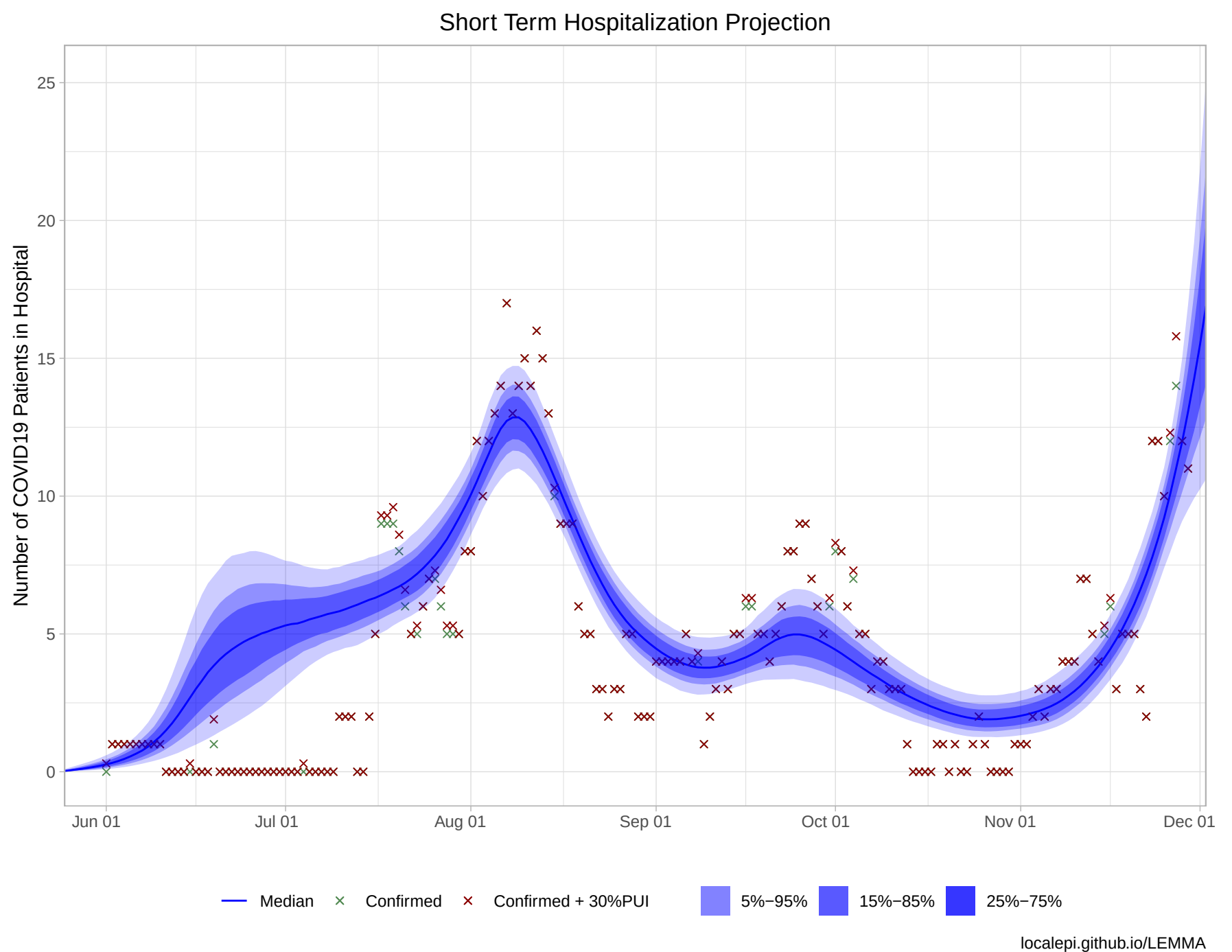
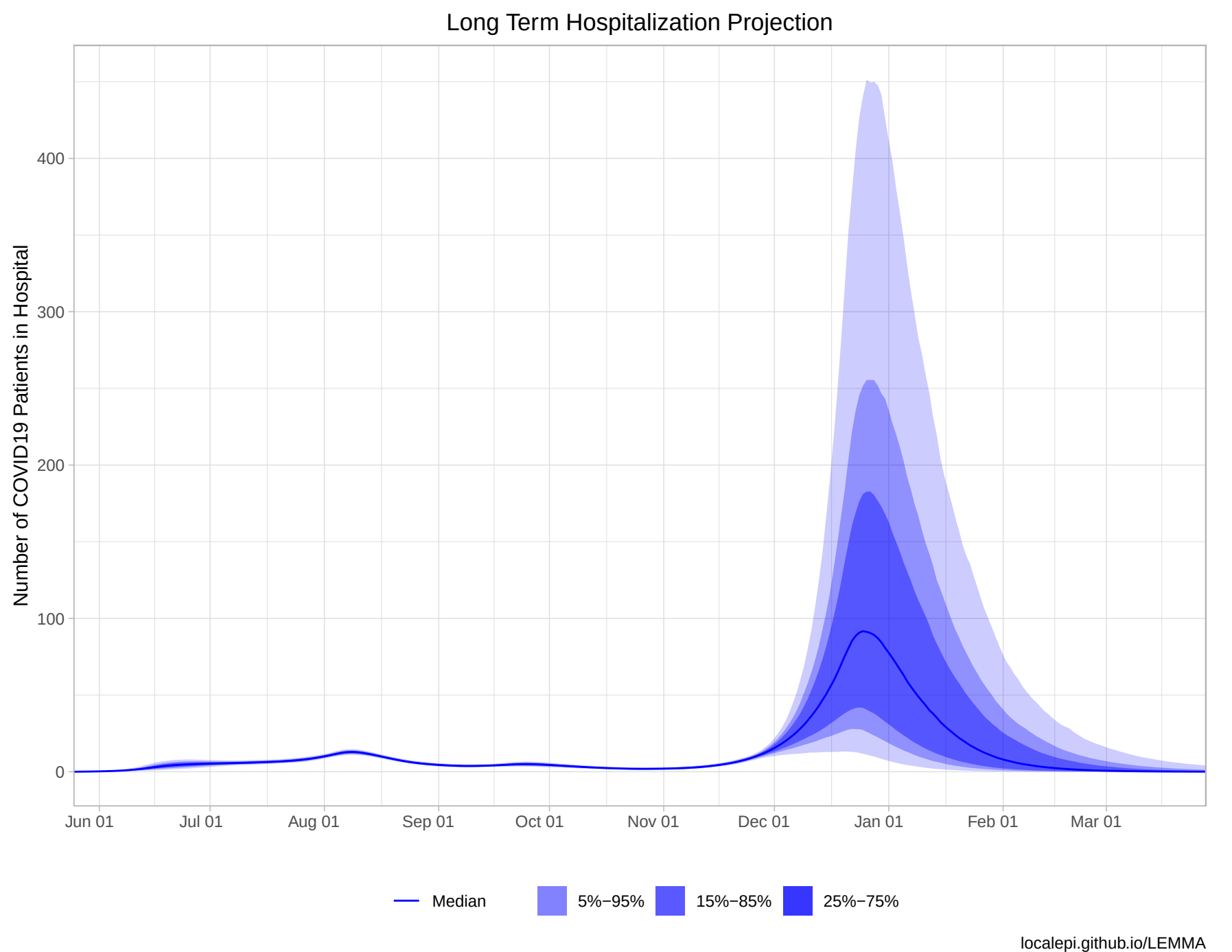
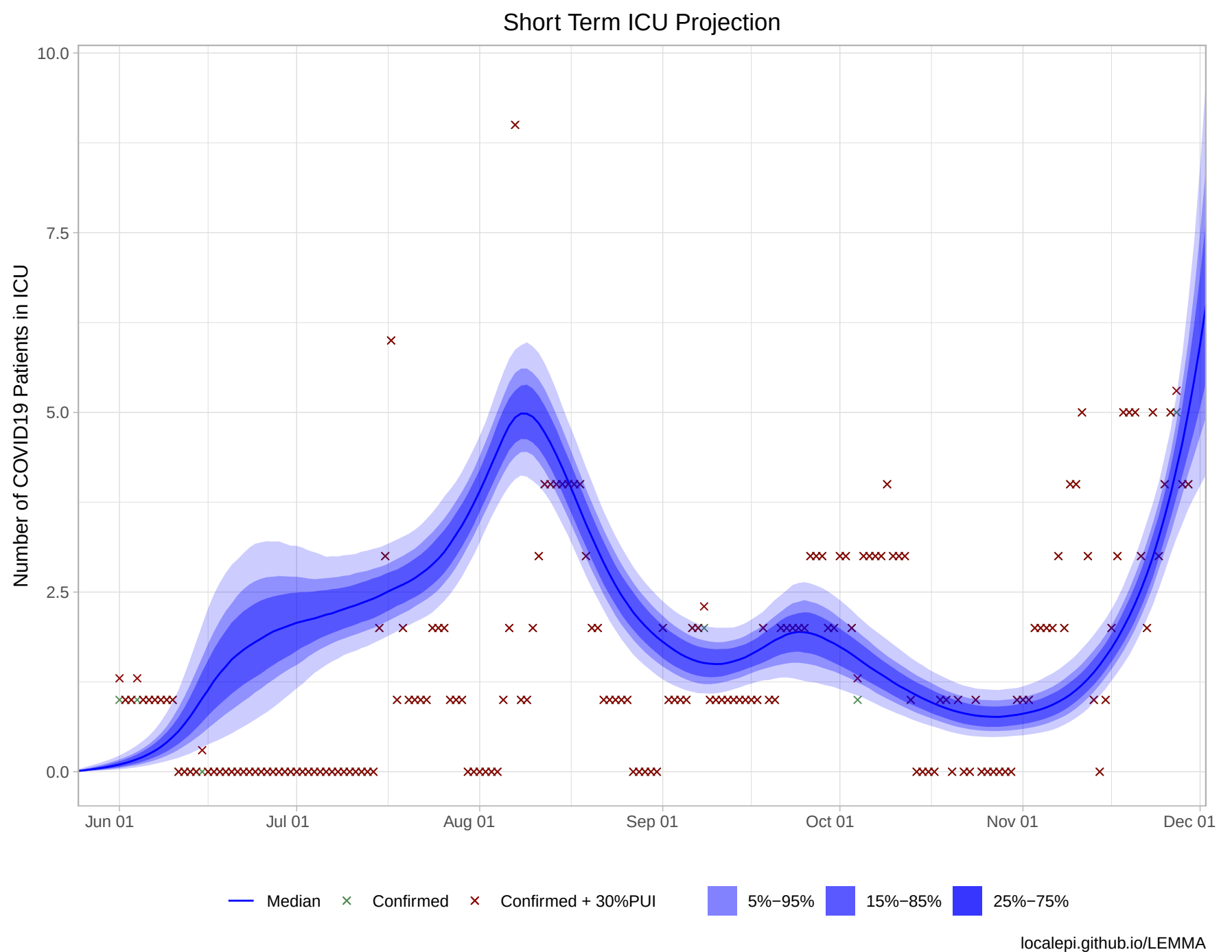
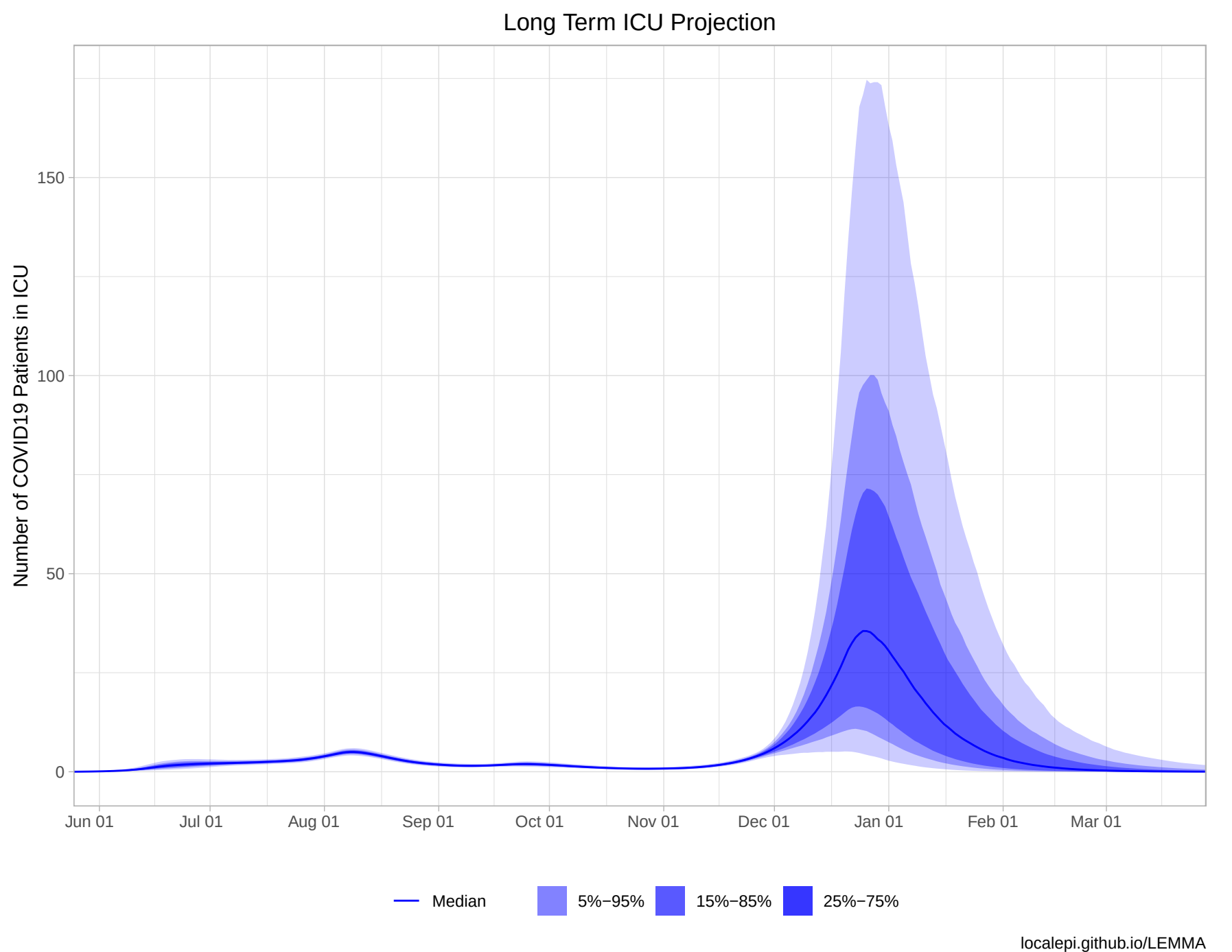
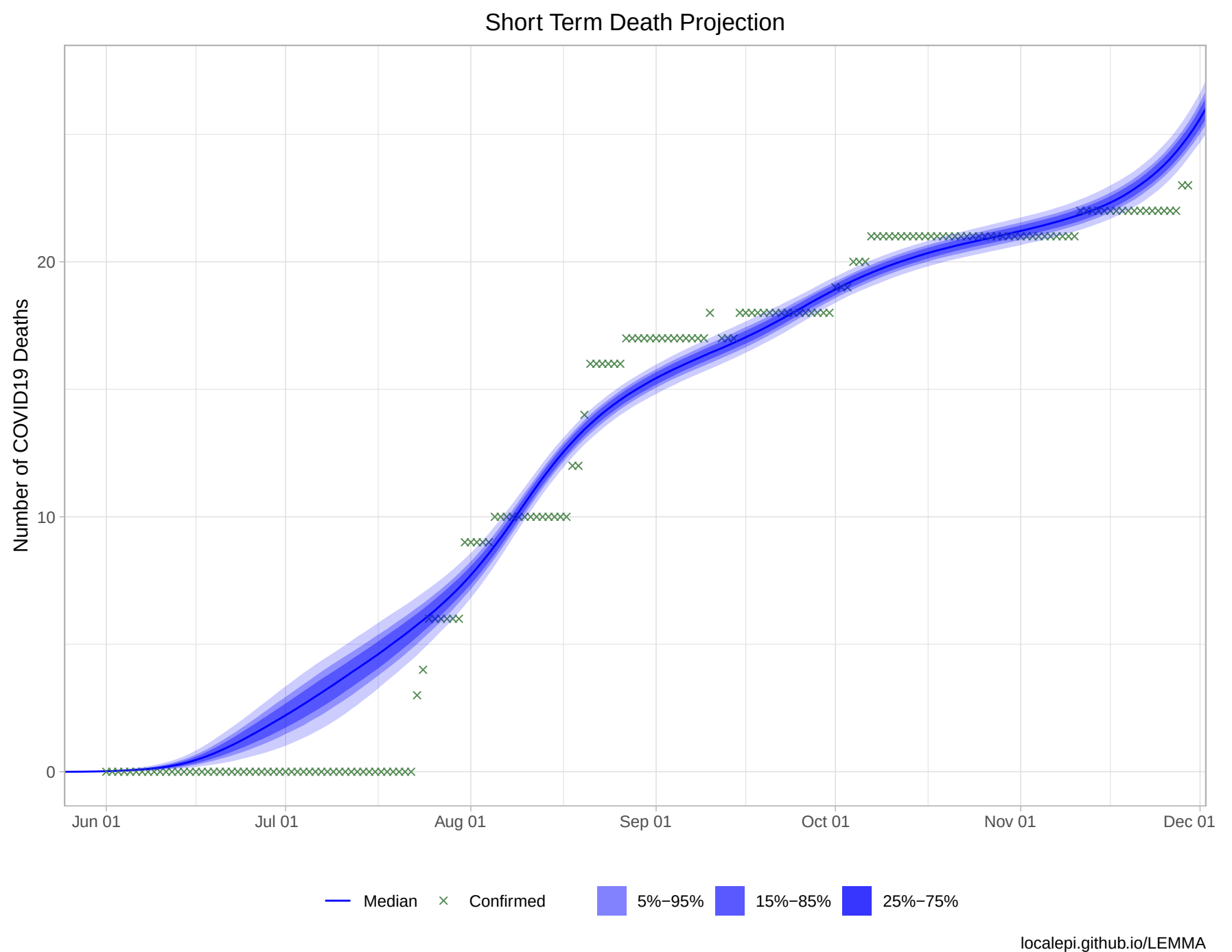
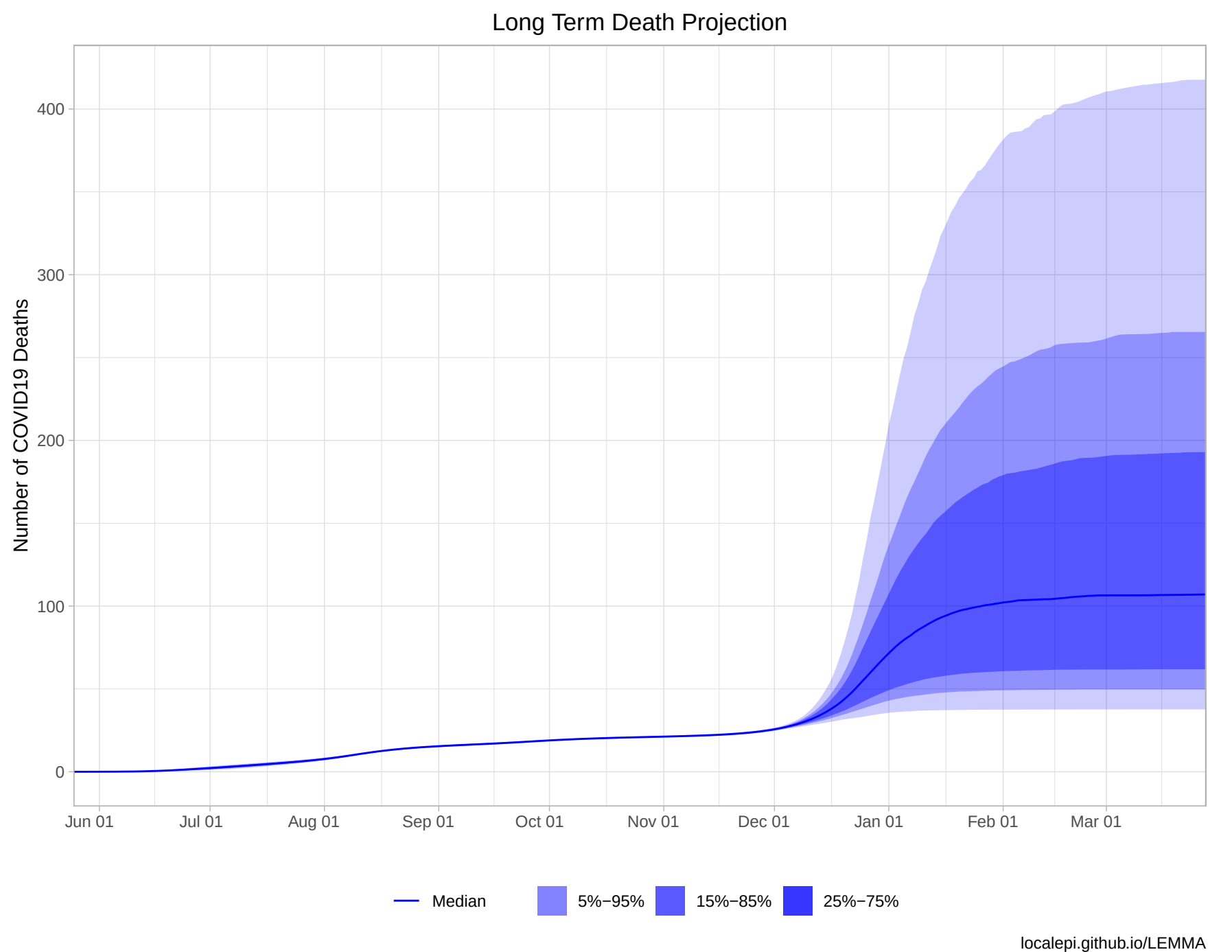

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
5
10
15
20
25
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

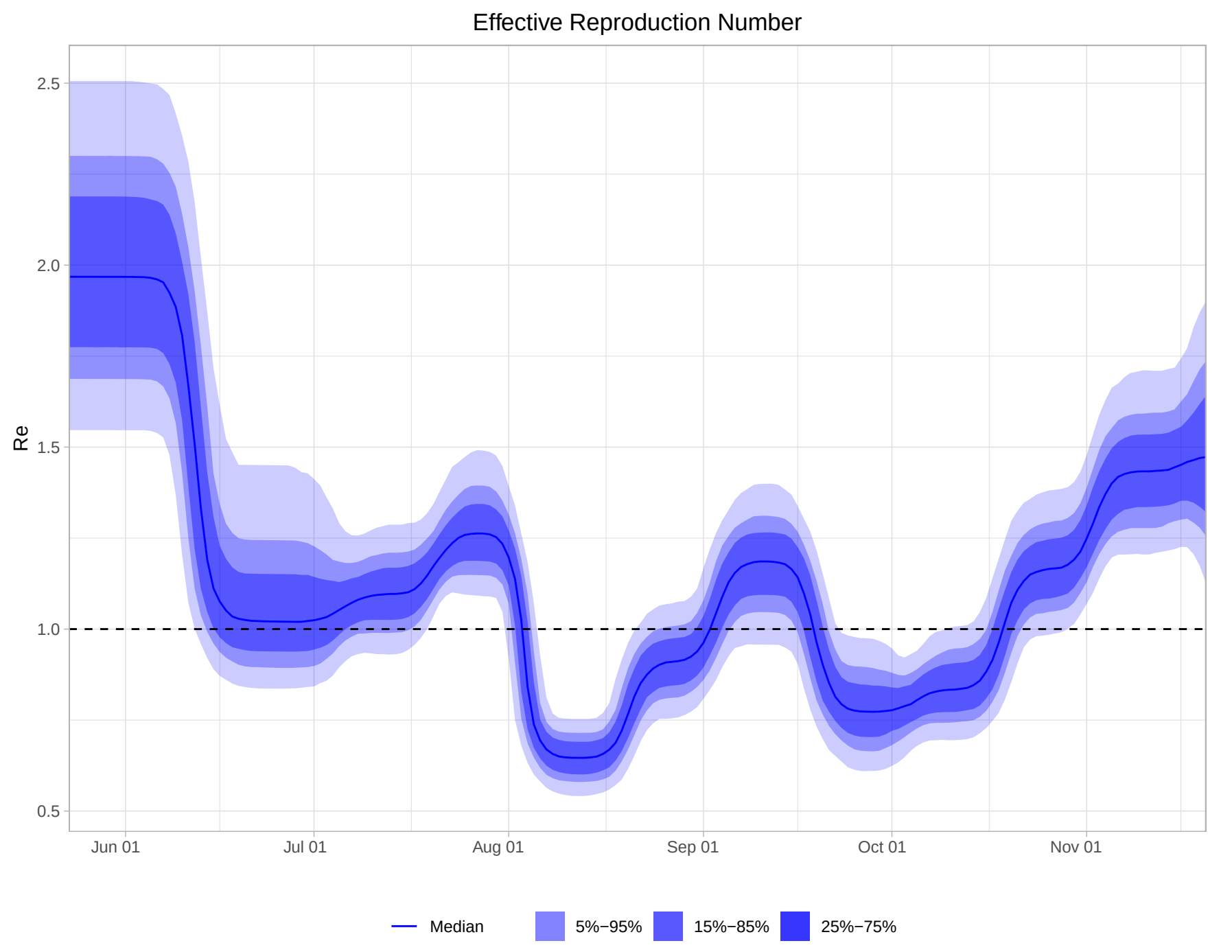

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
400
300
200
100
0
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
10.0
7.5
5.0
2.5
0.0
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
150
100
50
0
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

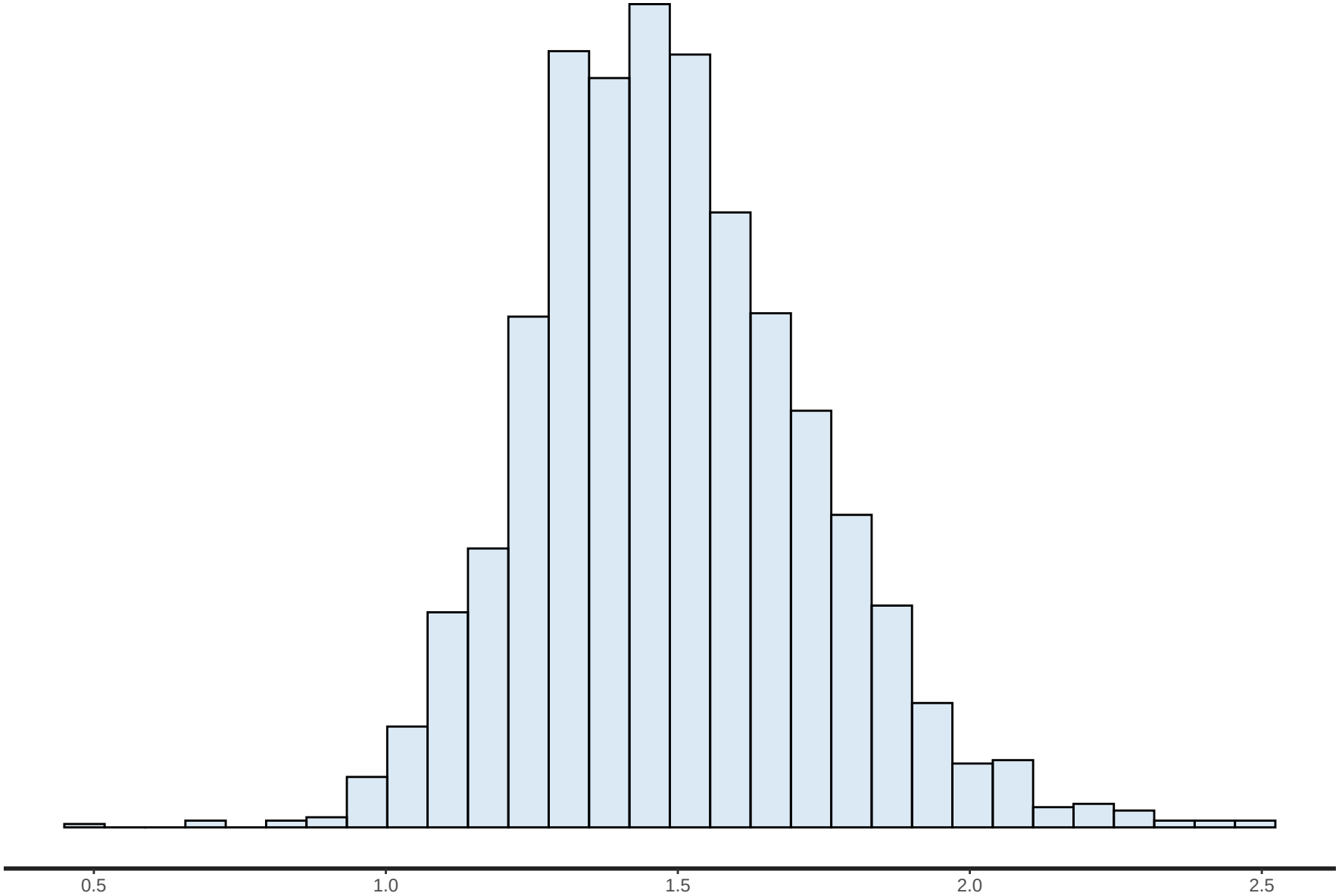

Short Term Death Projection
Number of COVID19 Deaths
0
10
20
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

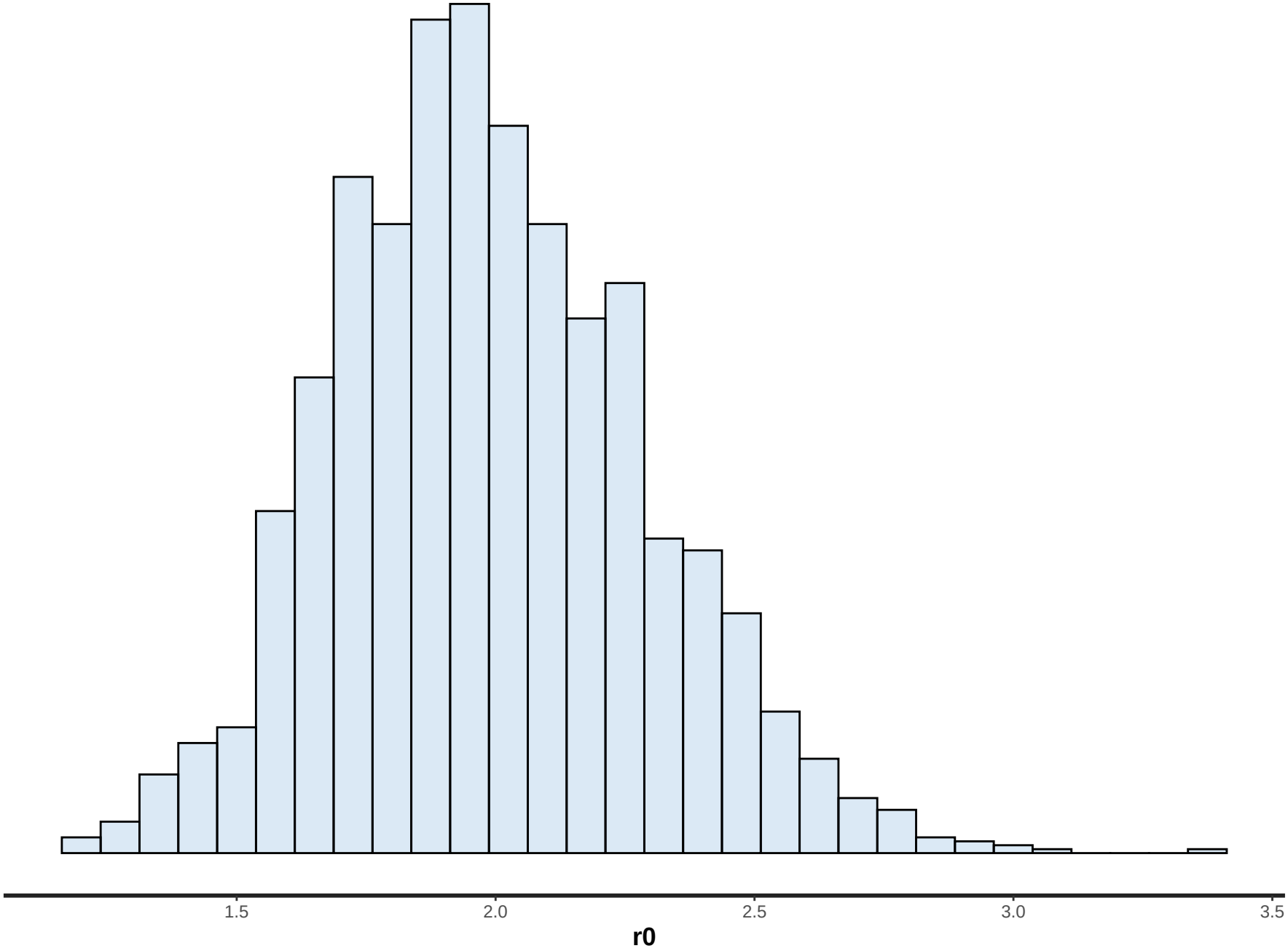

Long Term Death Projection
Number of COVID19 Deaths
400
300
200
100
0
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

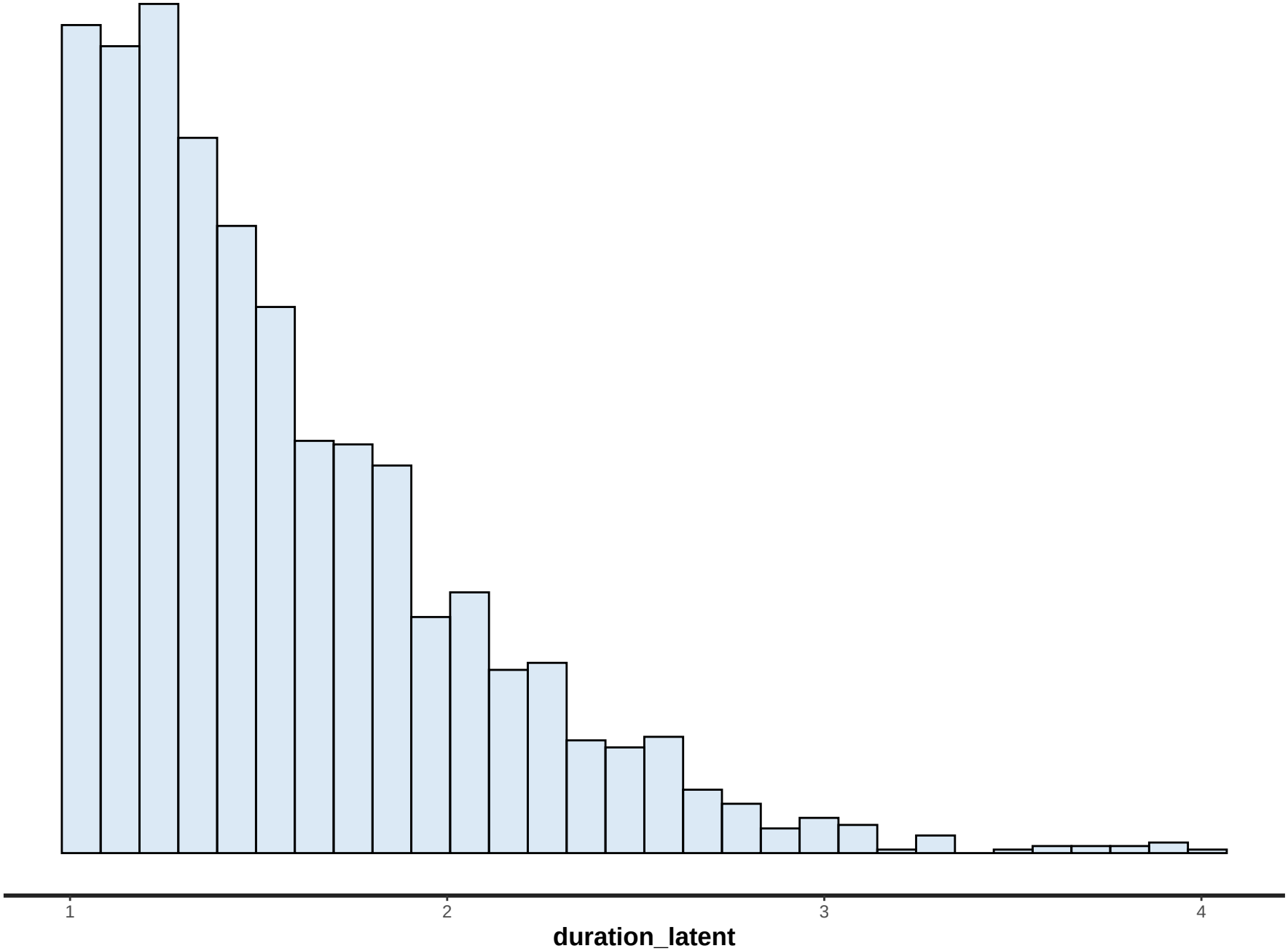

Effective Reproduction Number
Re
2.5
2.0
1.5
1.0
0.5
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

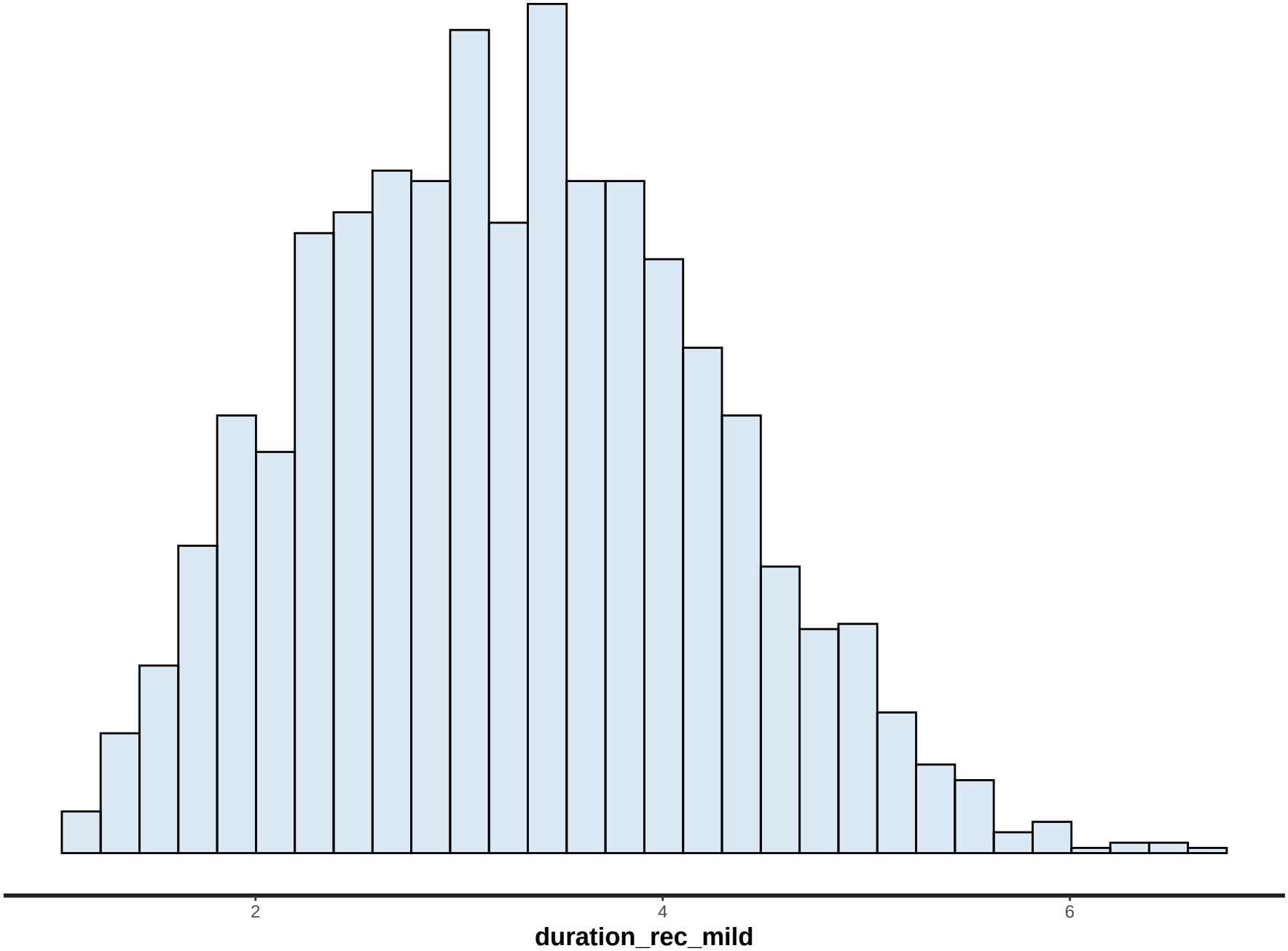
Rt as of 2020−11−20

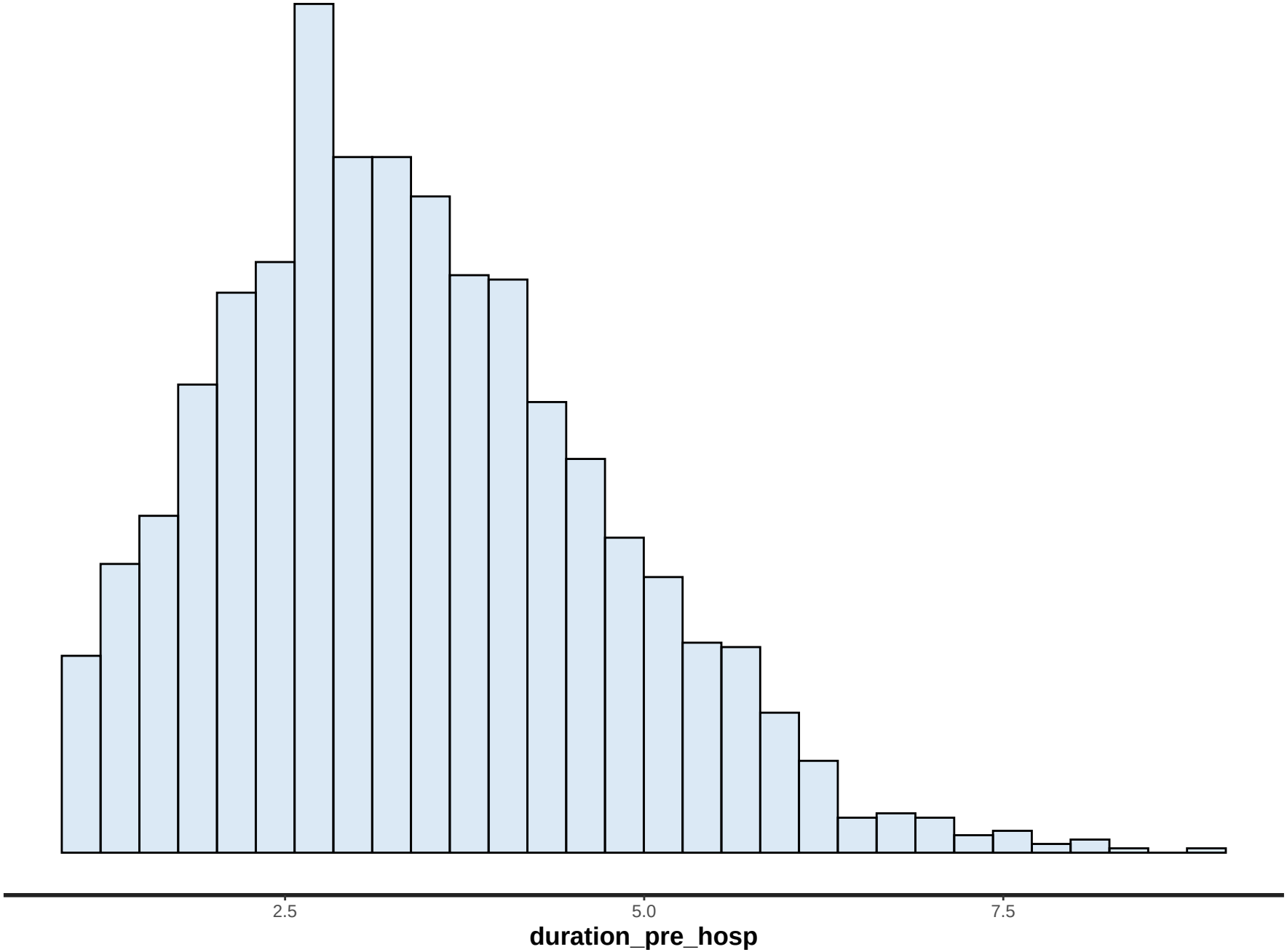
5%	10%	25%	50%	75%	90%	95%
1.13	1.21	1.32	1.47	1.64	1.81	1.90

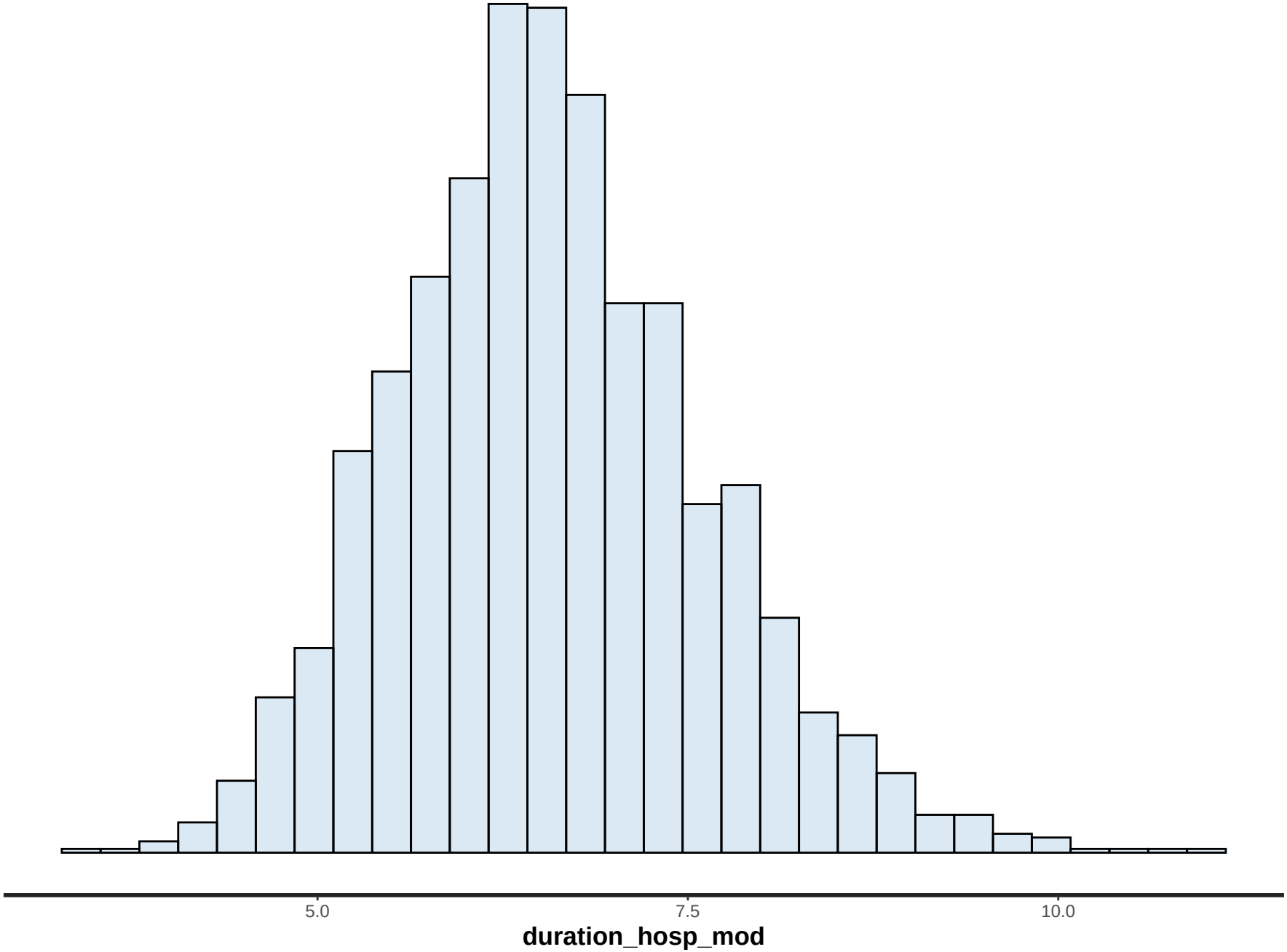


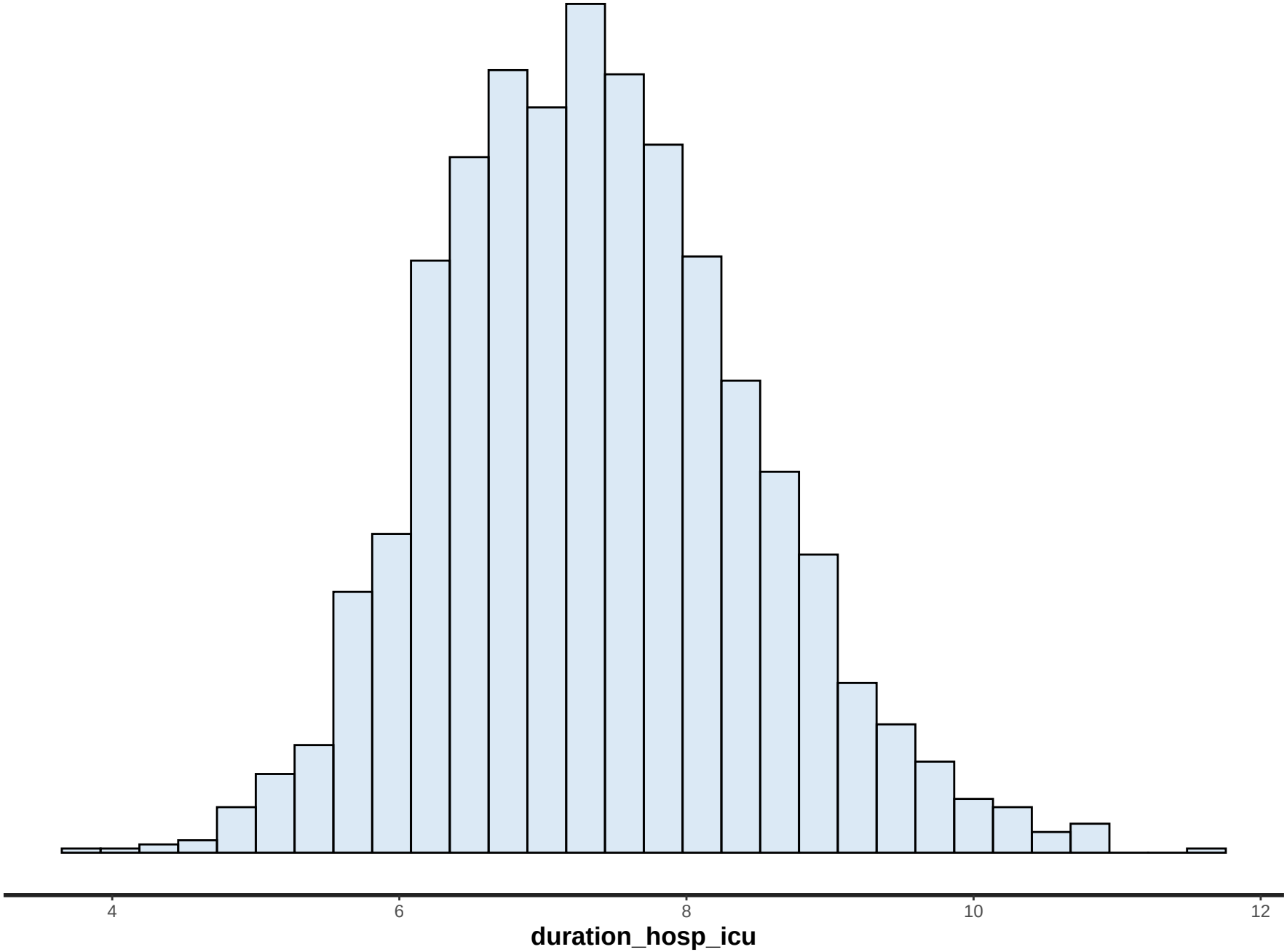

1.5
2.0
2.5
3.0
3.5
r0

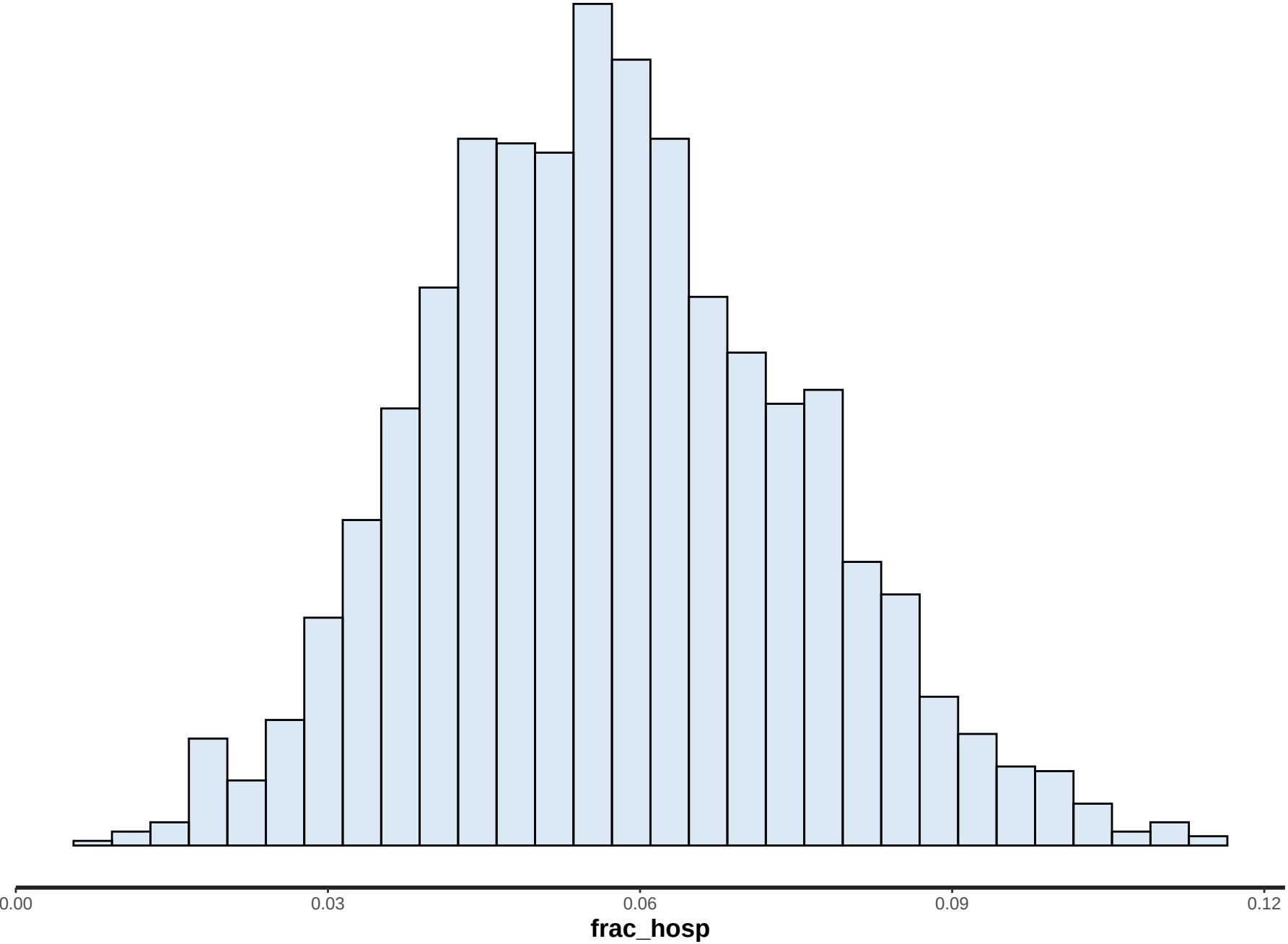

1
2
3
4
duration_latent

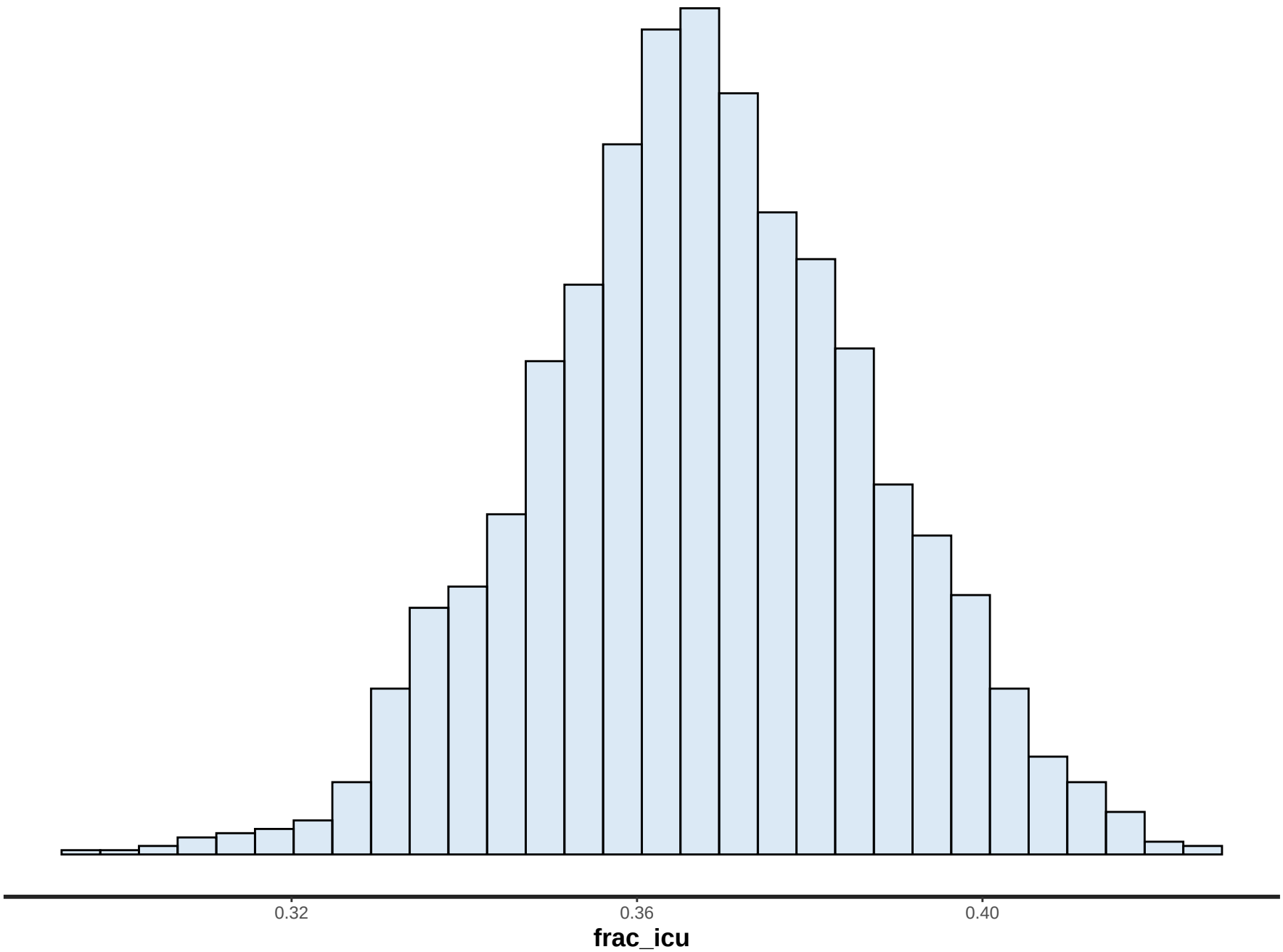

2
4
6
duration_rec_mild

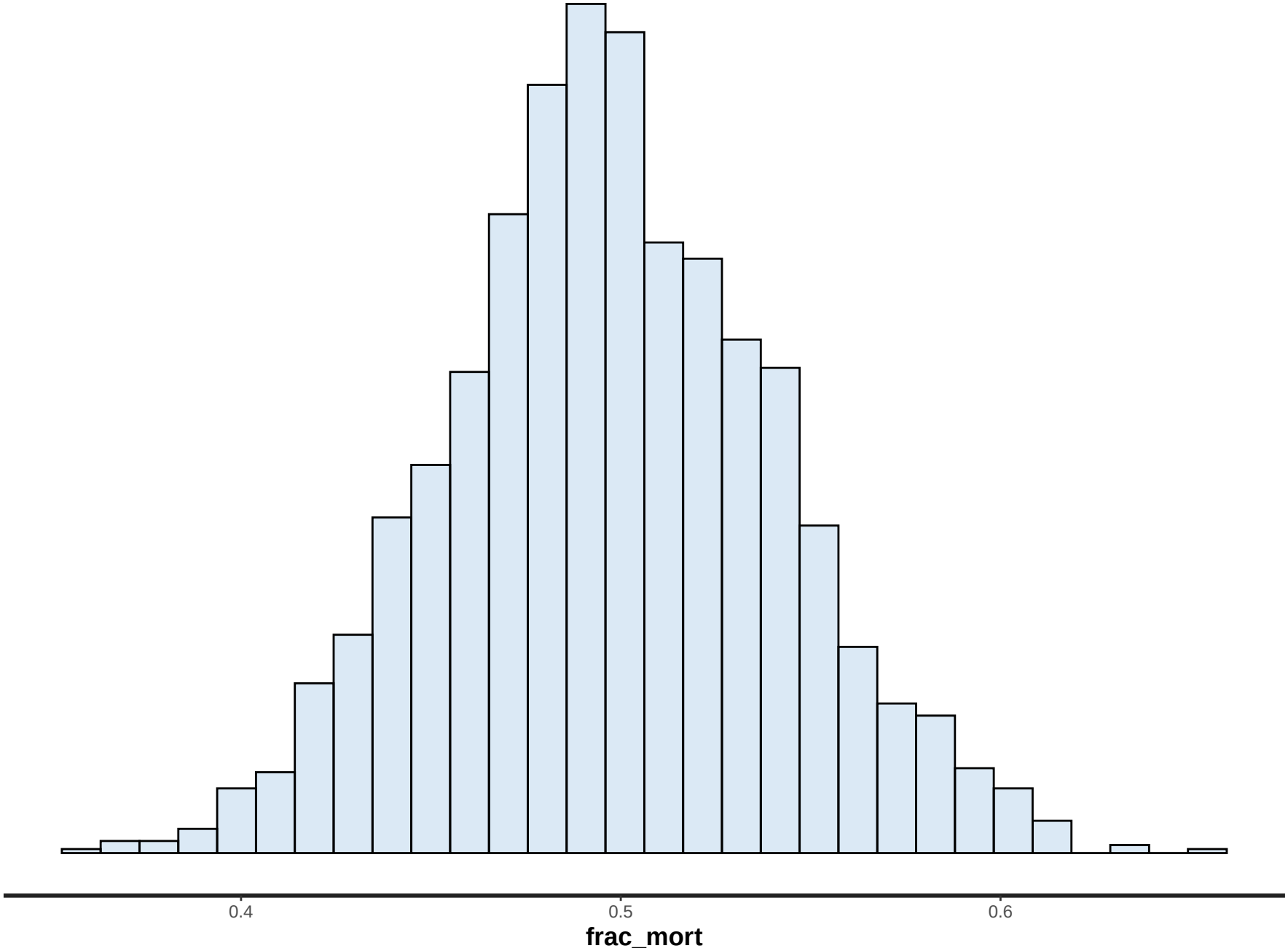

2.5
5.0
7.5
duration_pre_hosp

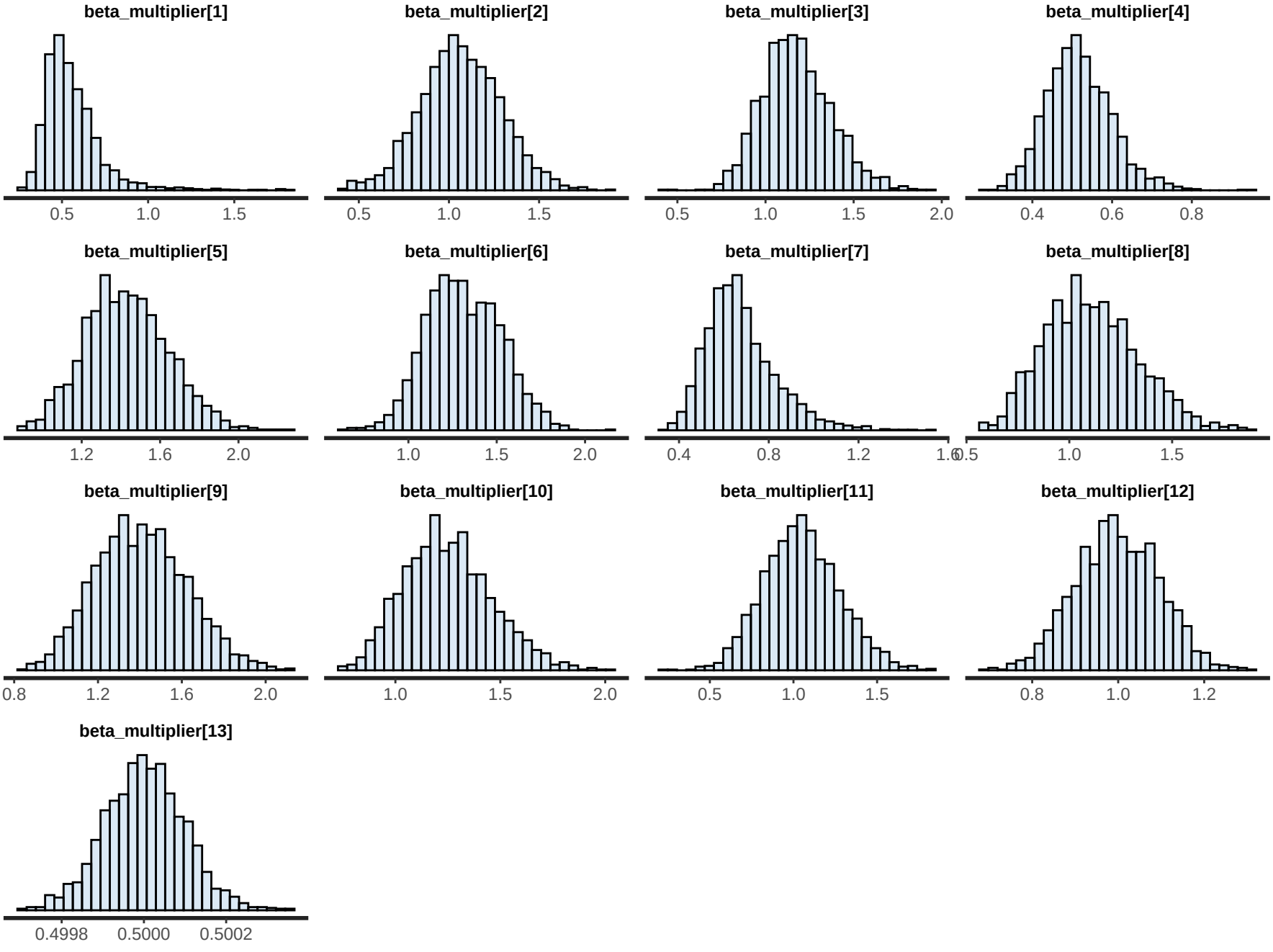

5.0
7.5
10.0
duration_hosp_mod

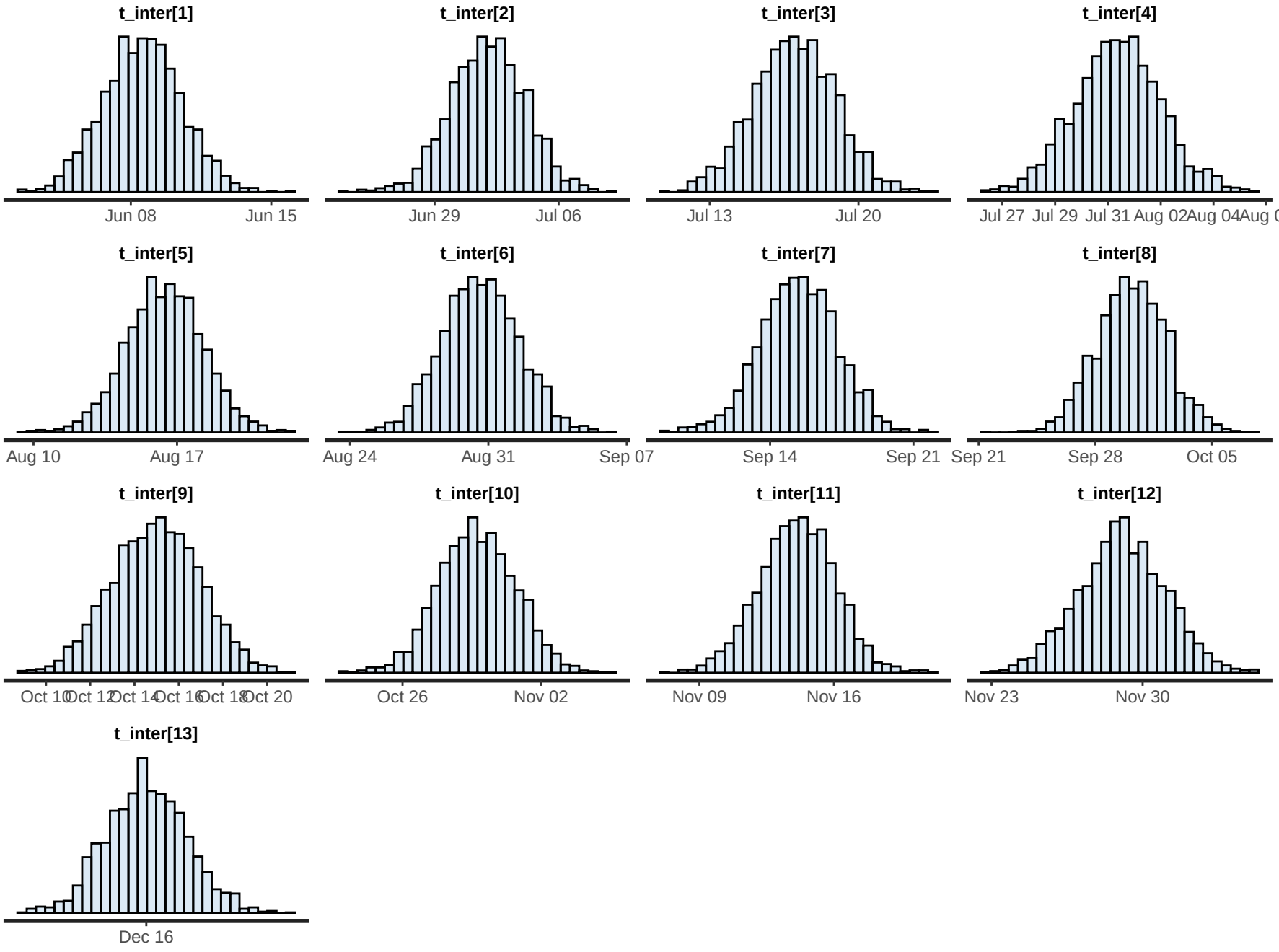

4
6
8
10
12
duration_hosp_icu

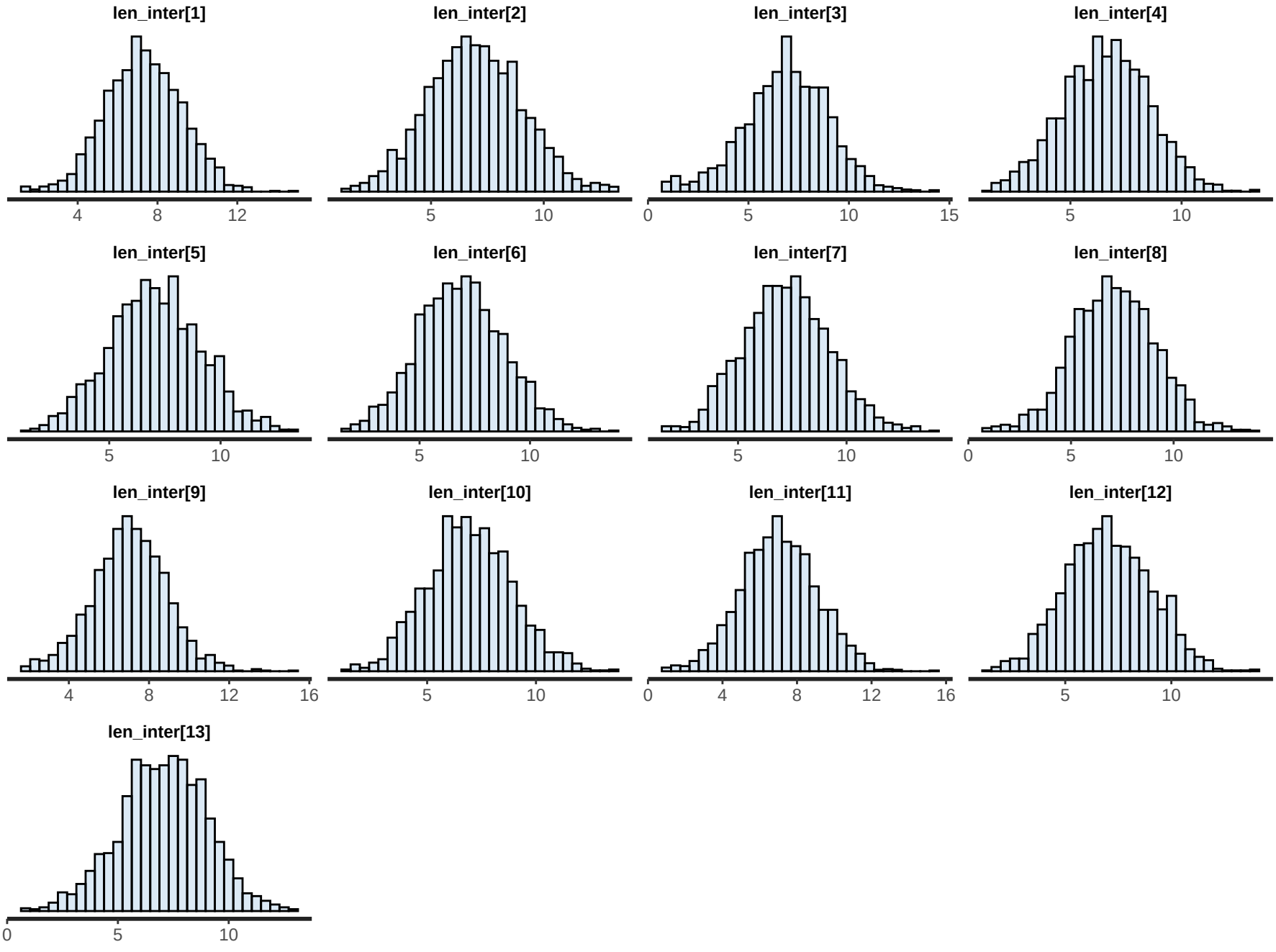

0.00
0.03
0.06
0.09
0.12
frac_hosp

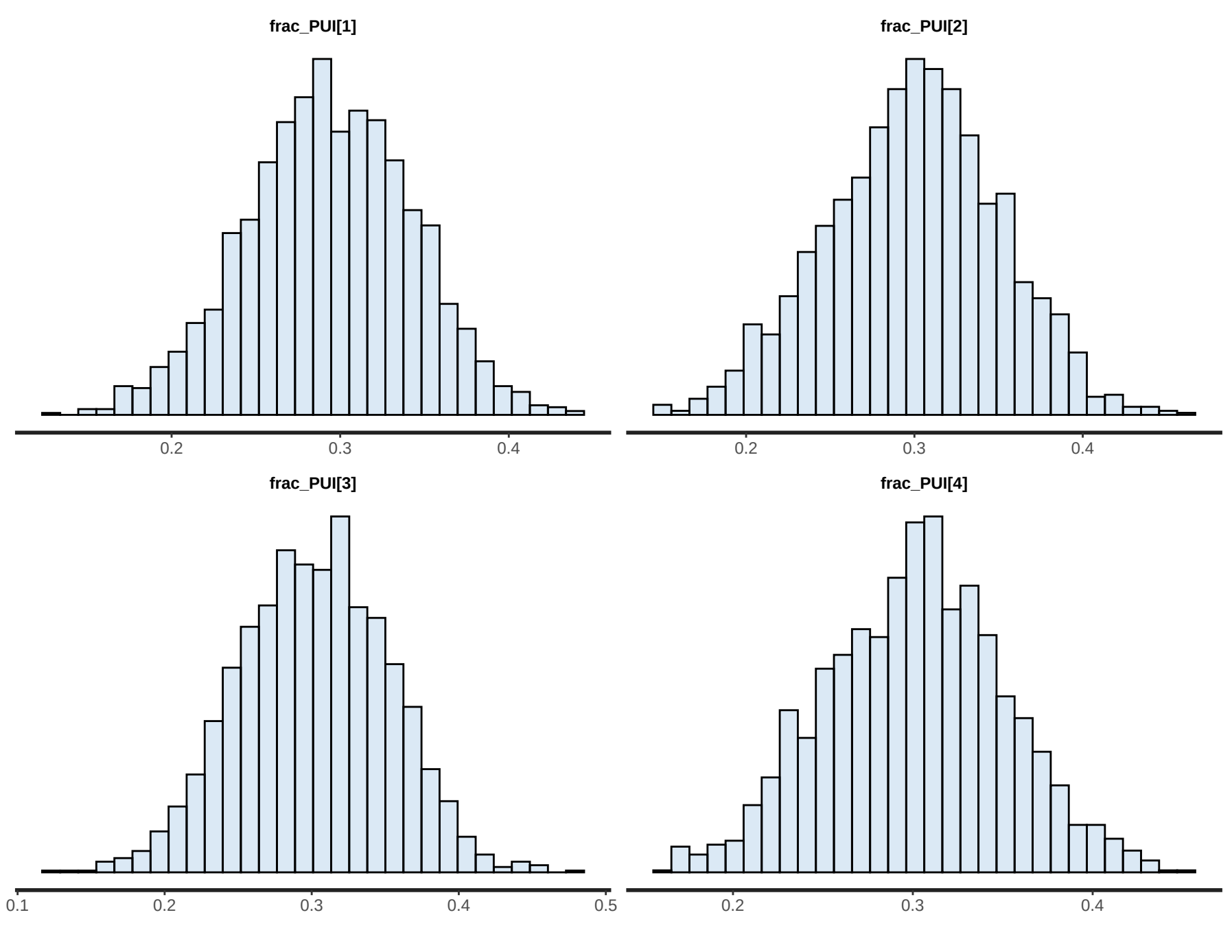

0.32
0.36
0.40
frac_icu

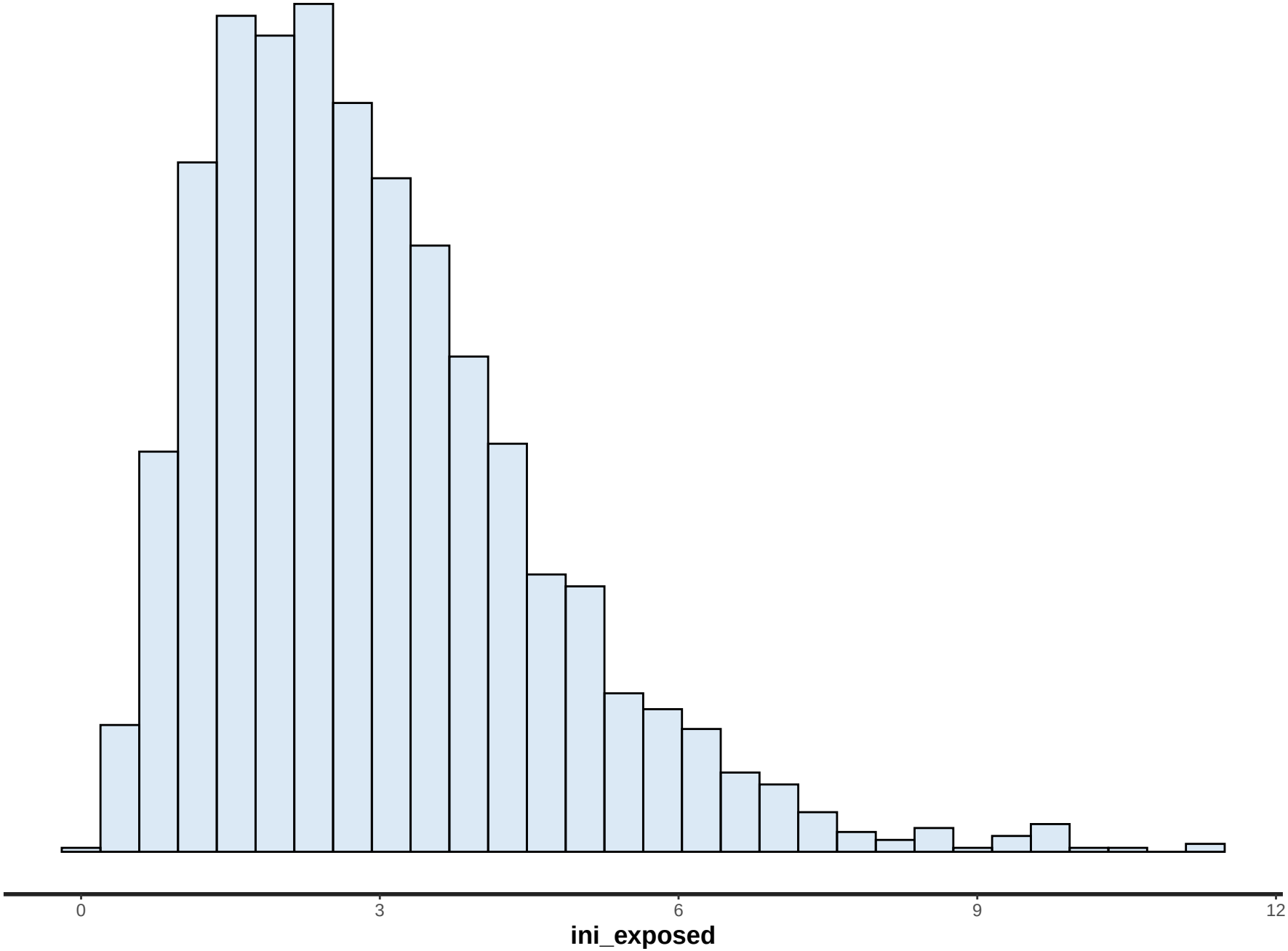

0.4
0.5
0.6
frac_mort

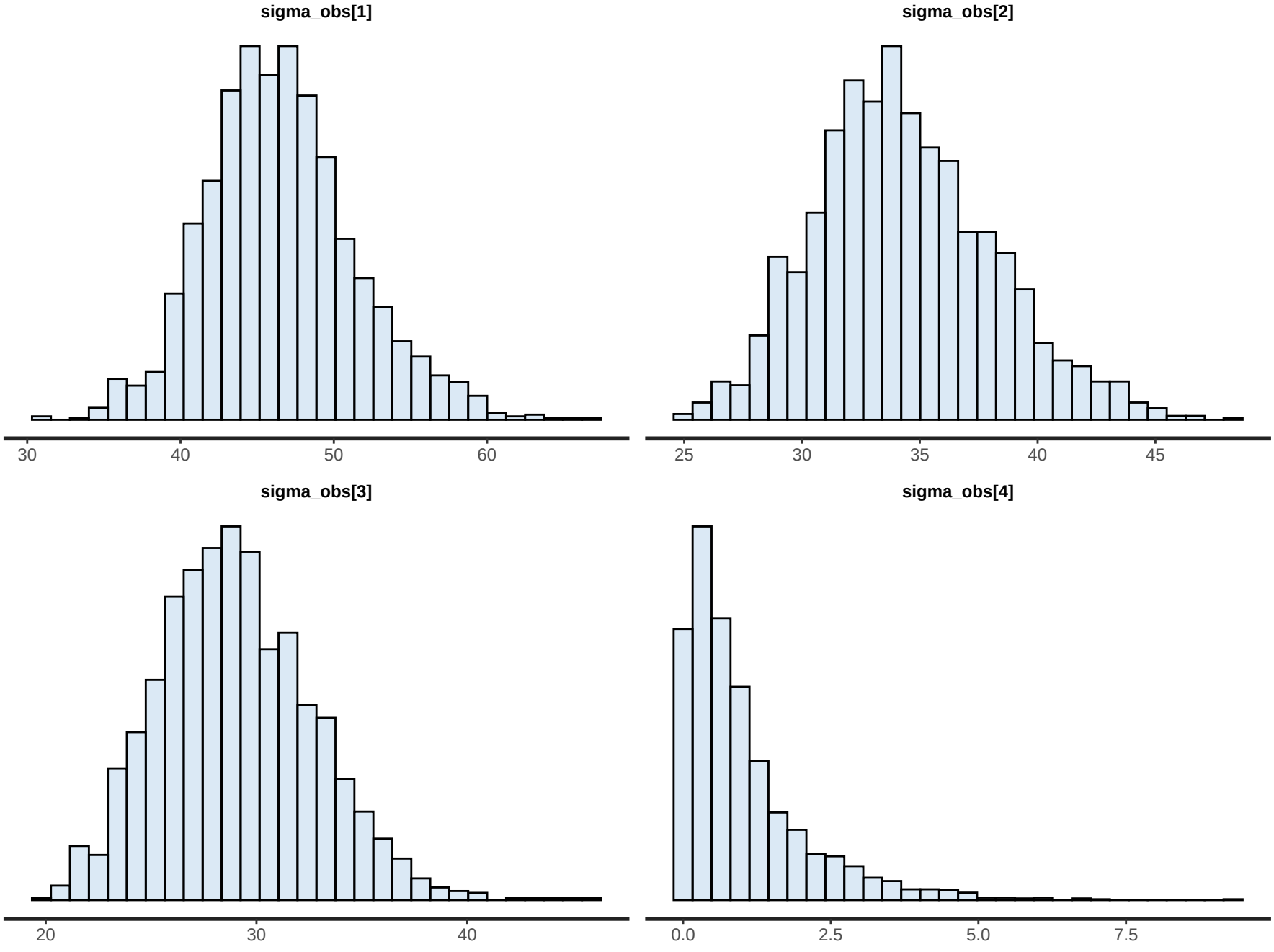

beta_multiplier[1]
0.5
1.0
1.5
beta_multiplier[2]
0.5
1.0
1.5
beta_multiplier[3]
0.5
1.0
1.5
2.0
beta_multiplier[4]
0.4
0.6
0.8
beta_multiplier[5]
1.2
1.6
2.0
beta_multiplier[6]
1.0
1.5
2.0
beta_multiplier[7]
0.4
0.8
1.2
beta_multiplier[8]
0.5
1.0
1.5
beta_multiplier[9]
0.8
1.2
1.6
2.0
beta_multiplier[10]
1.0
1.5
2.0
beta_multiplier[11]
0.5
1.0
1.5
beta_multiplier[12]
0.8
1.0
1.2
beta_multiplier[13]
0.4998
0.5000
0.5002


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


len_inter[1]
4
8
12
len_inter[2]
5
10
len_inter[3]
0
5
10
15
len_inter[4]
5
10
len_inter[5]
5
10
len_inter[6]
5
10
len_inter[7]
5
10
len_inter[8]
0
5
10
len_inter[9]
4
8
12
16
len_inter[10]
5
10
len_inter[11]
0
4
8
12
16
len_inter[12]
5
10
len_inter[13]
0
5
10


frac_PUI[1]
0.2
0.3
0.4
frac_PUI[2]
0.2
0.3
0.4
frac_PUI[3]
0.1
0.2
0.3
0.4
0.5
frac_PUI[4]
0.2
0.3
0.4


0
3
6
9
12
ini_exposed


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