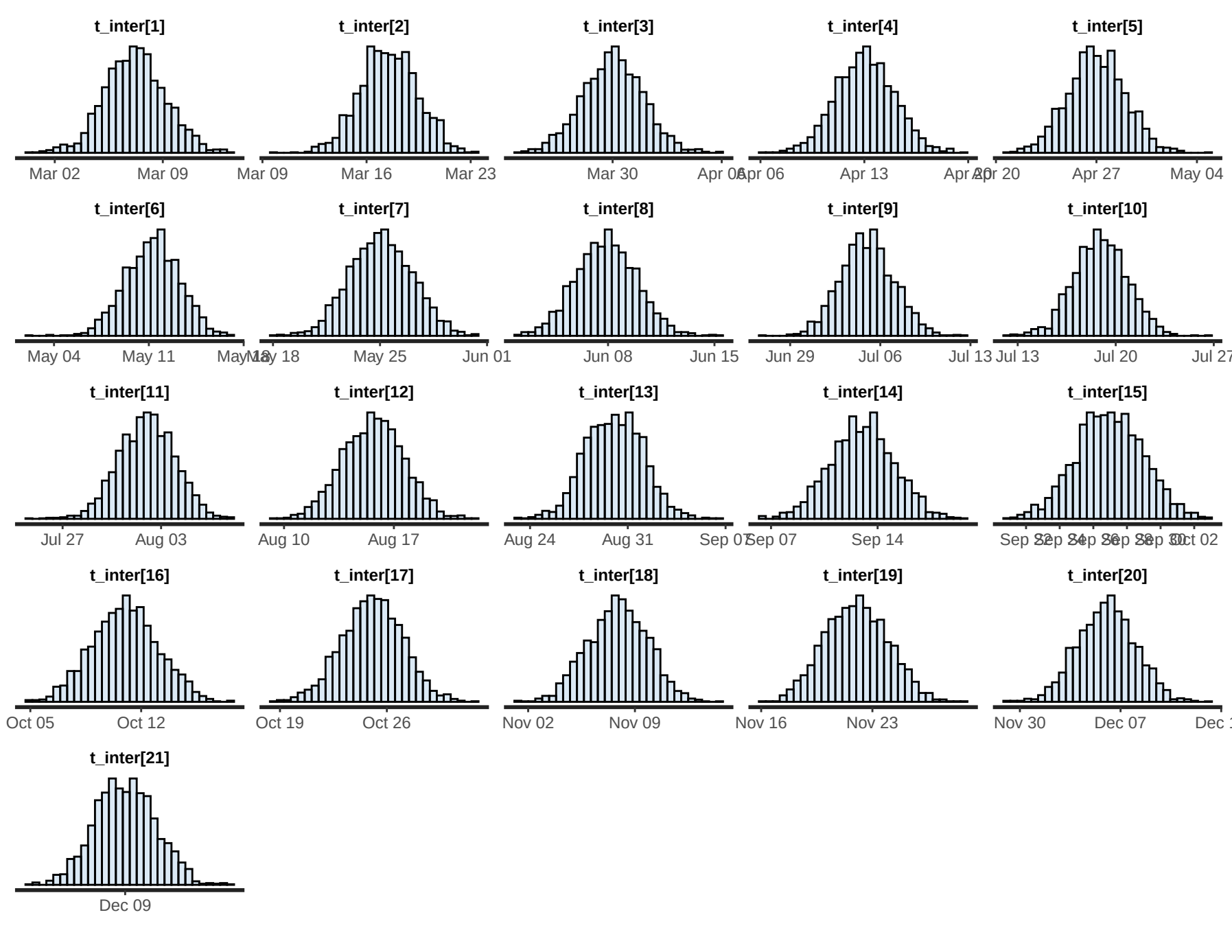

7
9
11
13
15
duration_hosp_icu

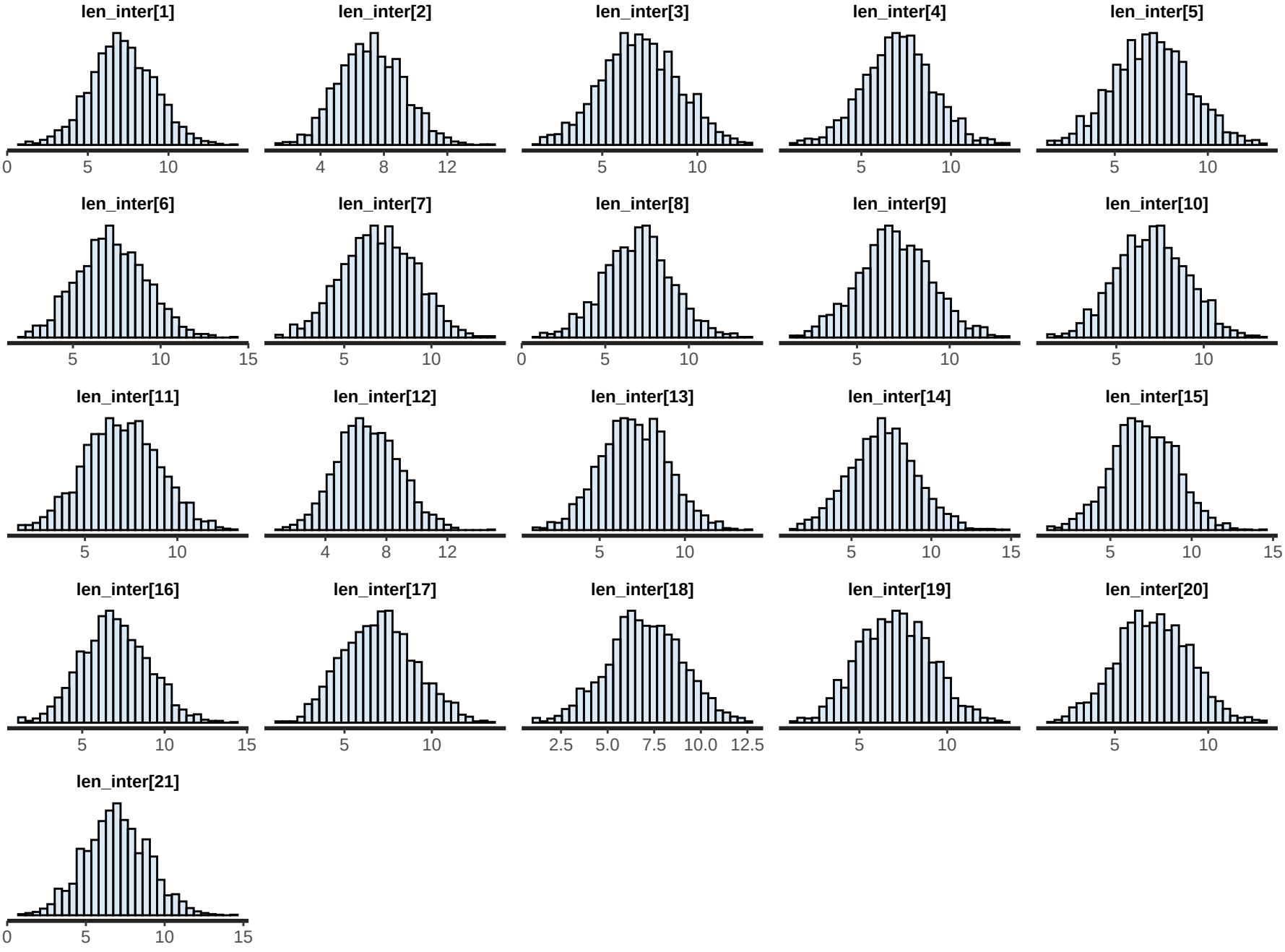

0.000
0.025
0.050
0.075
0.100
frac_hosp

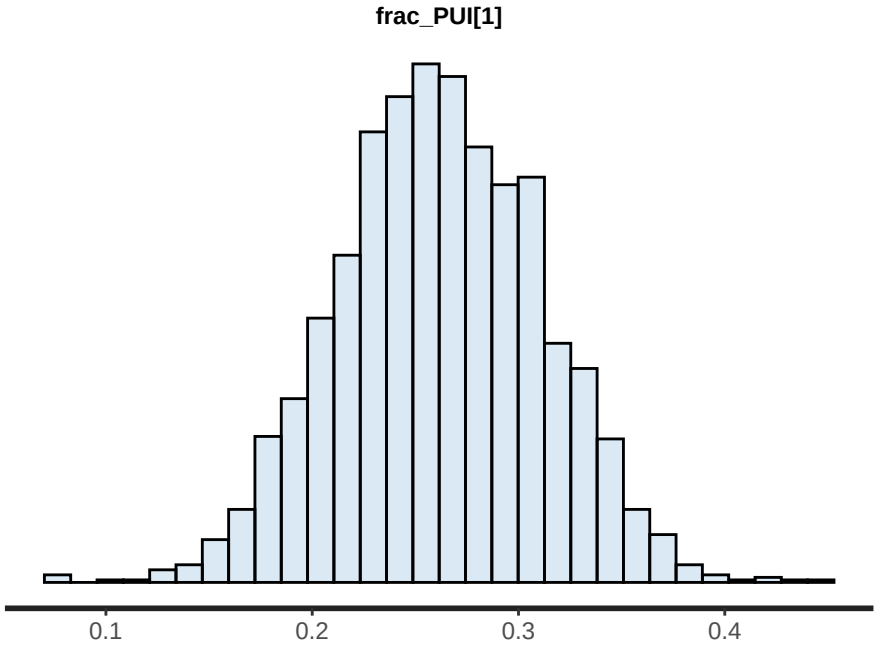

0.30
0.33
0.36
0.39
frac_icu

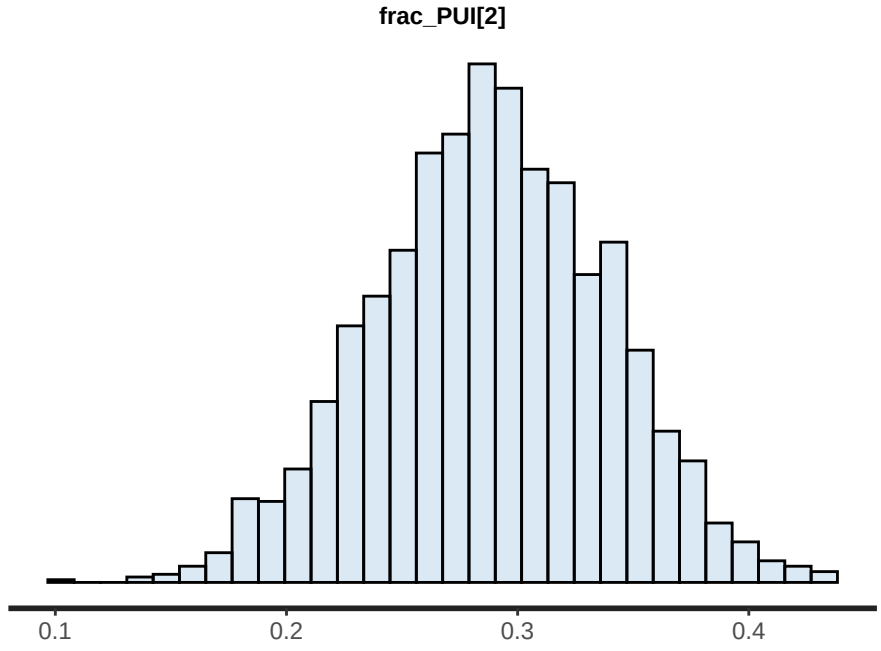

0.4
0.5
0.6
frac_mort

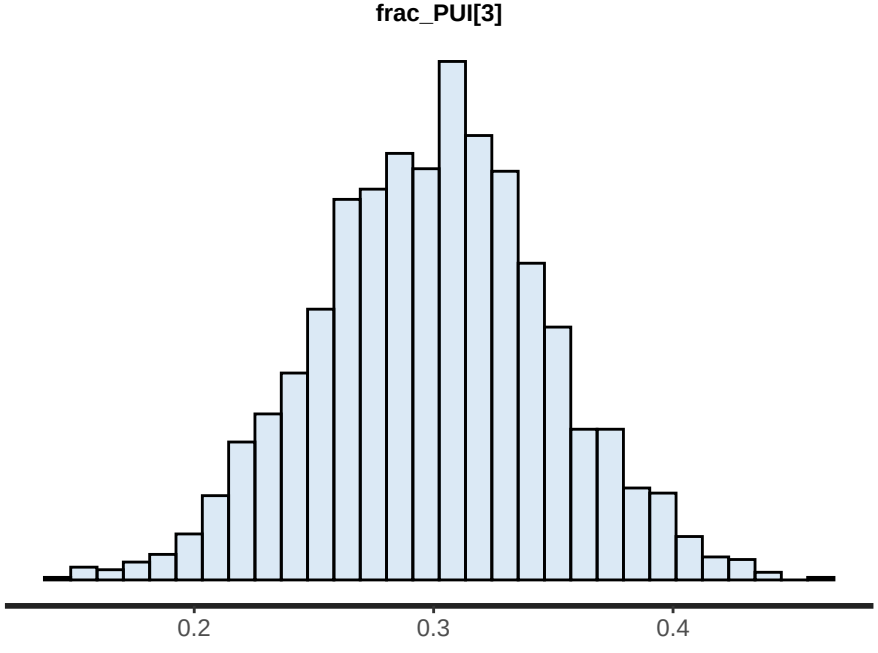

beta_multiplier[1]
0.5 1.0 1.5 2.0
beta_multiplier[2]
0.0 0.4 0.8 1.2 1.6
beta_multiplier[3]
0.6 0.8 1.0 1.2
beta_multiplier[4]
0.8 1.0 1.2
beta_multiplier[5]
0.8 1.0 1.2
beta_multiplier[6]
0.4 0.8 1.2 1.6
beta_multiplier[7]
1 2
beta_multiplier[8]
0.5 1.0 1.5 2.0 2.5
beta_multiplier[9]
0.50 0.75 1.00 1.25
beta_multiplier[10]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[11]
0.5 1.0 1.5
beta_multiplier[12]
0.6 0.9 1.2
beta_multiplier[13]
1.0 1.5
beta_multiplier[14]
0.5 1.0 1.5 2.0
beta_multiplier[15]
1.0 1.5 2.0
beta_multiplier[16]
1.0 1.5
beta_multiplier[17]
1.0 1.5 2.0
beta_multiplier[18]
1.0 1.5
beta_multiplier[19]
0.75 1.00 1.25
beta_multiplier[20]
0.6 0.8 1.0 1.2 1.4
beta_multiplier[21]
0.4998 0.5000 0.5002

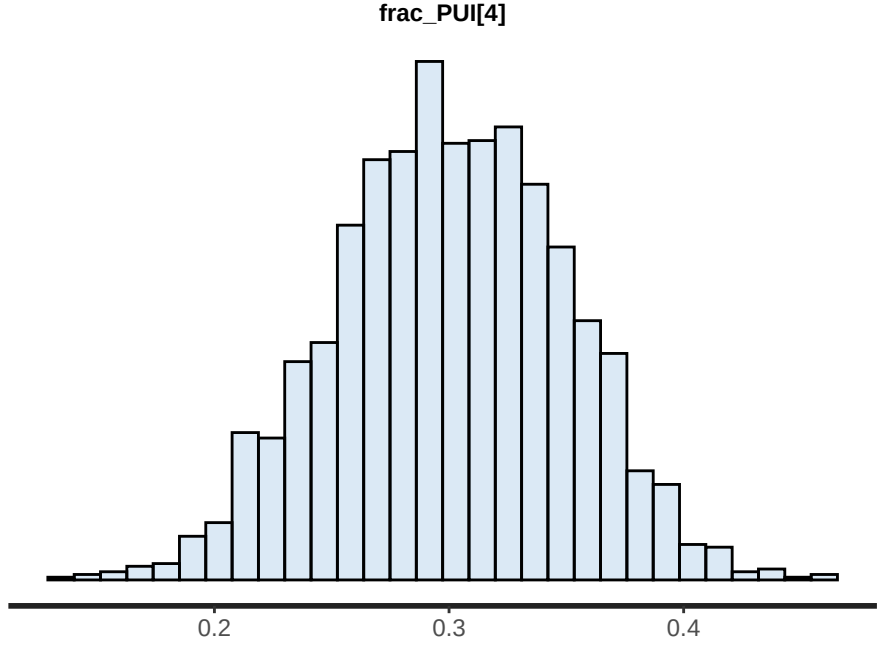

t_inter[1]
Mar 02
Mar 09
t_inter[2]
Mar 09
Mar 16
Mar 23
t_inter[3]
Mar 30
Apr 06
t_inter[4]
Apr 06
Apr 13
Apr 20
t_inter[5]
Apr 20
Apr 27
May 04
t_inter[6]
May 04
May 11
May 18
t_inter[7]
May 18
May 25
Jun 01
t_inter[8]
Jun 01
Jun 08
Jun 15
t_inter[9]
Jun 29
Jul 06
Jul 13
t_inter[10]
Jul 13
Jul 20
Jul 27
t_inter[11]
Jul 27
Aug 03
t_inter[12]
Aug 10
Aug 17
t_inter[13]
Aug 24
Aug 31
Sep 07
t_inter[14]
Sep 07
Sep 14
t_inter[15]
Sep 22
Sep 24
Sep 26
Sep 28
Sep 30
Oct 02
t_inter[16]
Oct 05
Oct 12
t_inter[17]
Oct 19
Oct 26
t_inter[18]
Nov 02
Nov 09
t_inter[19]
Nov 16
Nov 23
t_inter[20]
Nov 30
Dec 07
t_inter[21]
Dec 09

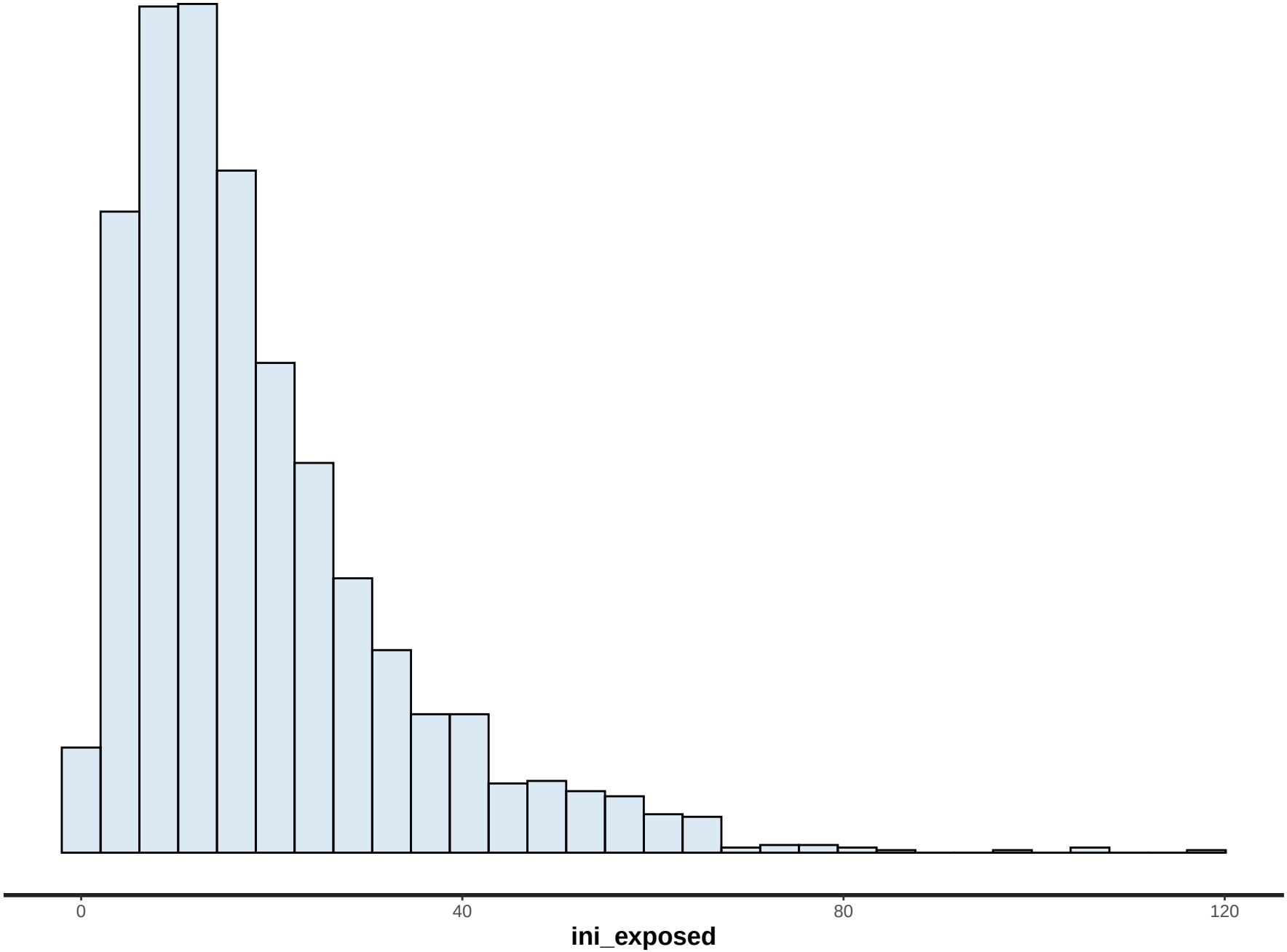

len_inter[1]
0
5
10
len_inter[2]
4
8
12
len_inter[3]
5
10
len_inter[4]
5
10
len_inter[5]
5
10
len_inter[6]
5
10
15
len_inter[7]
5
10
len_inter[8]
0
5
10
len_inter[9]
5
10
len_inter[10]
5
10
len_inter[11]
5
10
len_inter[12]
4
8
12
len_inter[13]
5
10
len_inter[14]
5
10
15
len_inter[15]
5
10
15
len_inter[16]
5
10
15
len_inter[17]
5
10
len_inter[18]
2.5
5.0
7.5
10.0
12.5
len_inter[19]
5
10
len_inter[20]
5
10
len_inter[21]
0
5
10
15

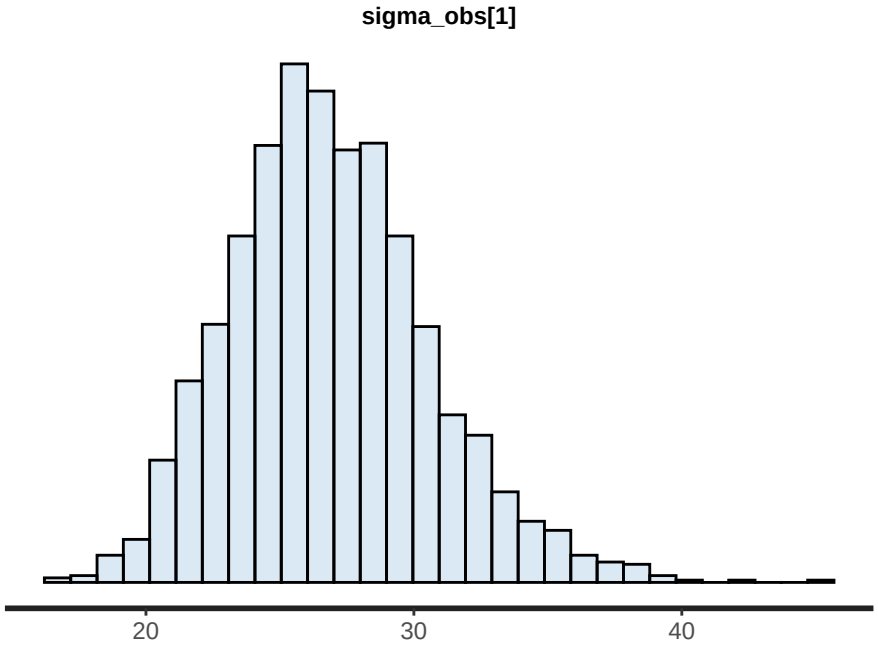

frac_PUI[1]
0.1
0.2
0.3
0.4

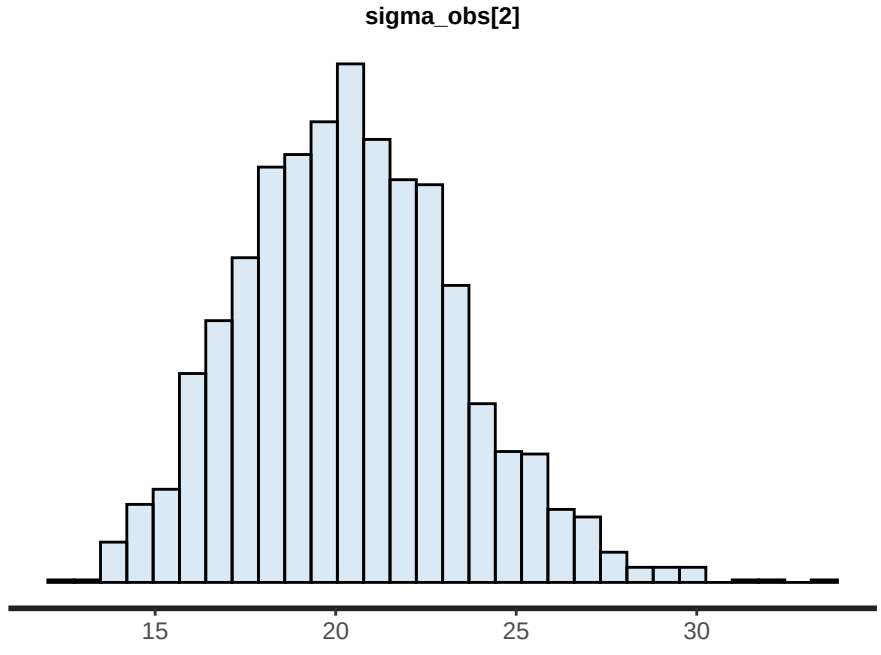

frac_PUI[2]
0.1
0.2
0.3
0.4

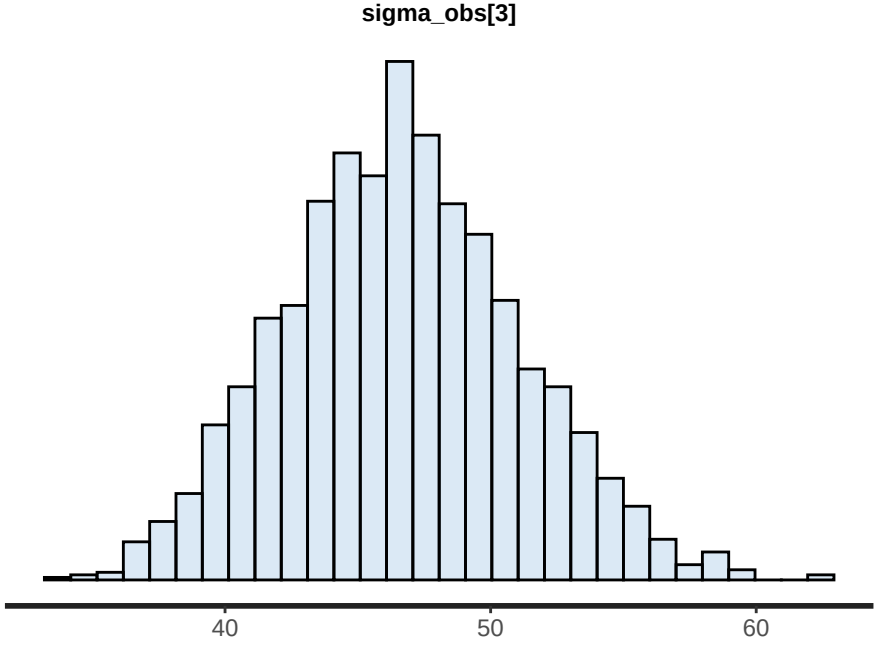

frac_PUI[3]
0.2
0.3
0.4

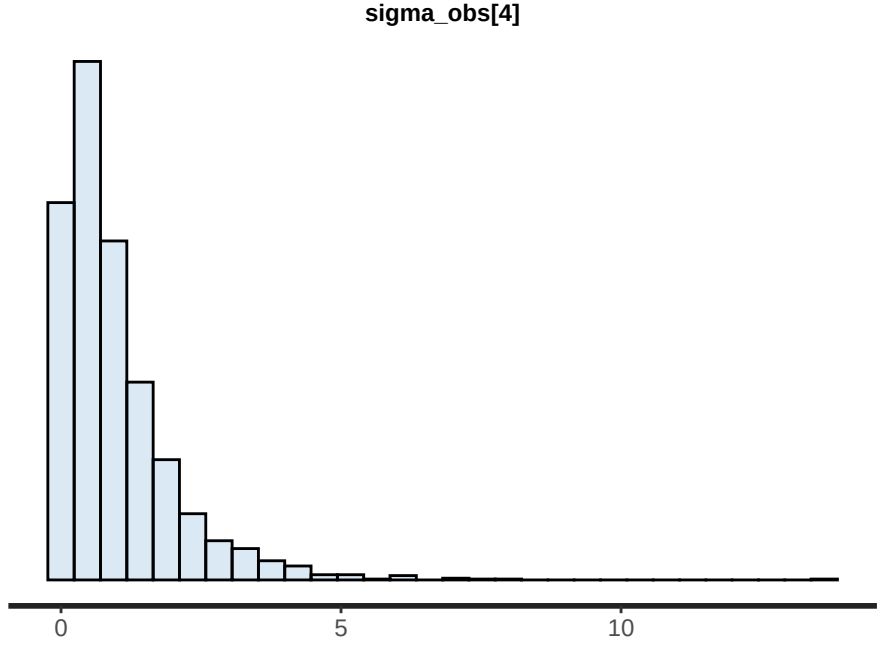

frac_PUI[4]
0.2
0.3
0.4


0
40
80
120
ini_exposed


sigma_obs[1]
20
30
40


sigma_obs[2]
15
20
25
30


sigma_obs[3]
40
50
60


sigma_obs[4]
0
5
10