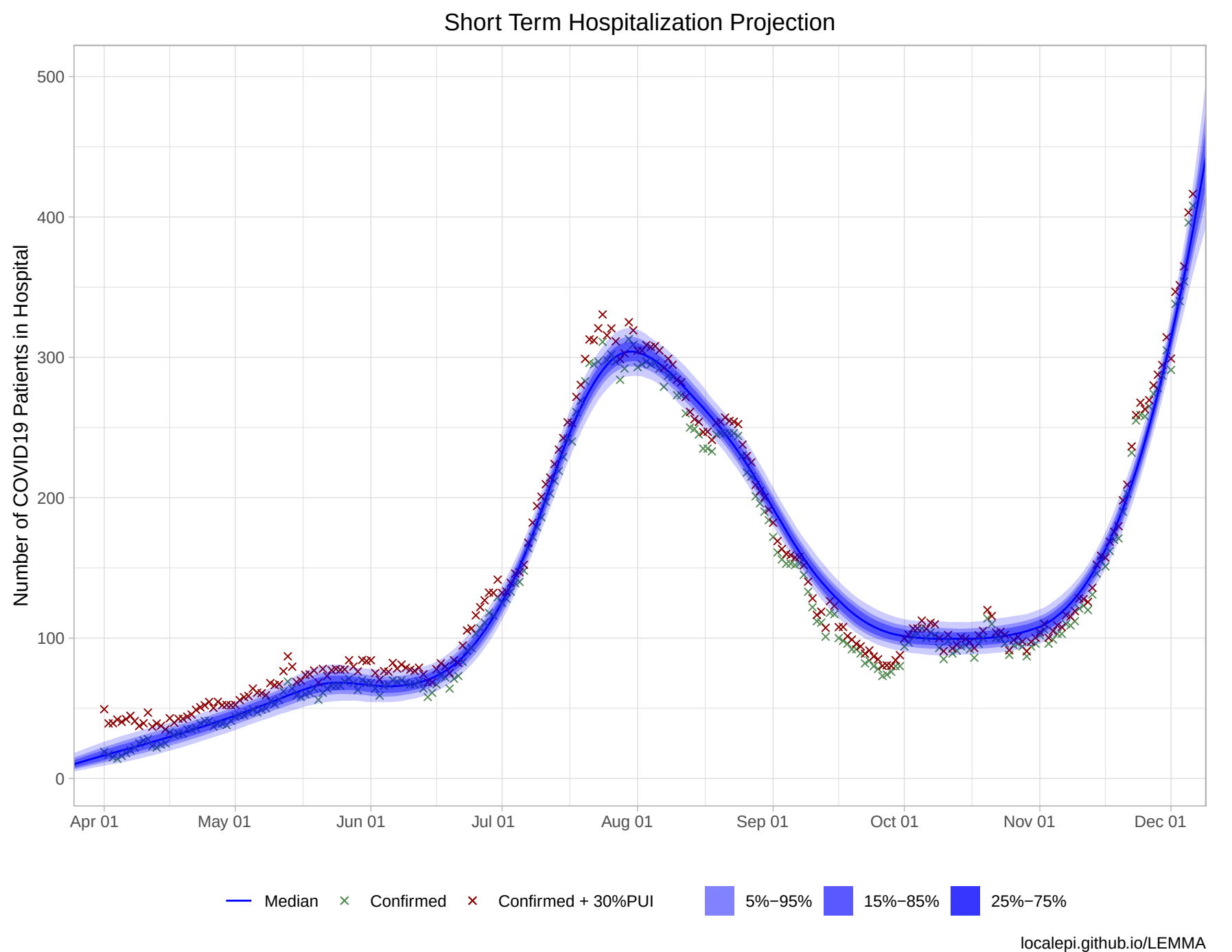
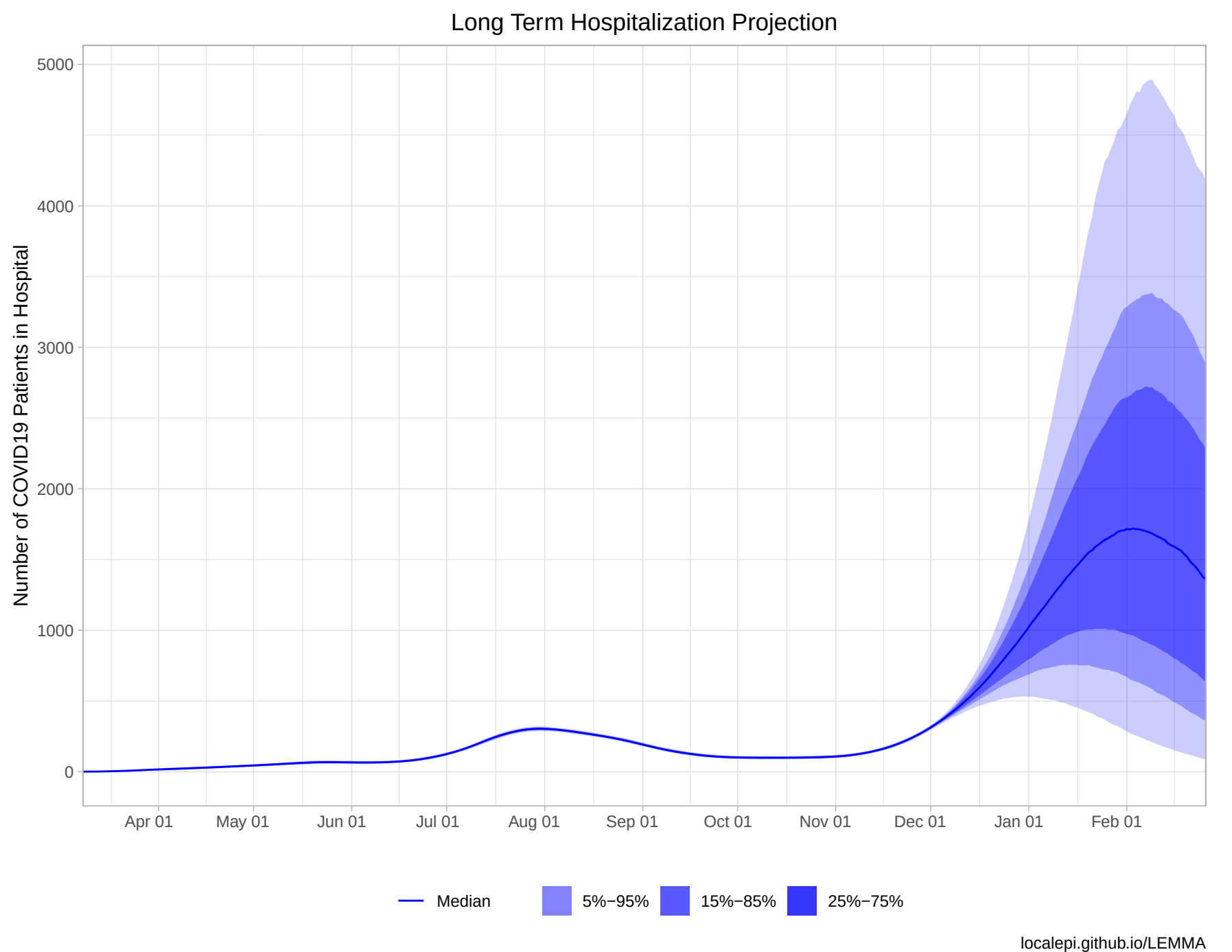
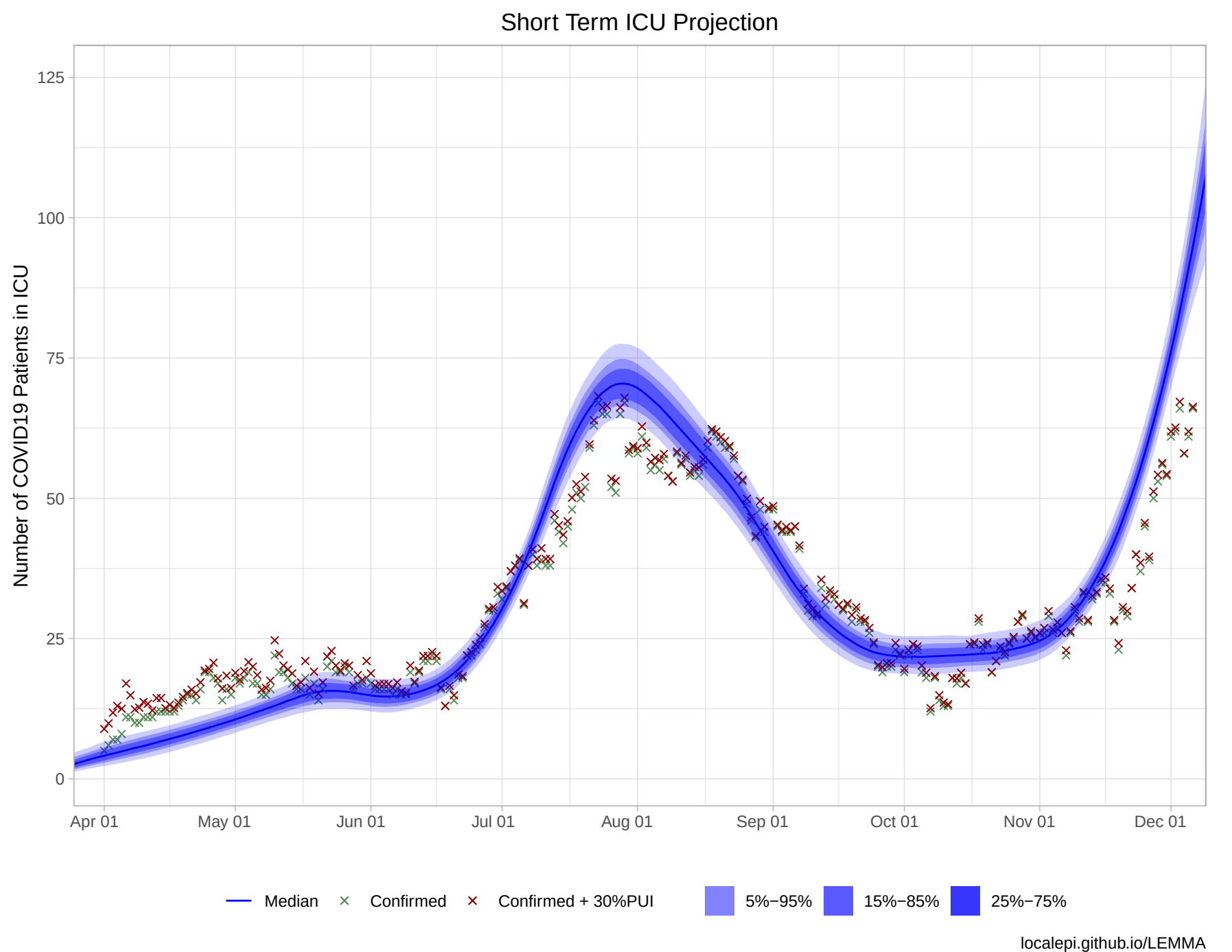
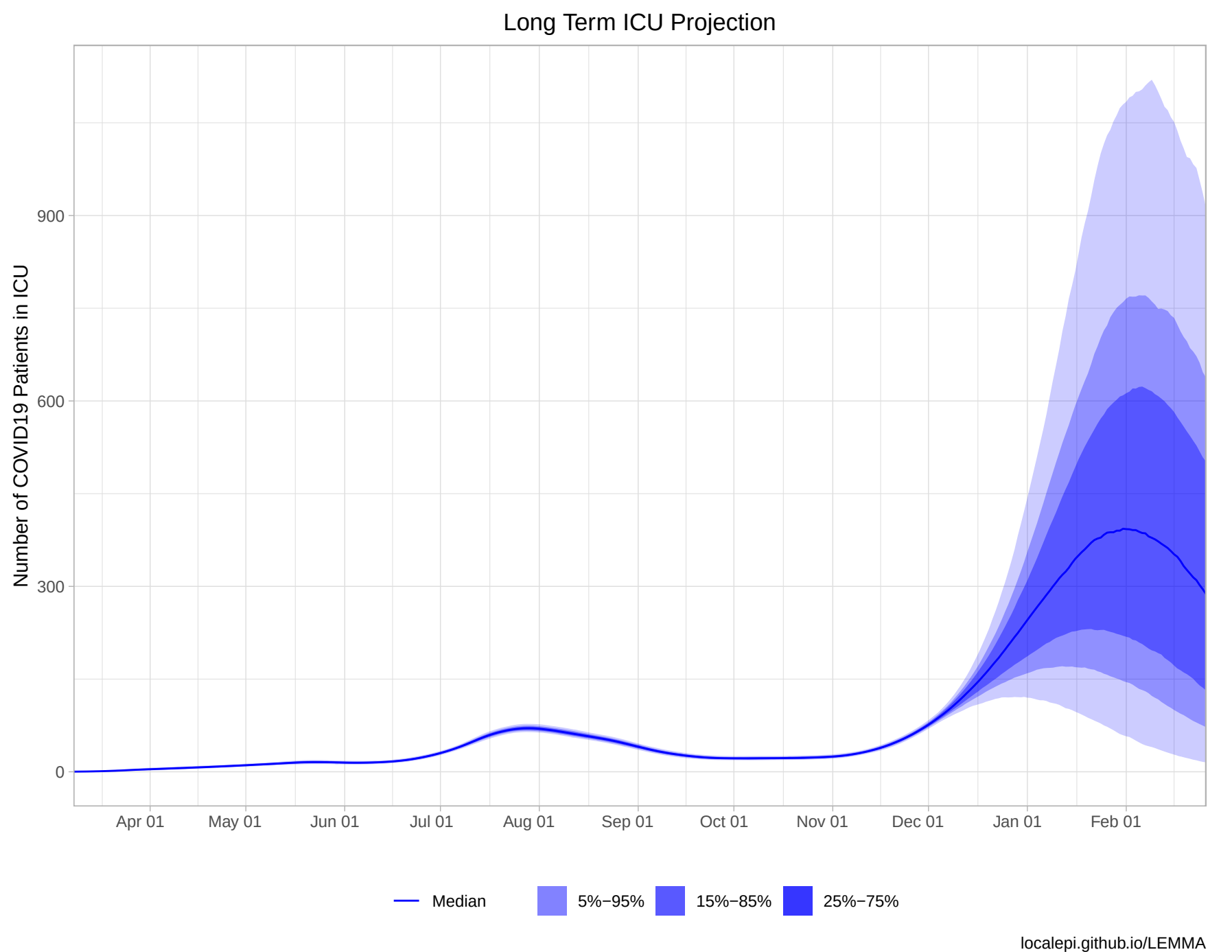
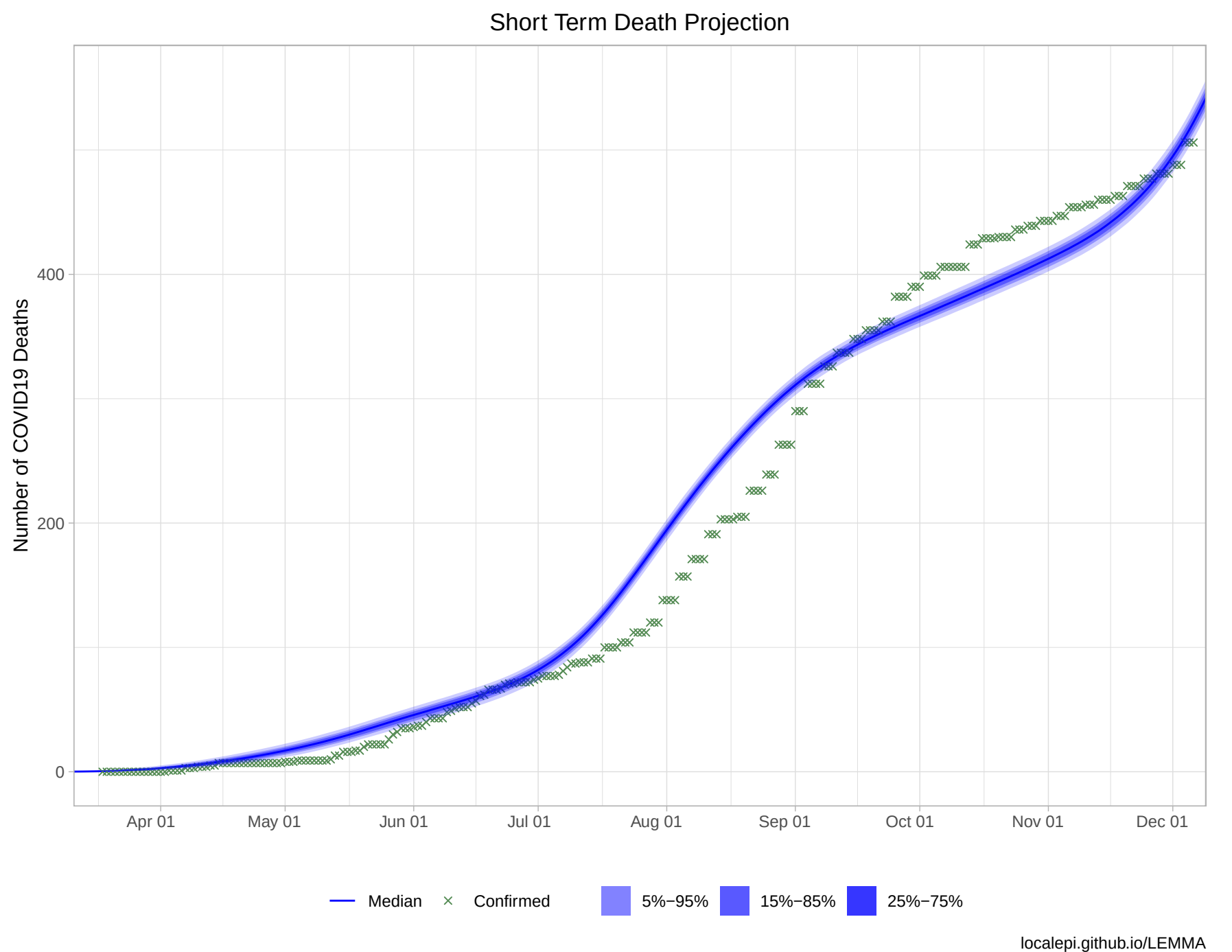
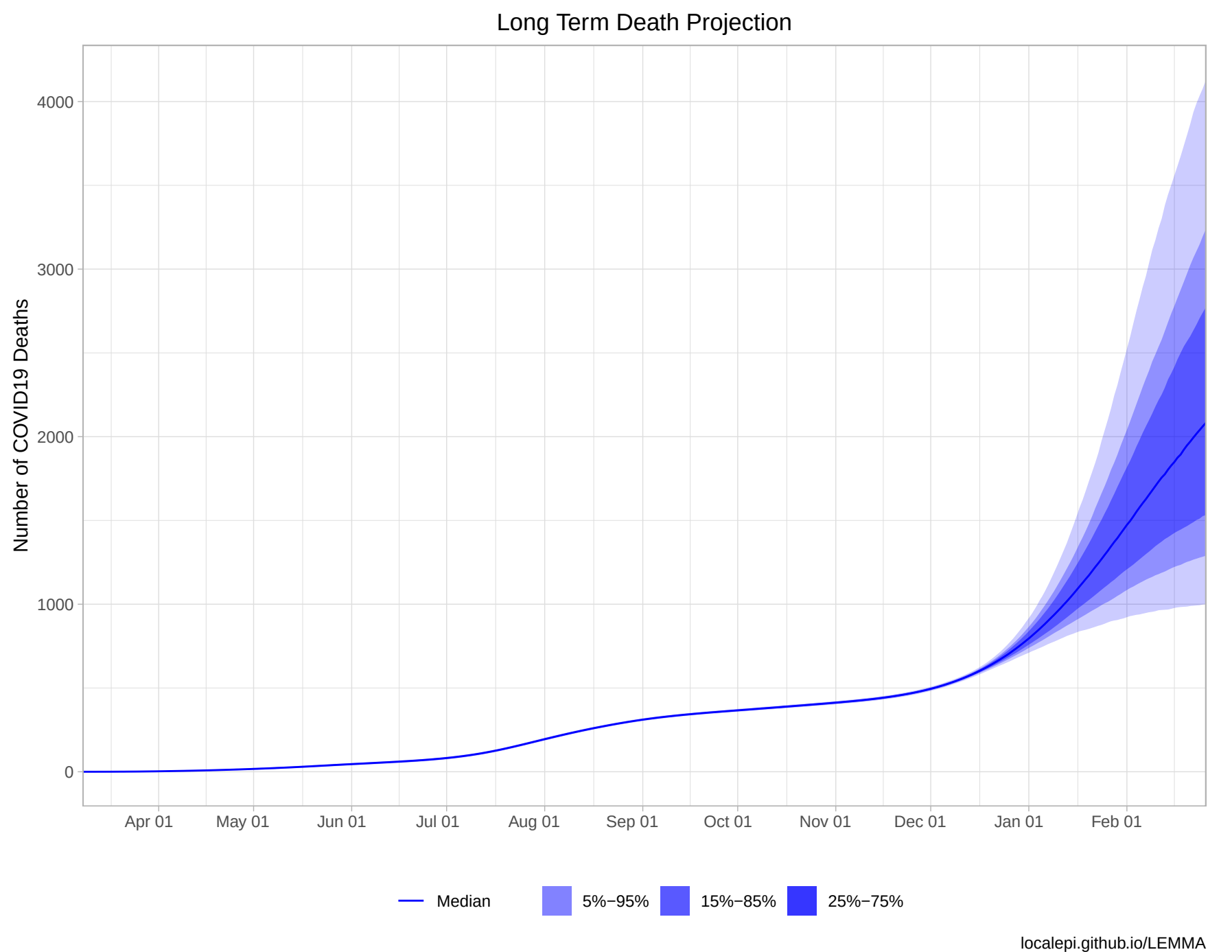

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
500
400
300
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

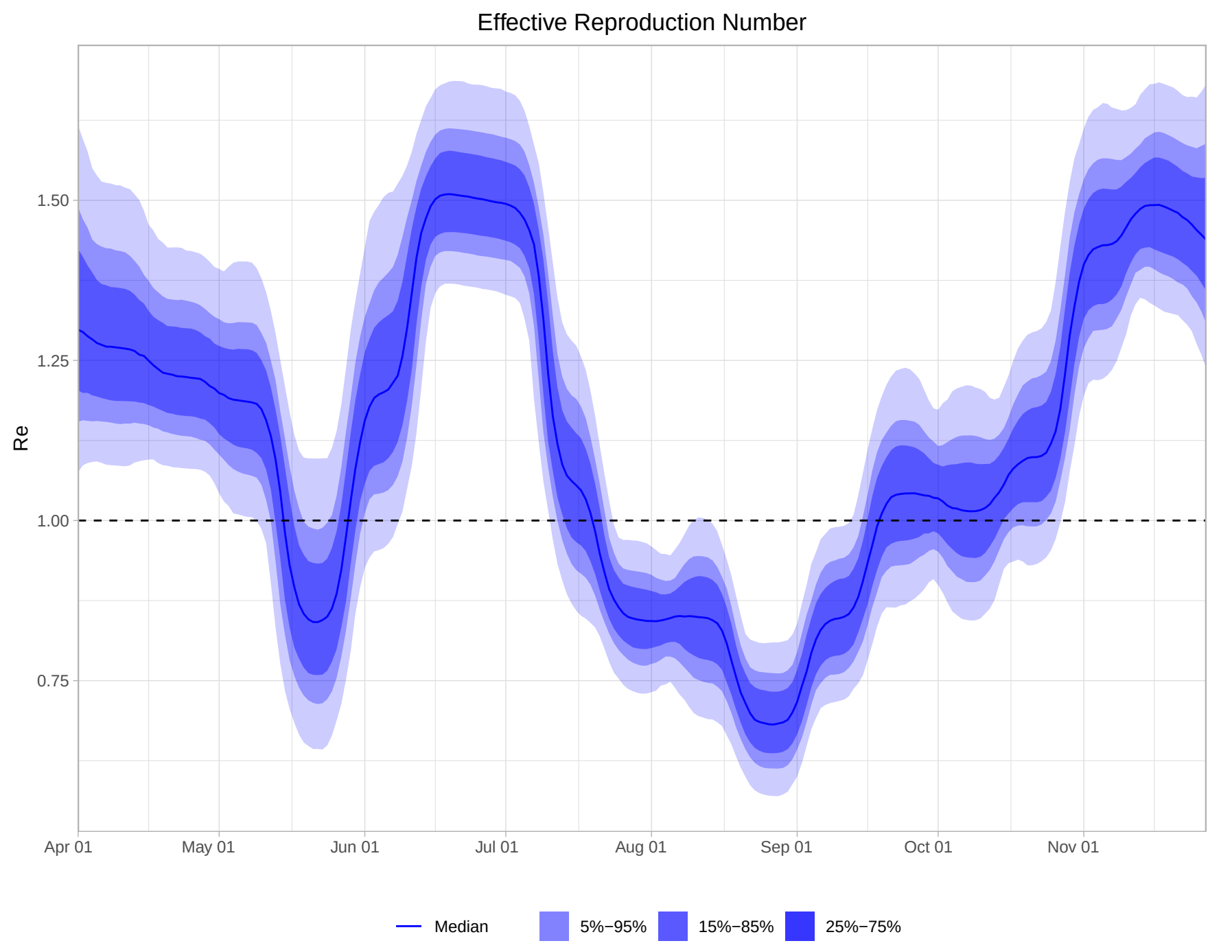

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
5000
4000
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
125
100
75
50
25
0
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
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

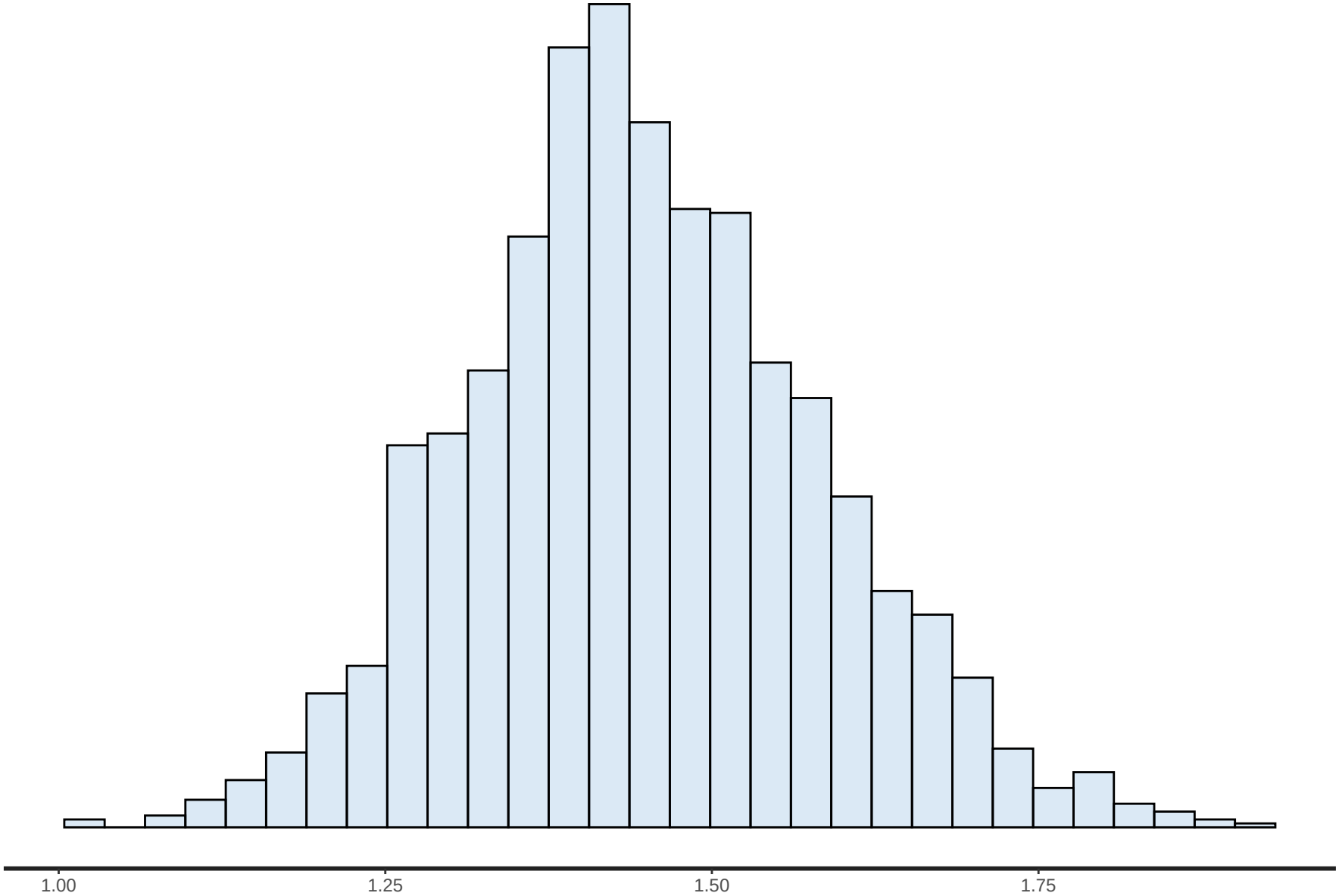

Short Term Death Projection
Number of COVID19 Deaths
0
200
400
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

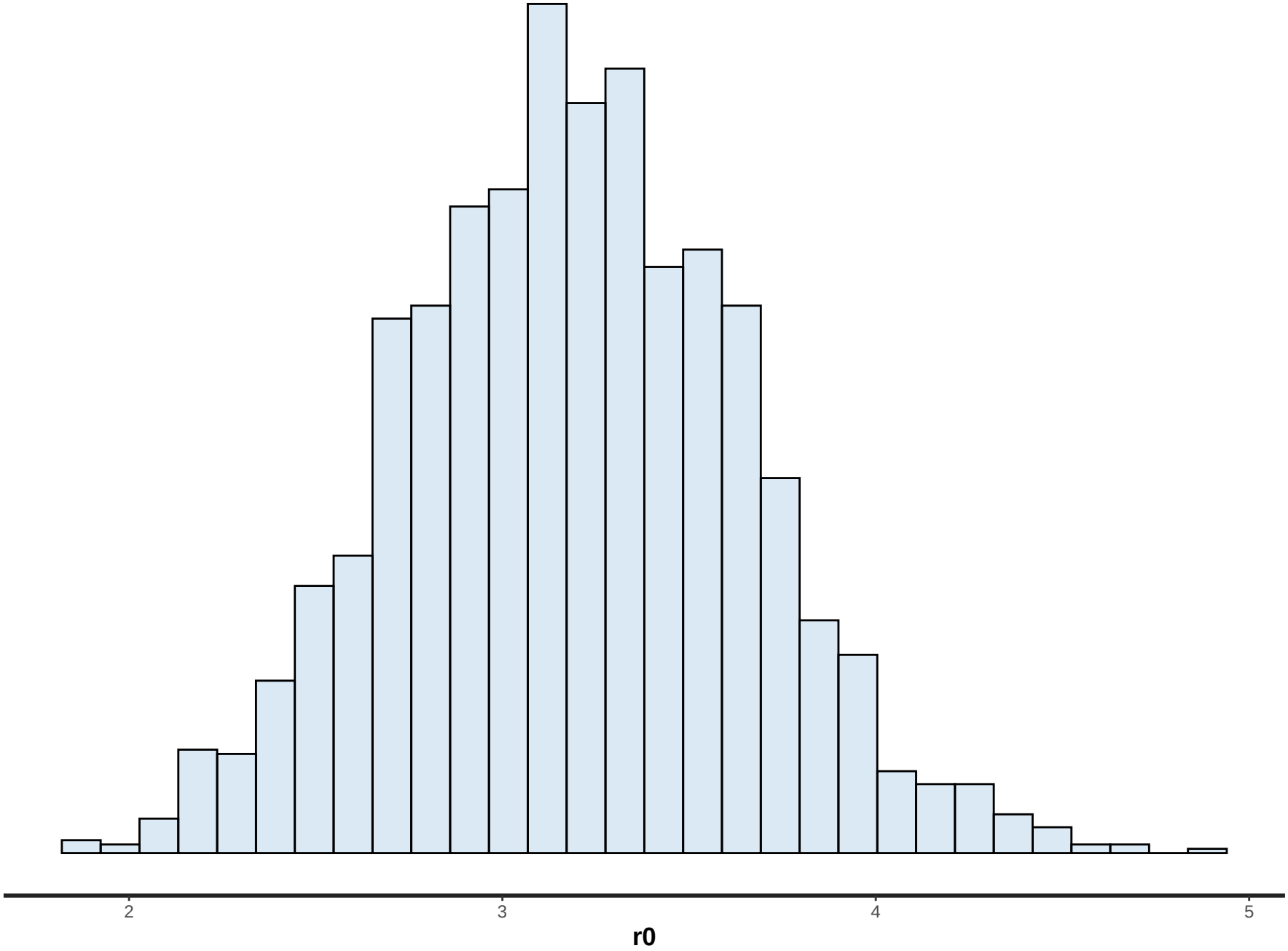

Long Term Death Projection
Number of COVID19 Deaths
4000
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

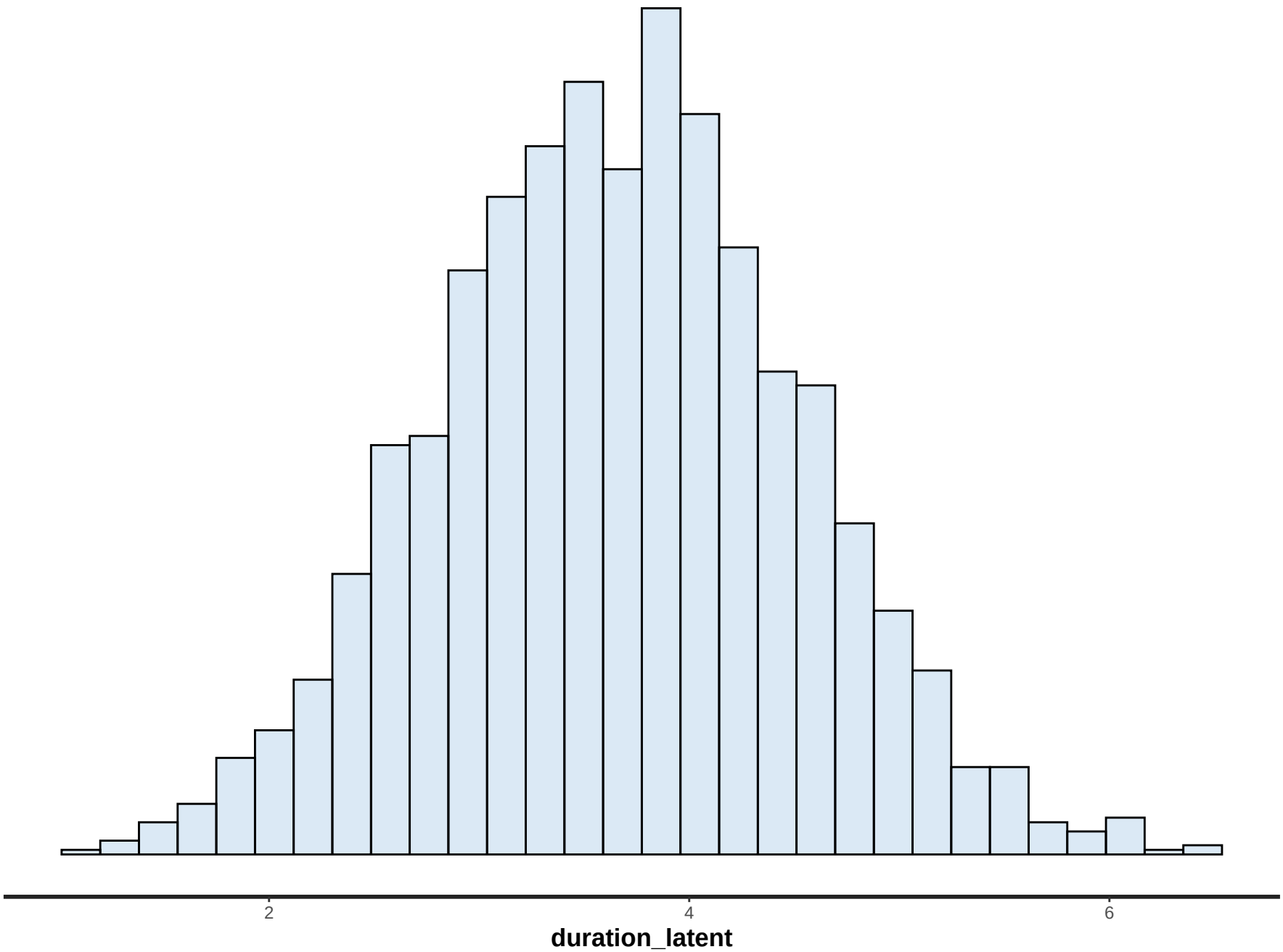

Effective Reproduction Number
Re
1.50
1.25
1.00
0.75
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

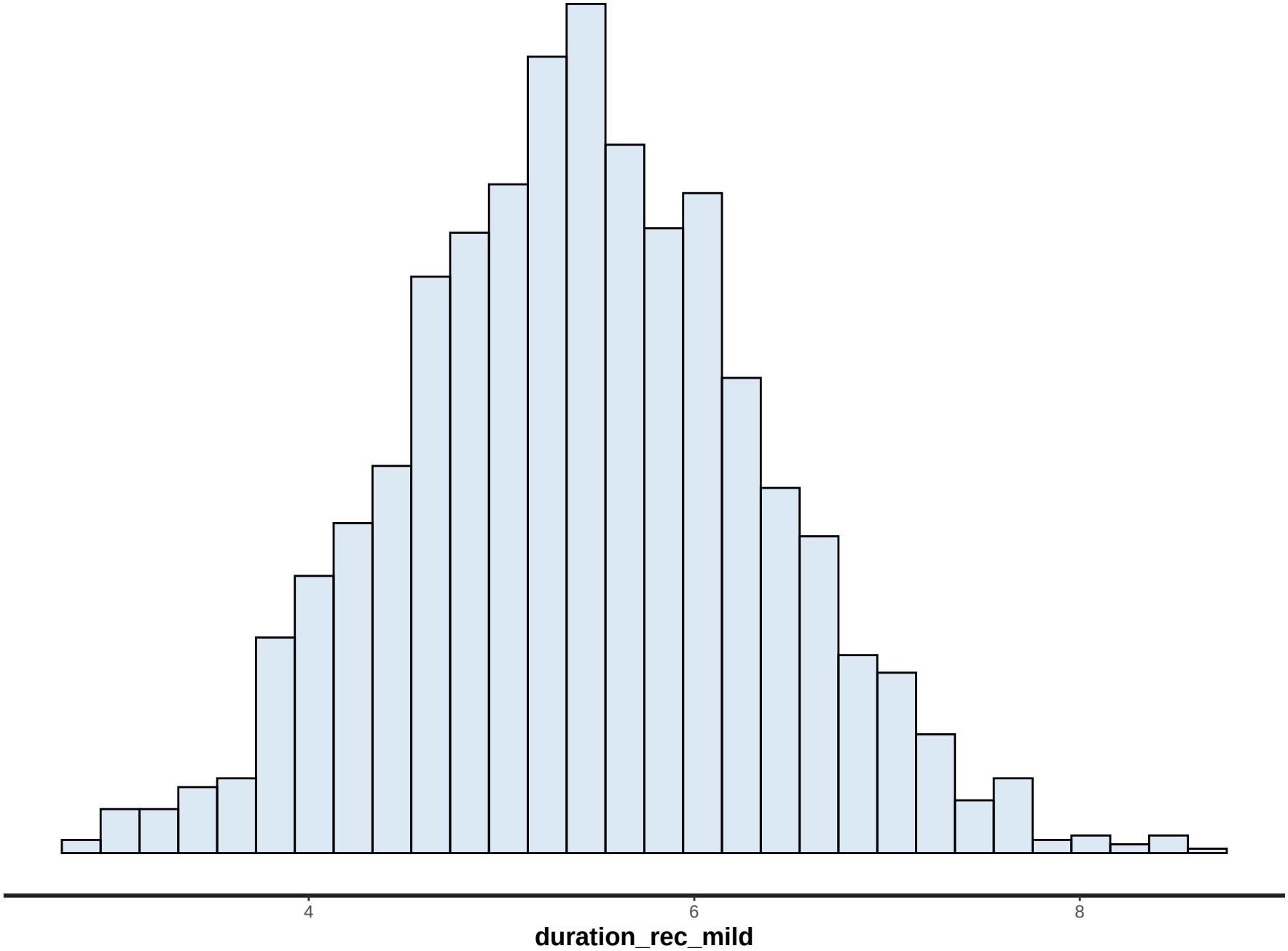
Rt as of 2020−11−27

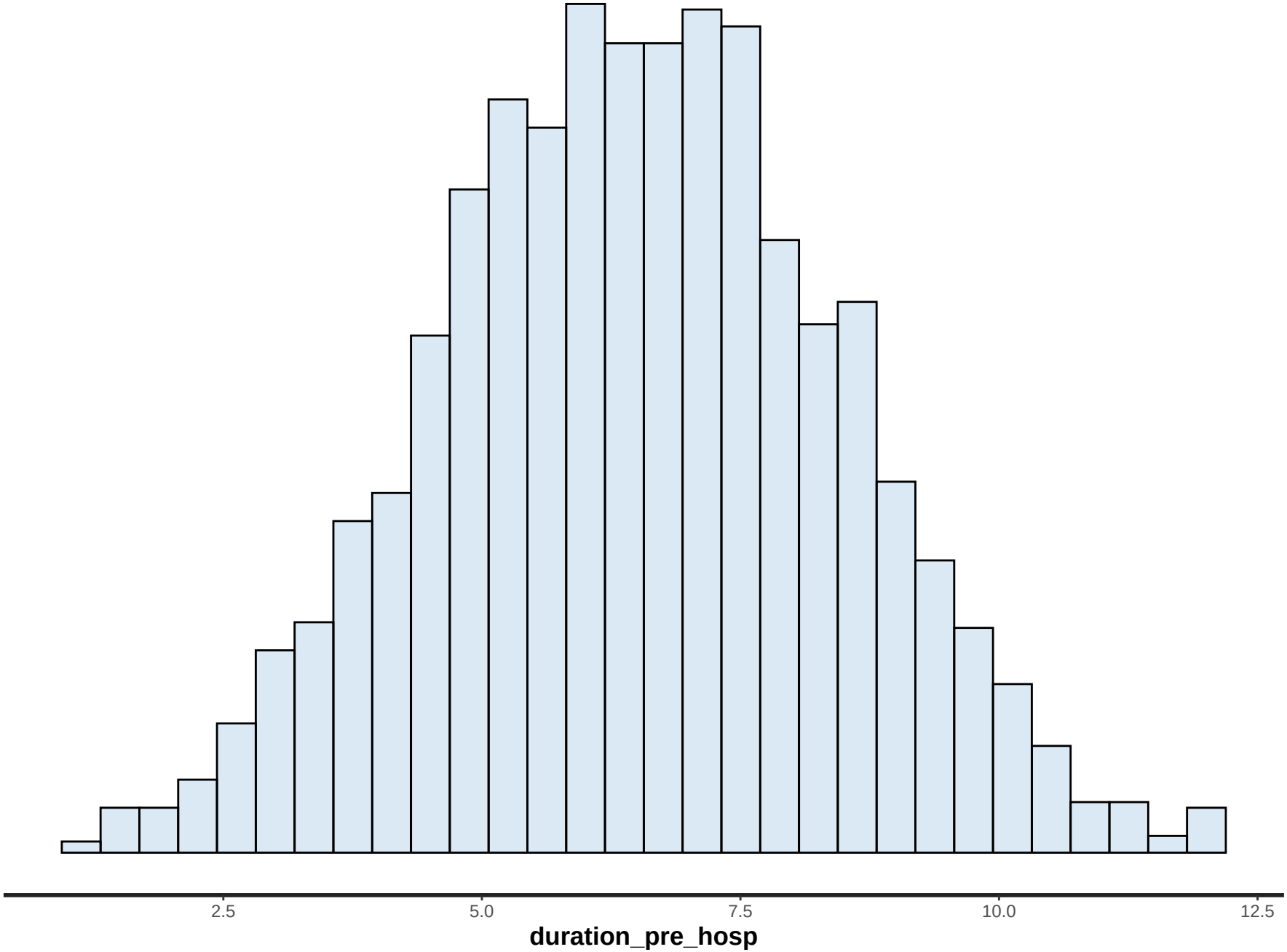
5%	10%	25%	50%	75%	90%	95%
1.24	1.28	1.36	1.44	1.54	1.63	1.68

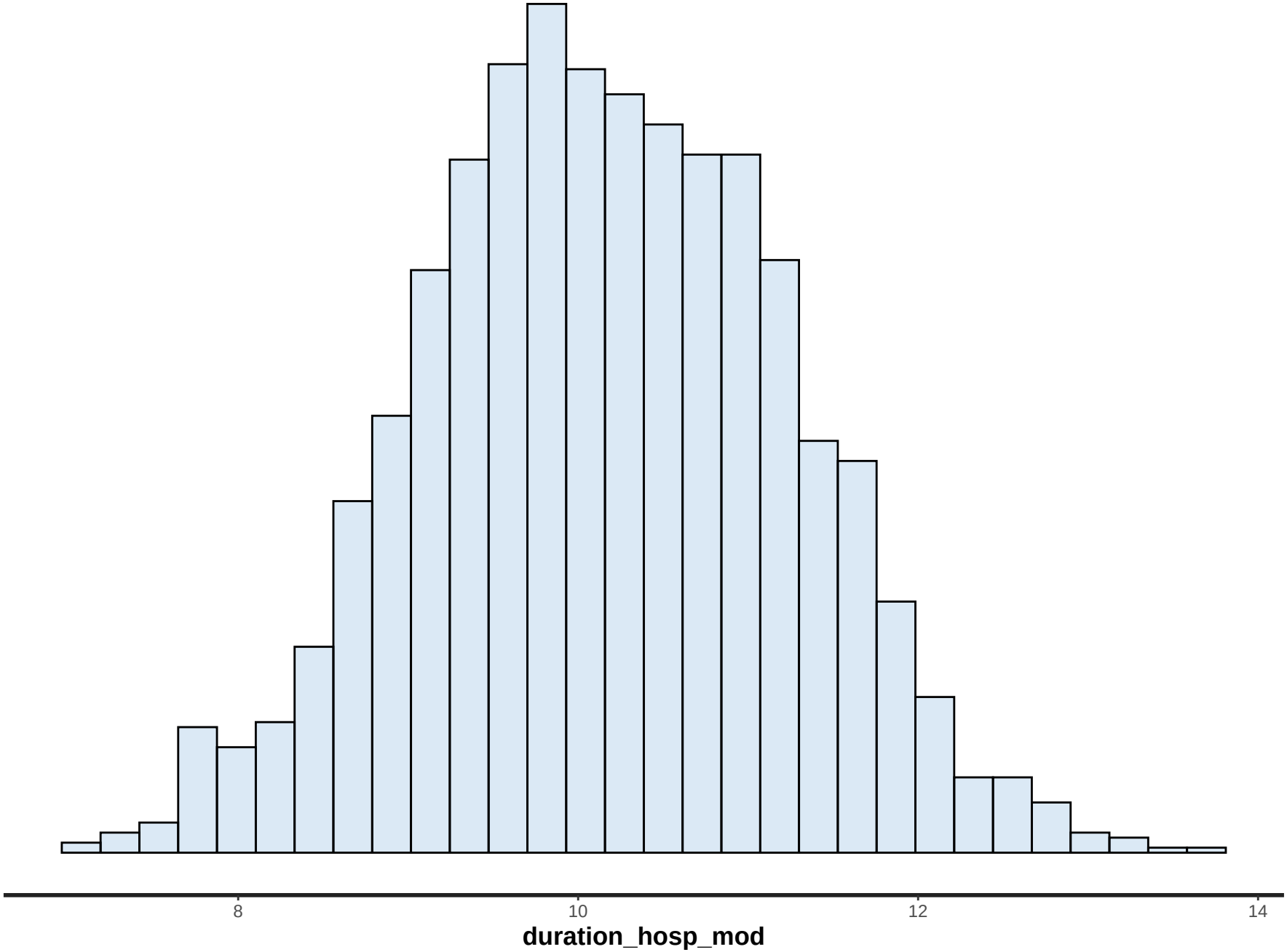


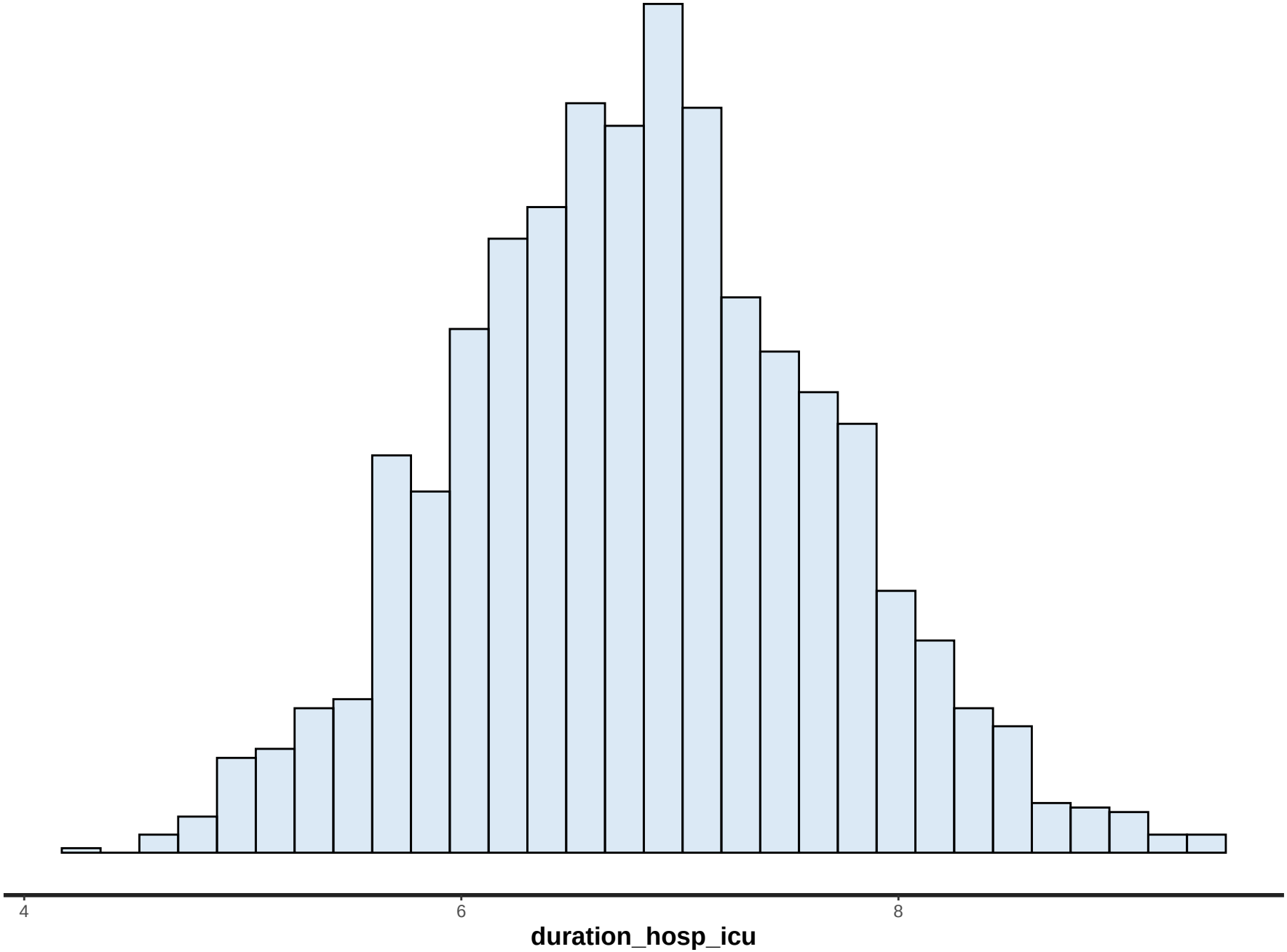

2
3
4
5
r0

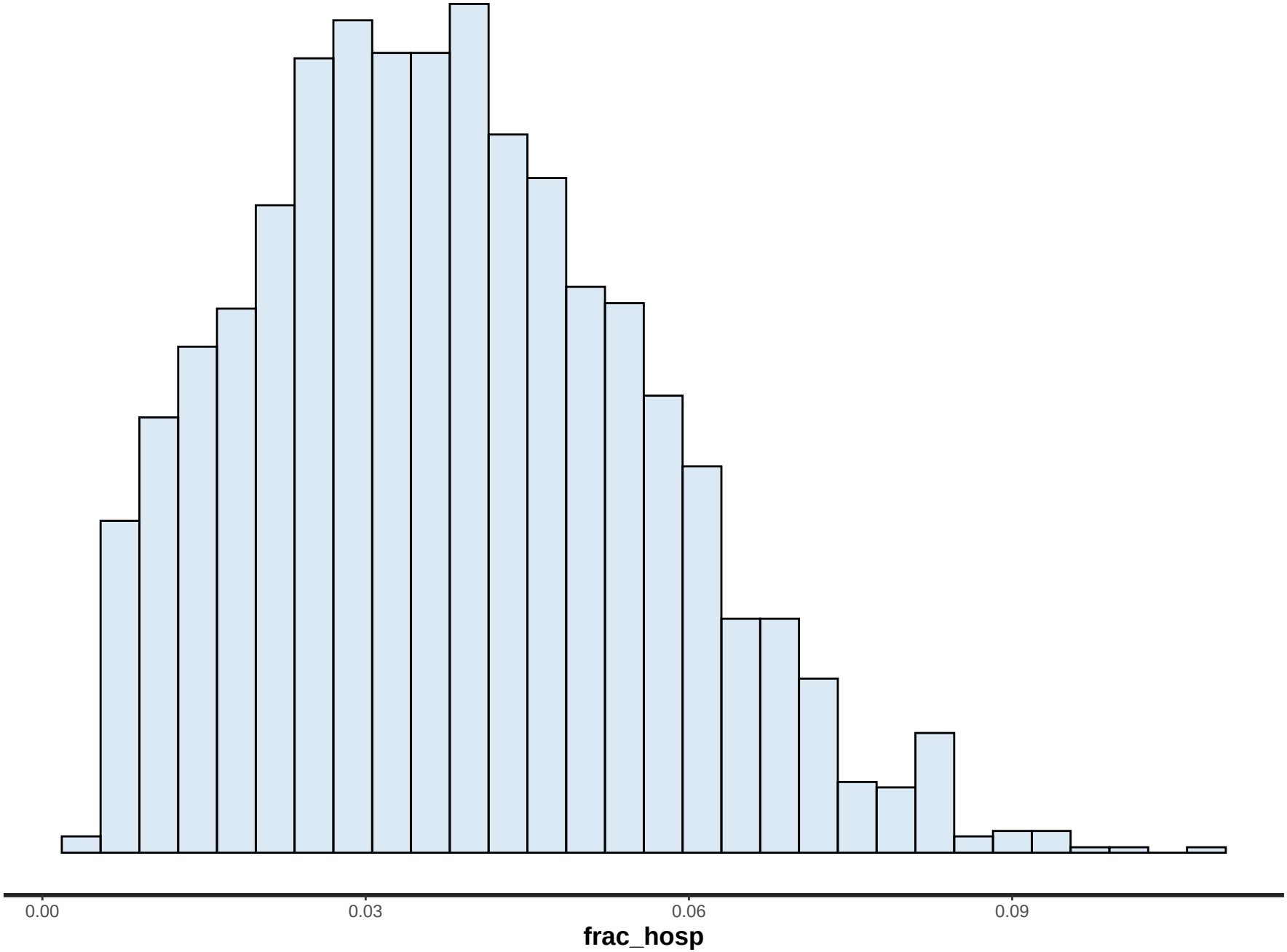

2
4
6
duration_latent

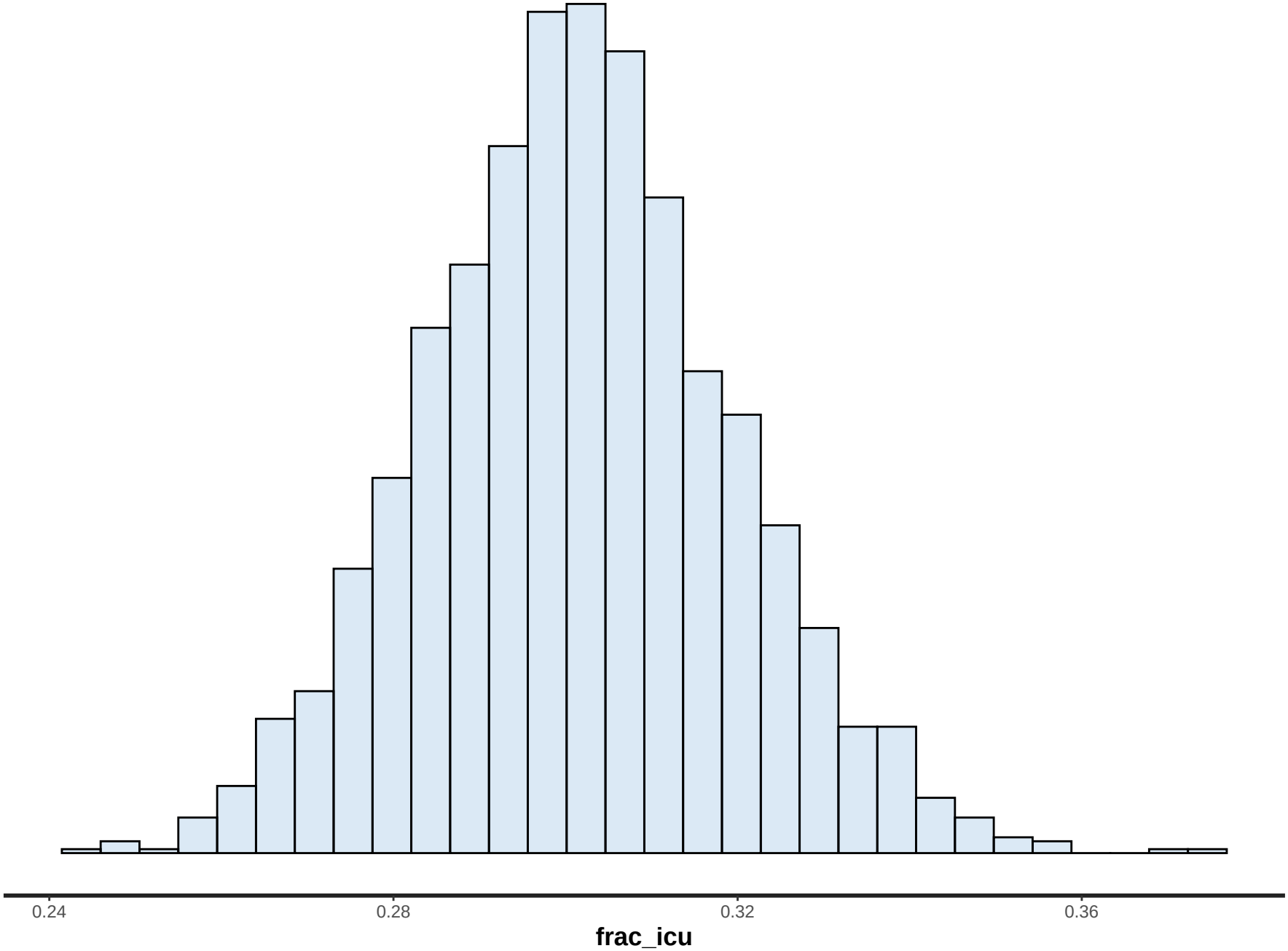

4
6
8
duration_rec_mild

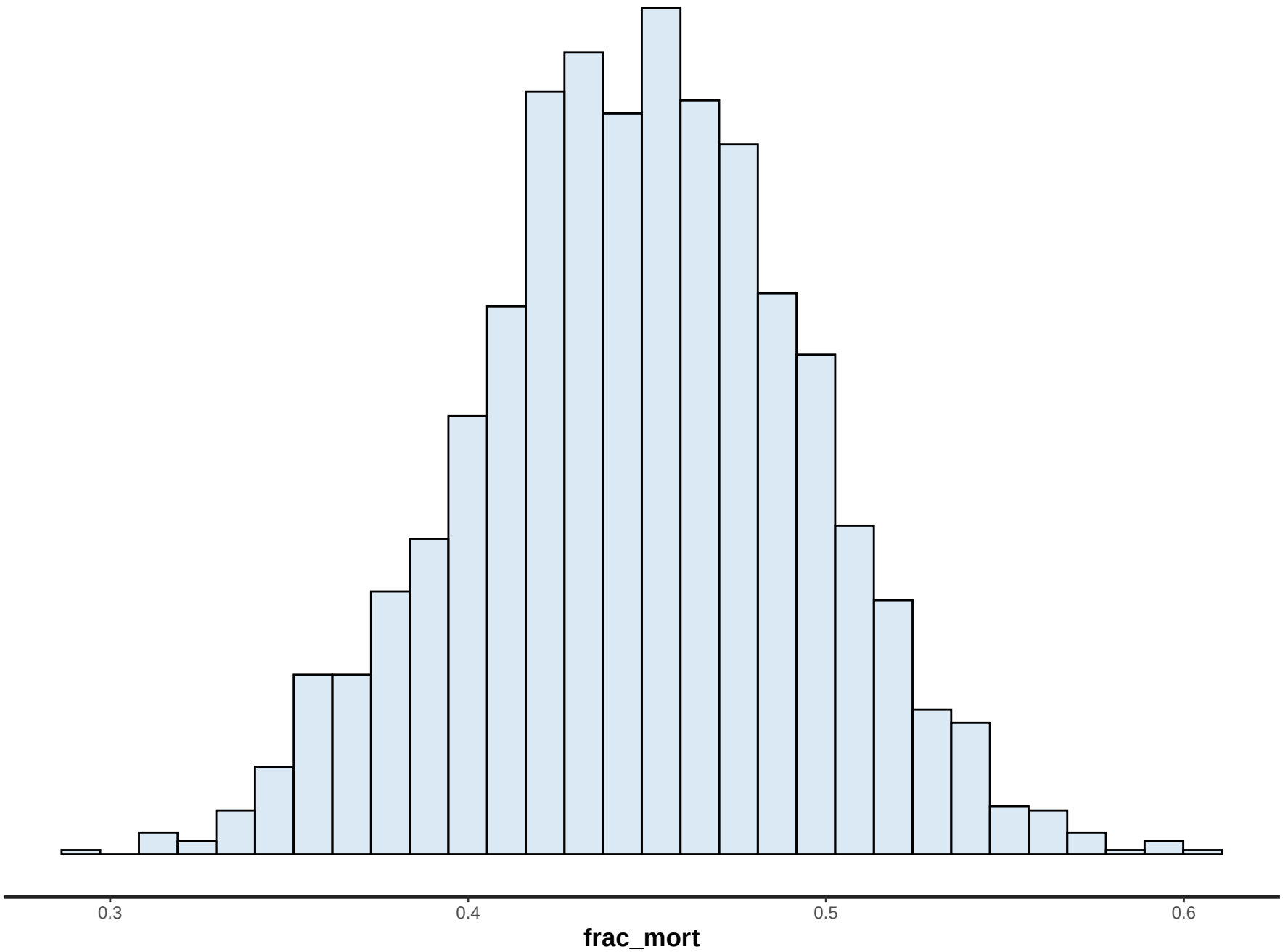

2.5
5.0
7.5
10.0
12.5
duration_pre_hosp

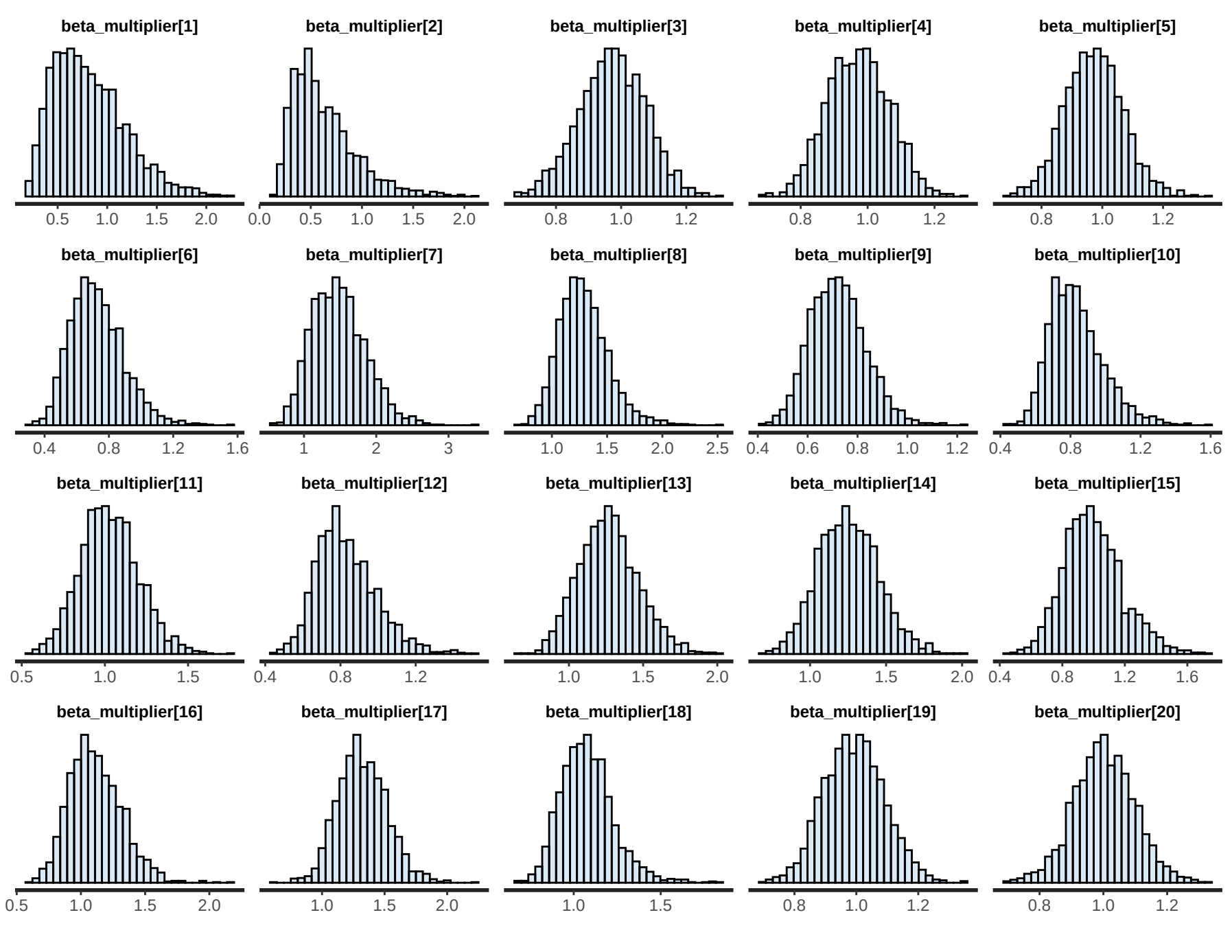

8
10
12
14
duration_hosp_mod

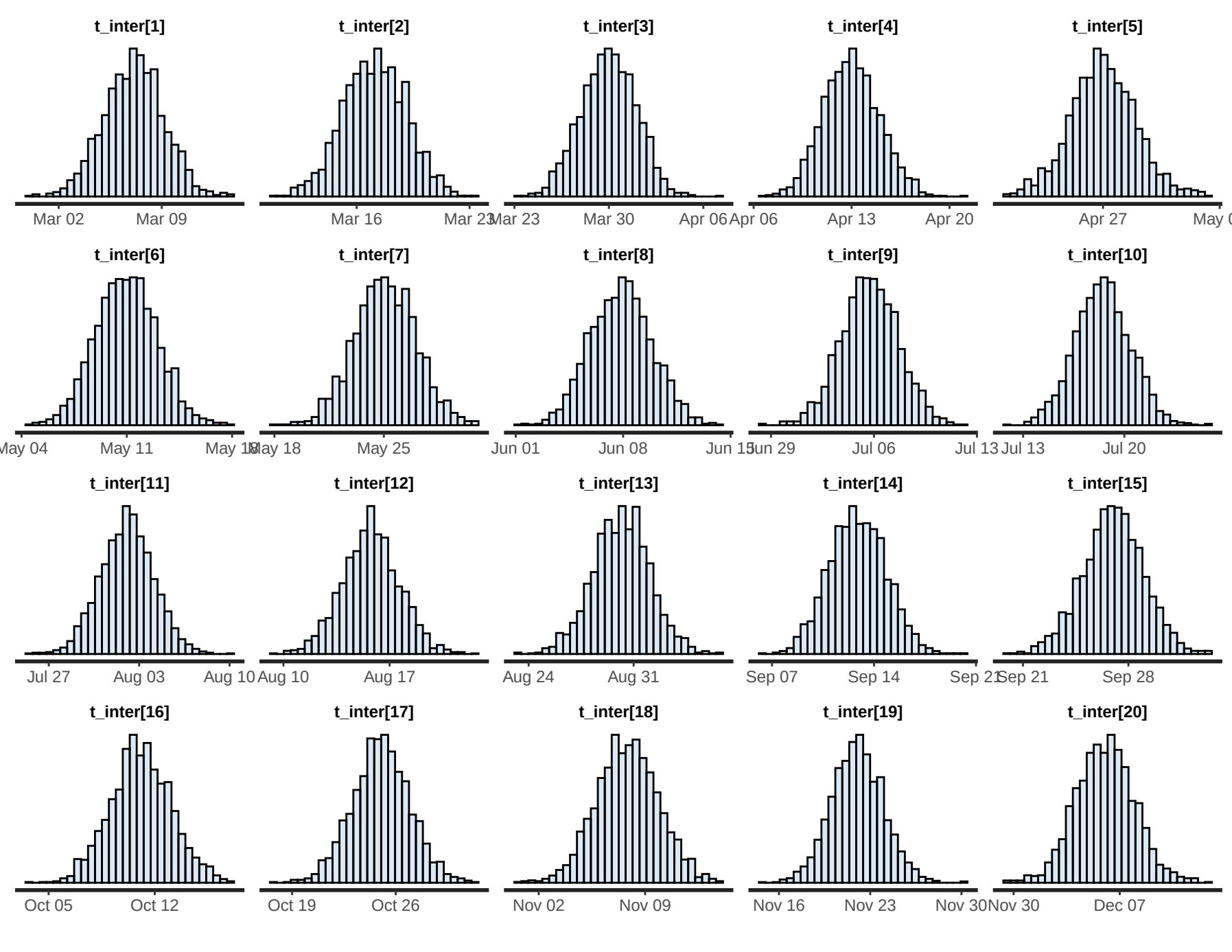

4
6
8
duration_hosp_icu

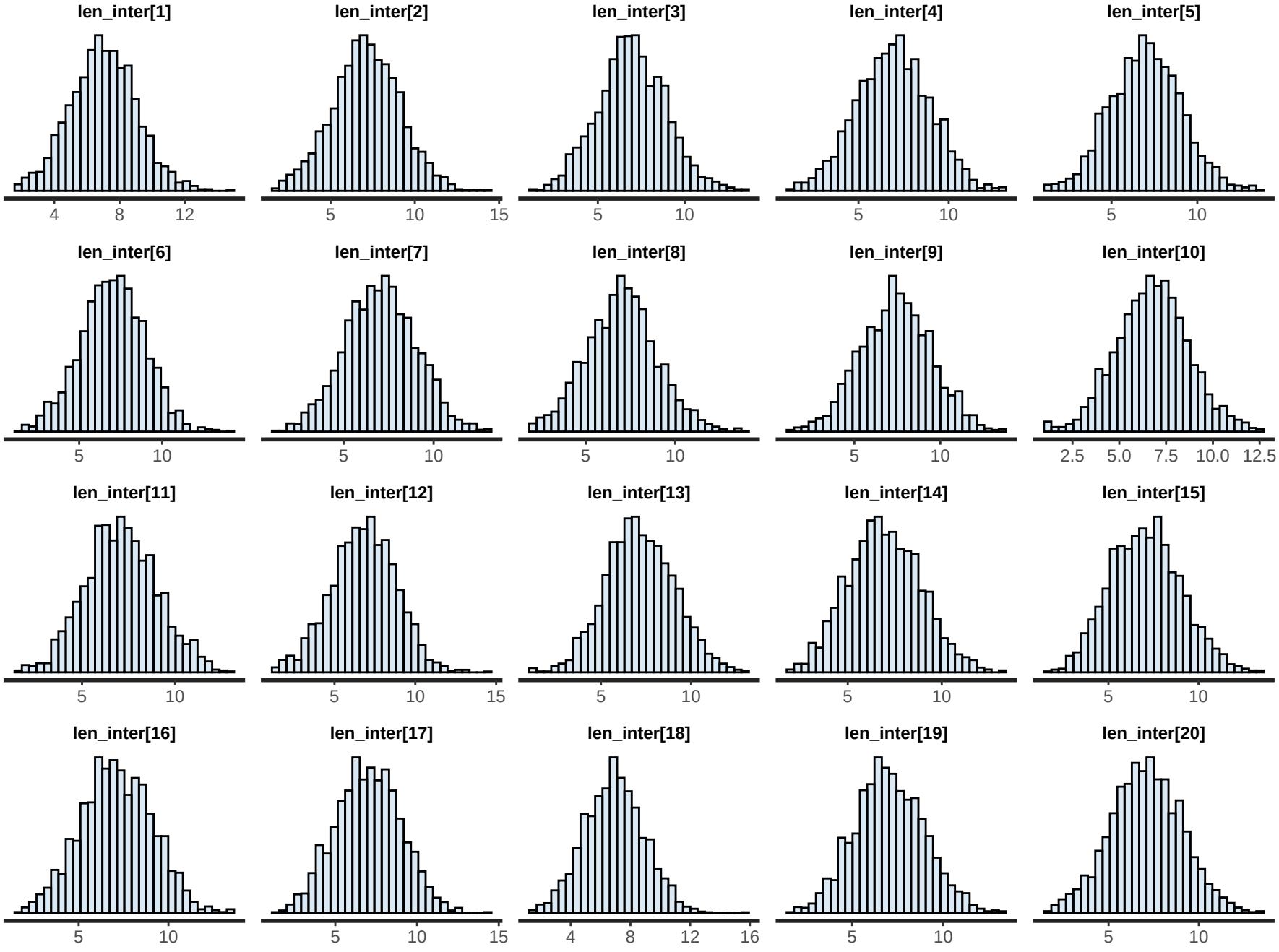

0.00
0.03
0.06
0.09
frac_hosp


0.24
0.28
0.32
0.36
frac_icu


0.3
0.4
0.5
0.6
frac_mort


beta_multiplier[1]
0.5 1.0 1.5 2.0
beta_multiplier[2]
0.0 0.5 1.0 1.5 2.0
beta_multiplier[3]
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 3
beta_multiplier[8]
1.0 1.5 2.0 2.5
beta_multiplier[9]
0.4 0.6 0.8 1.0 1.2
beta_multiplier[10]
0.4 0.8 1.2 1.6
beta_multiplier[11]
0.5 1.0 1.5
beta_multiplier[12]
0.4 0.8 1.2
beta_multiplier[13]
1.0 1.5 2.0
beta_multiplier[14]
1.0 1.5 2.0
beta_multiplier[15]
0.4 0.8 1.2 1.6
beta_multiplier[16]
0.5 1.0 1.5 2.0
beta_multiplier[17]
1.0 1.5 2.0
beta_multiplier[18]
1.0 1.5
beta_multiplier[19]
0.8 1.0 1.2
beta_multiplier[20]
0.8 1.0 1.2


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


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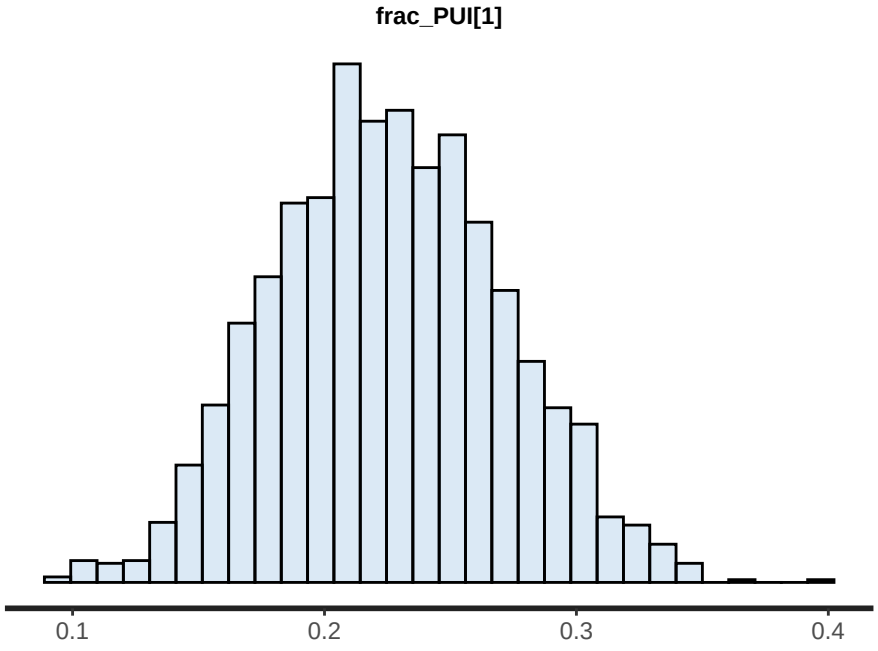
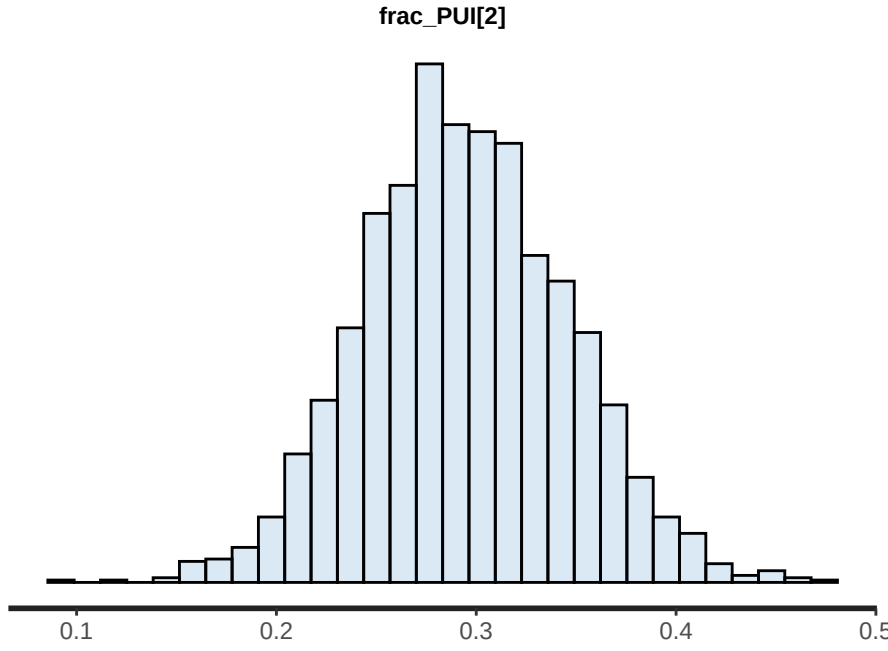
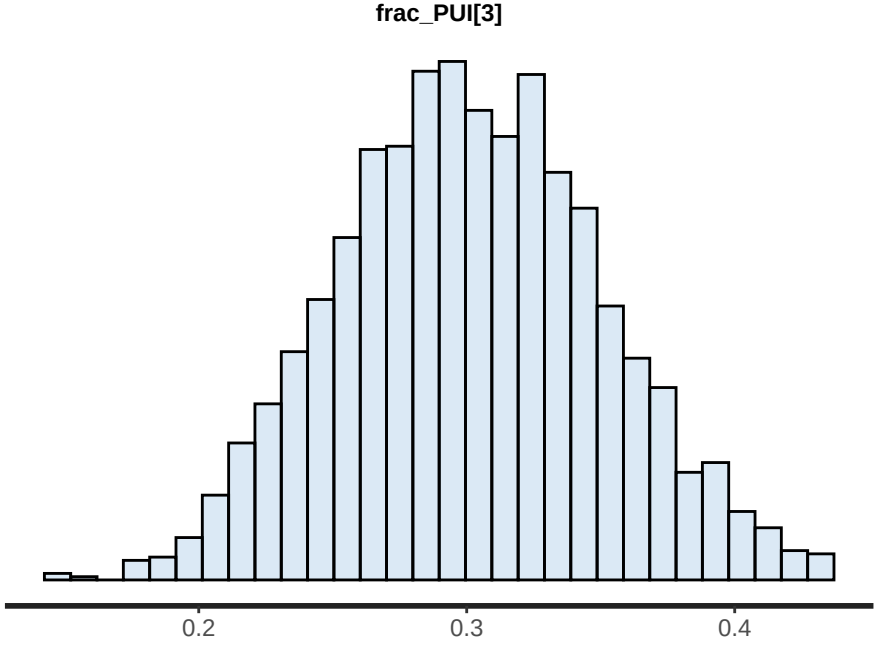
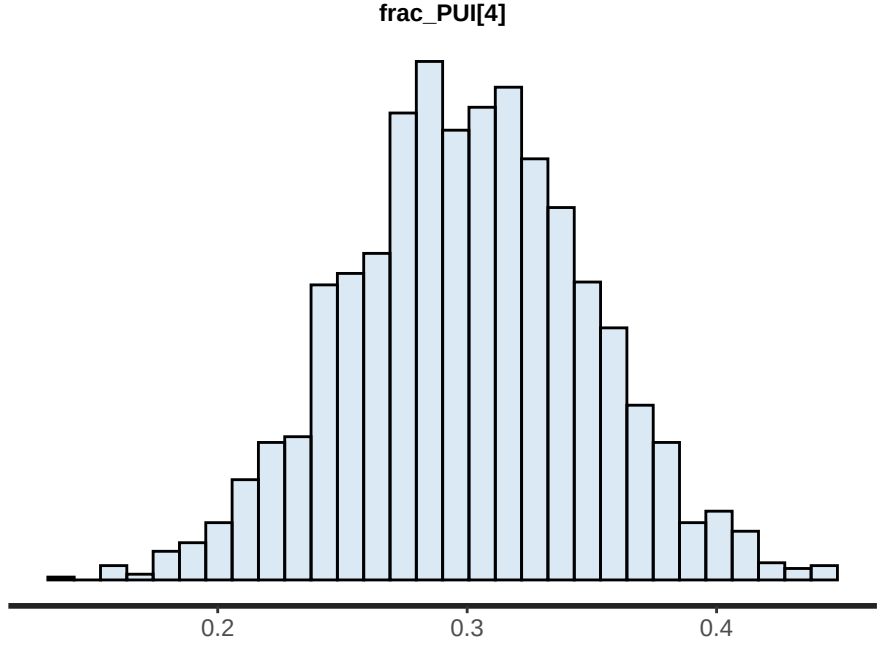
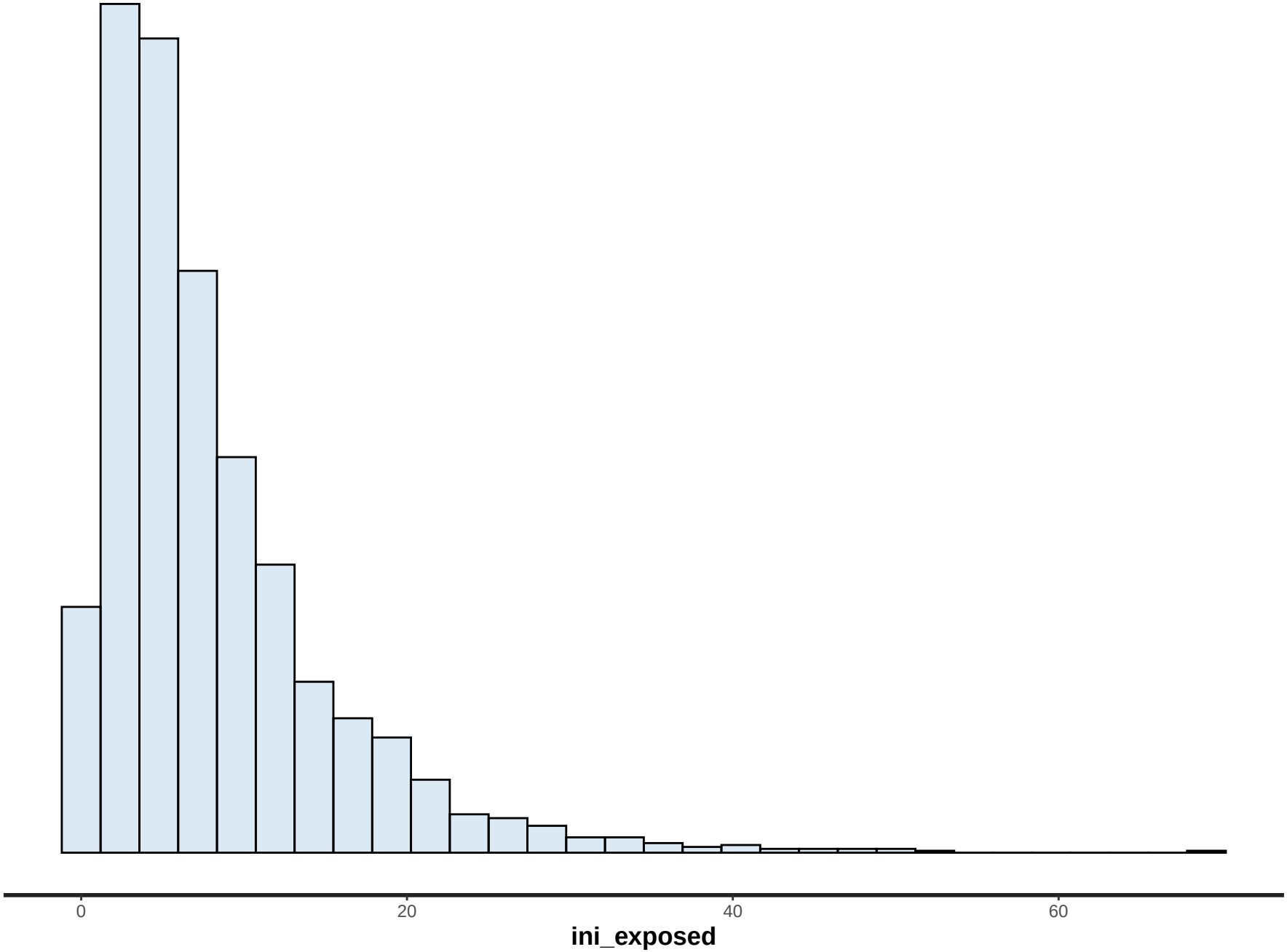
len_inter[18]
4
8
12
16
len_inter[19]
5
10
len_inter[20]
5
10

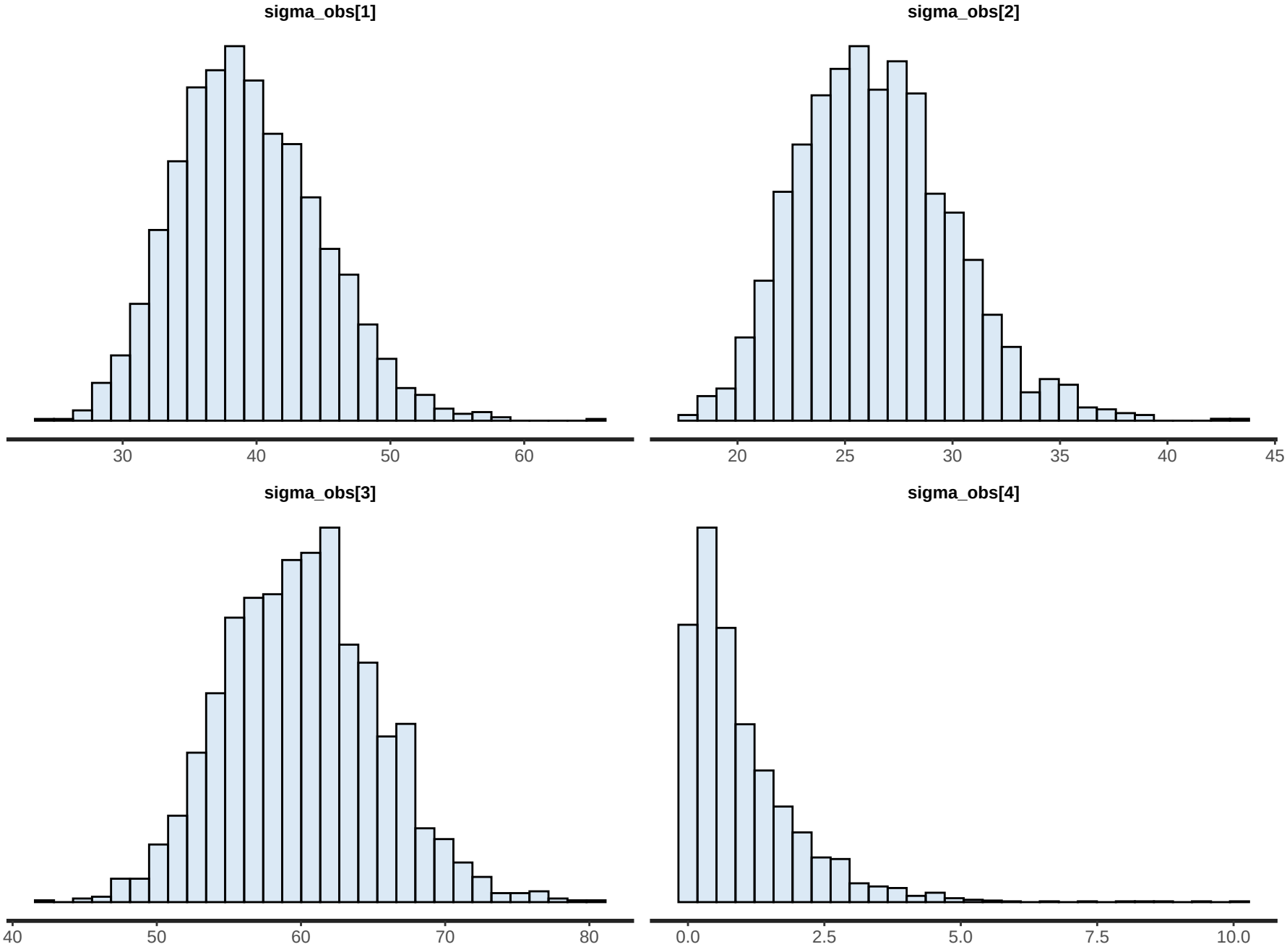

frac_PUI[1]
0.1
0.2
0.3
0.4


frac_PUI[2]
0.1
0.2
0.3
0.4
0.5


frac_PUI[3]
0.2
0.3
0.4


frac_PUI[4]
0.2
0.3
0.4


0
20
40
60
ini_exposed


sigma_obs[1]
30
40
50
60
sigma_obs[2]
20
25
30
35
40
45
sigma_obs[3]
40
50
60
70
80
sigma_obs[4]
0.0
2.5
5.0
7.5
10.0