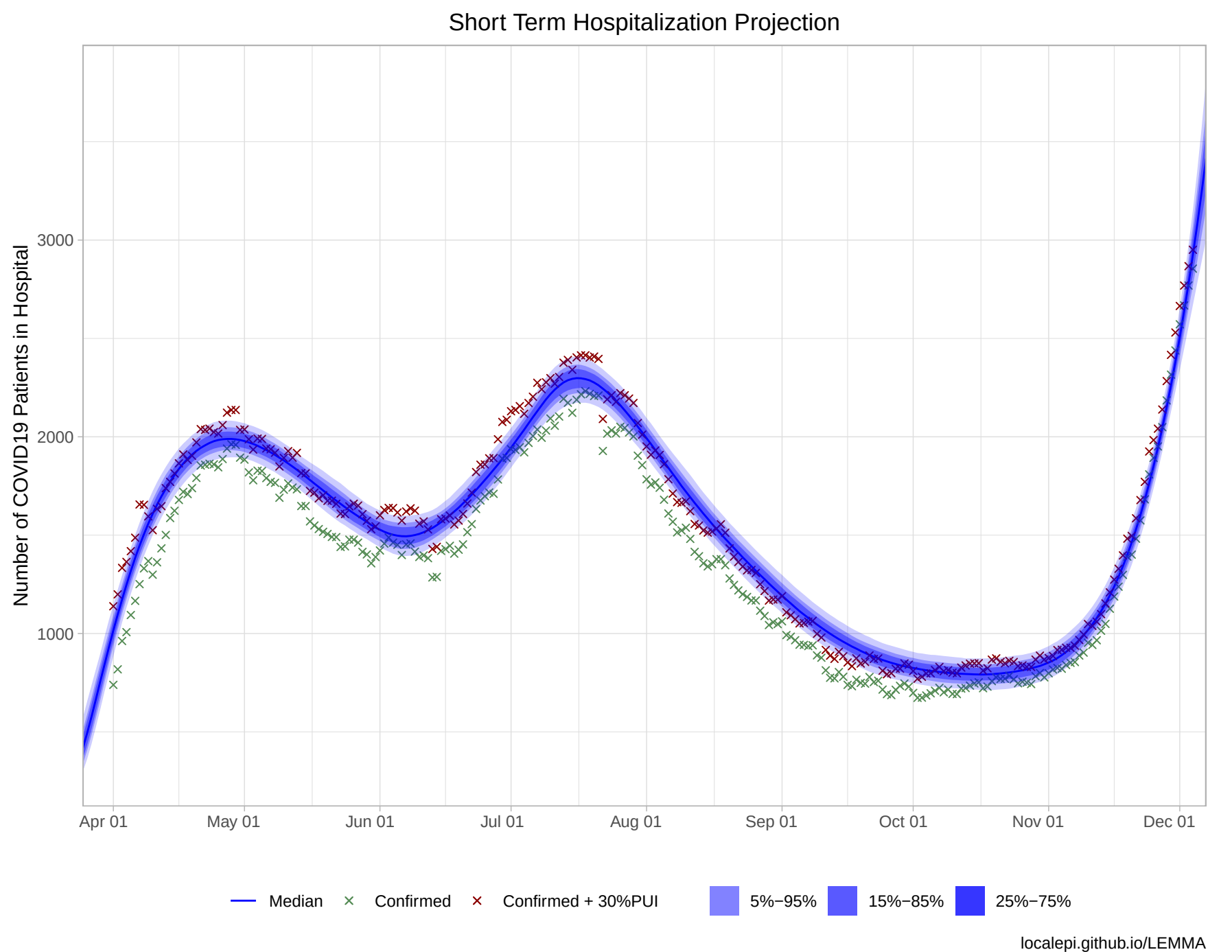
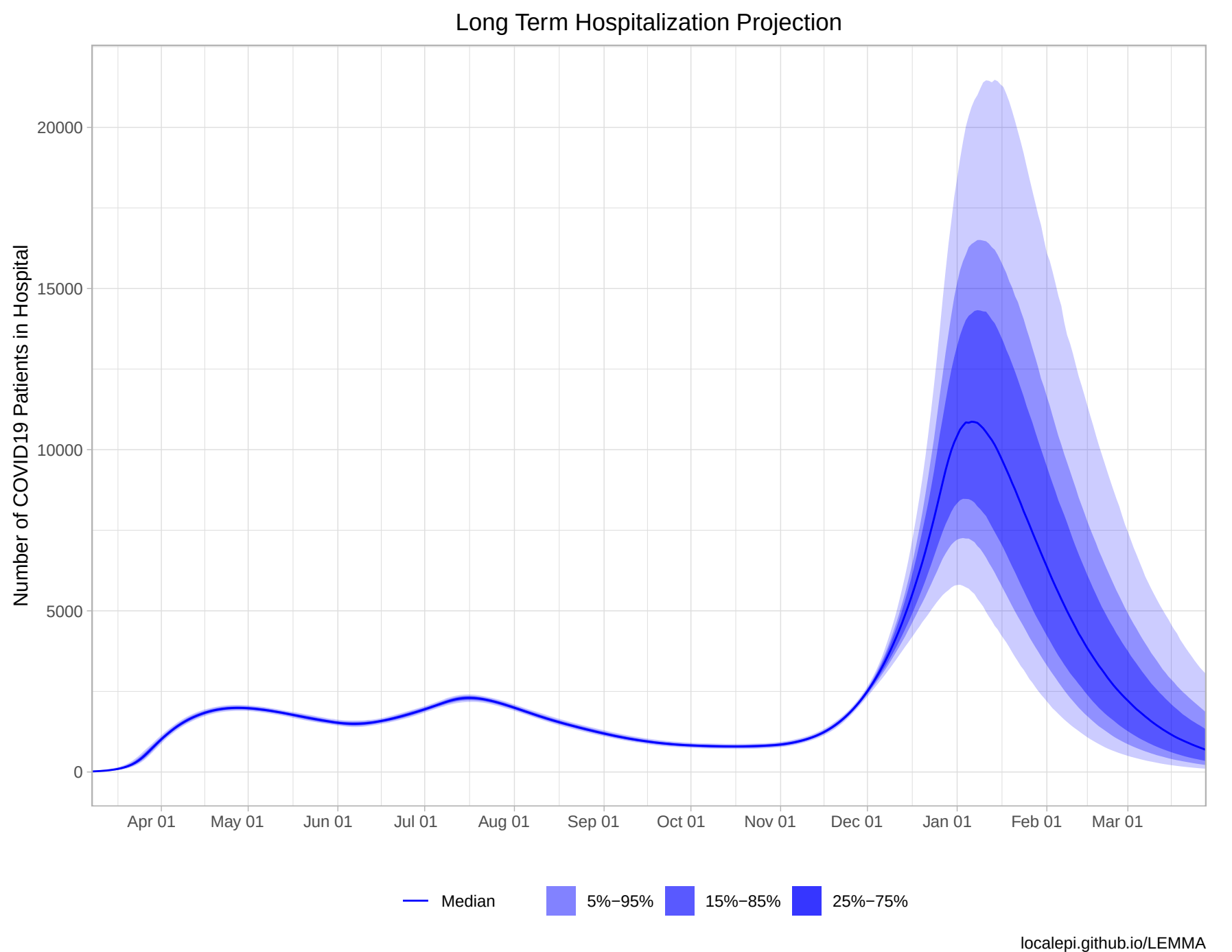
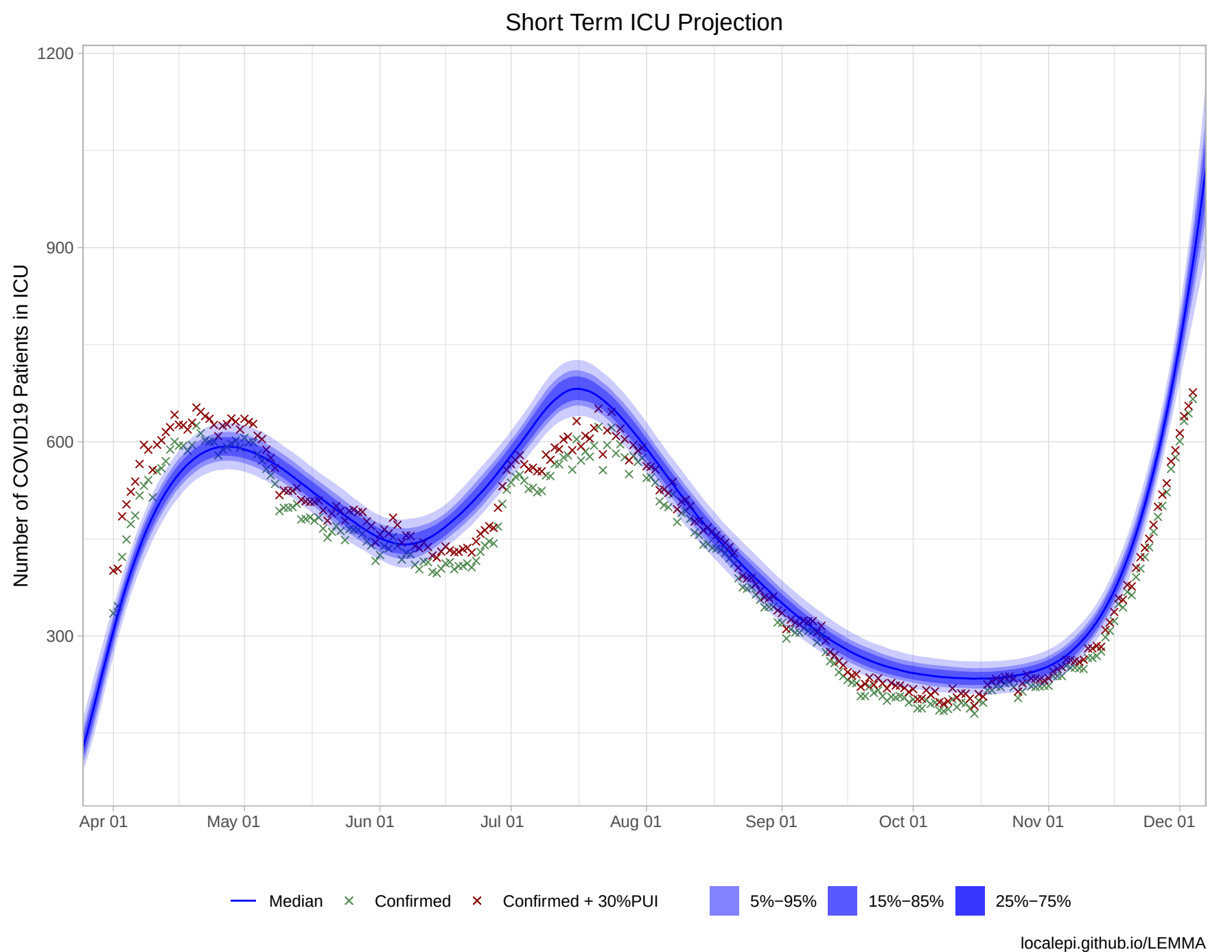
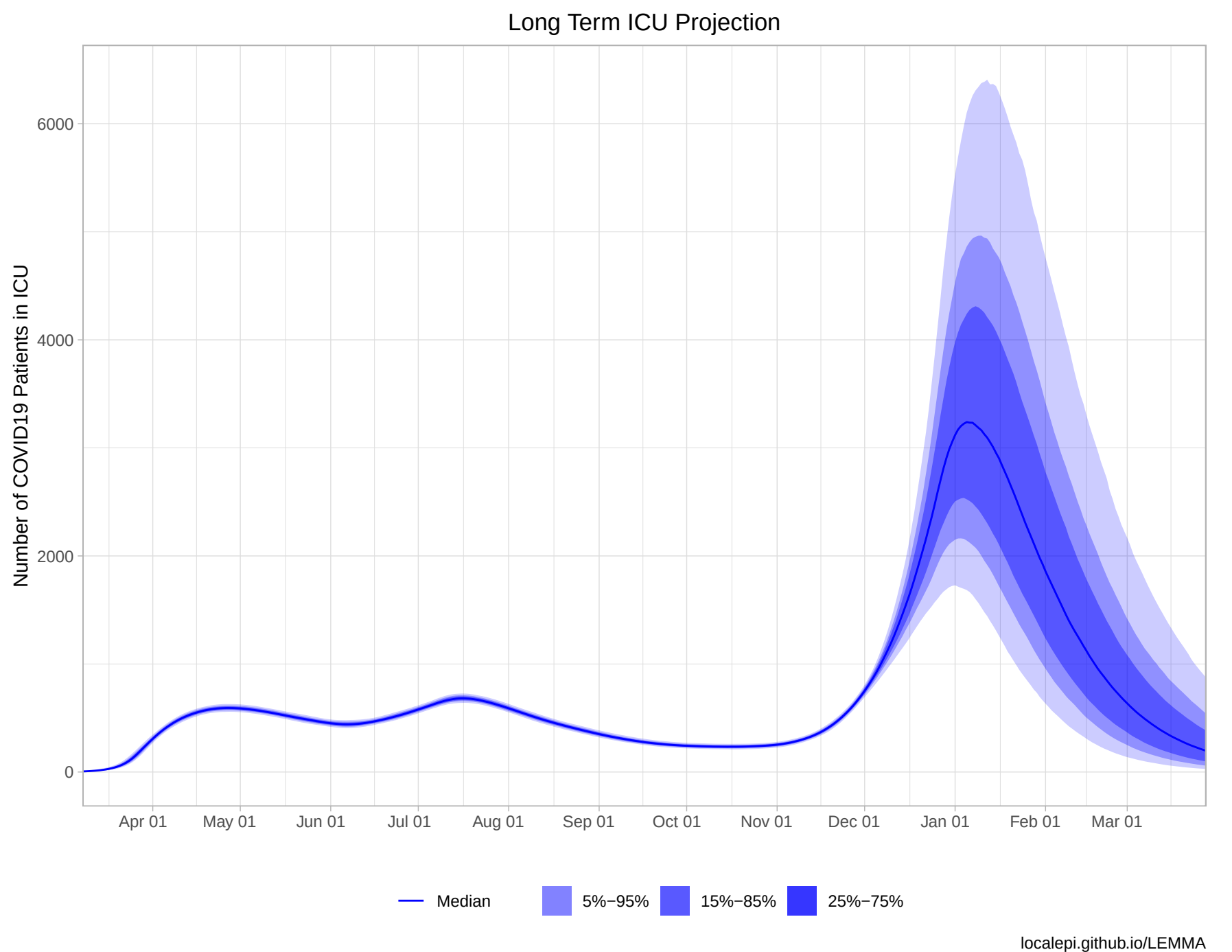
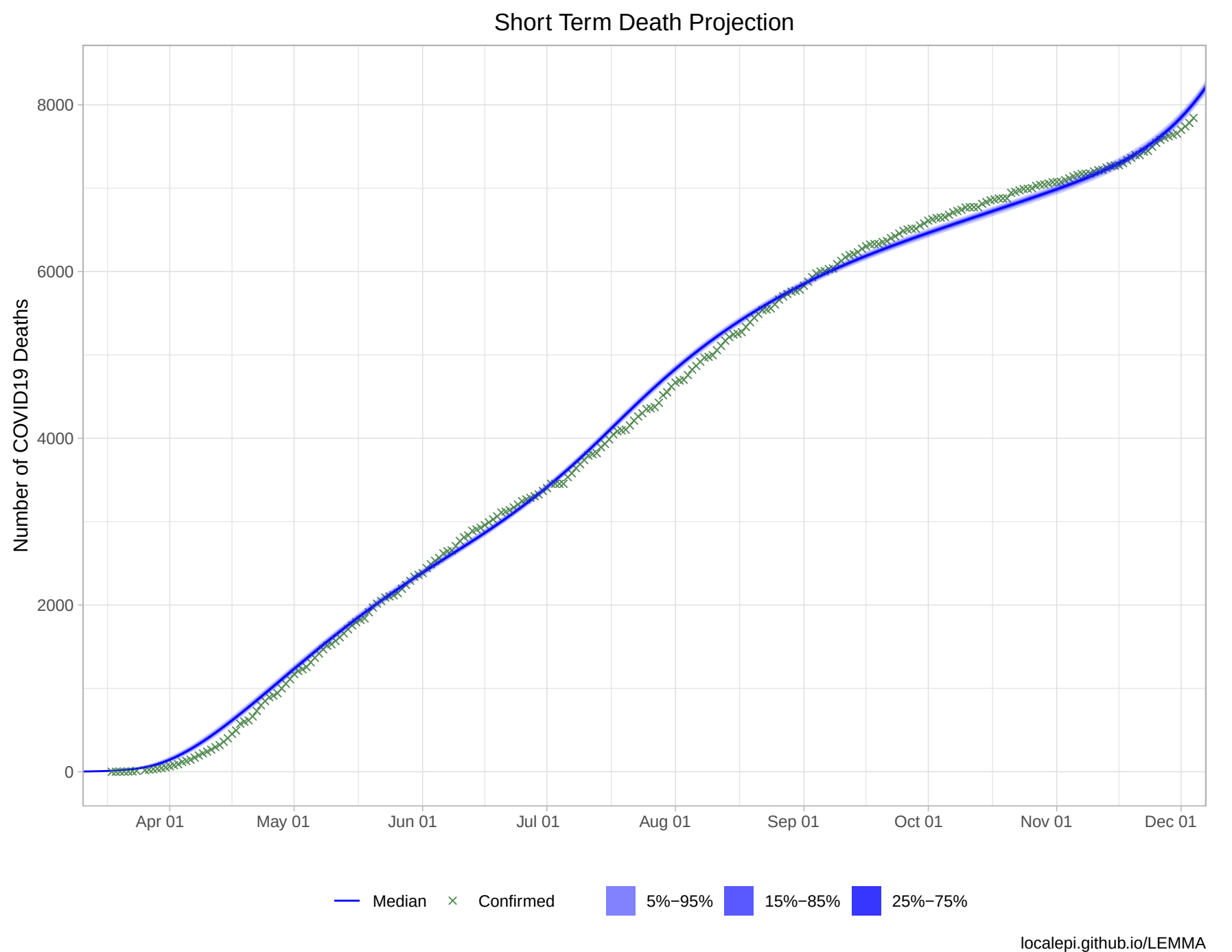
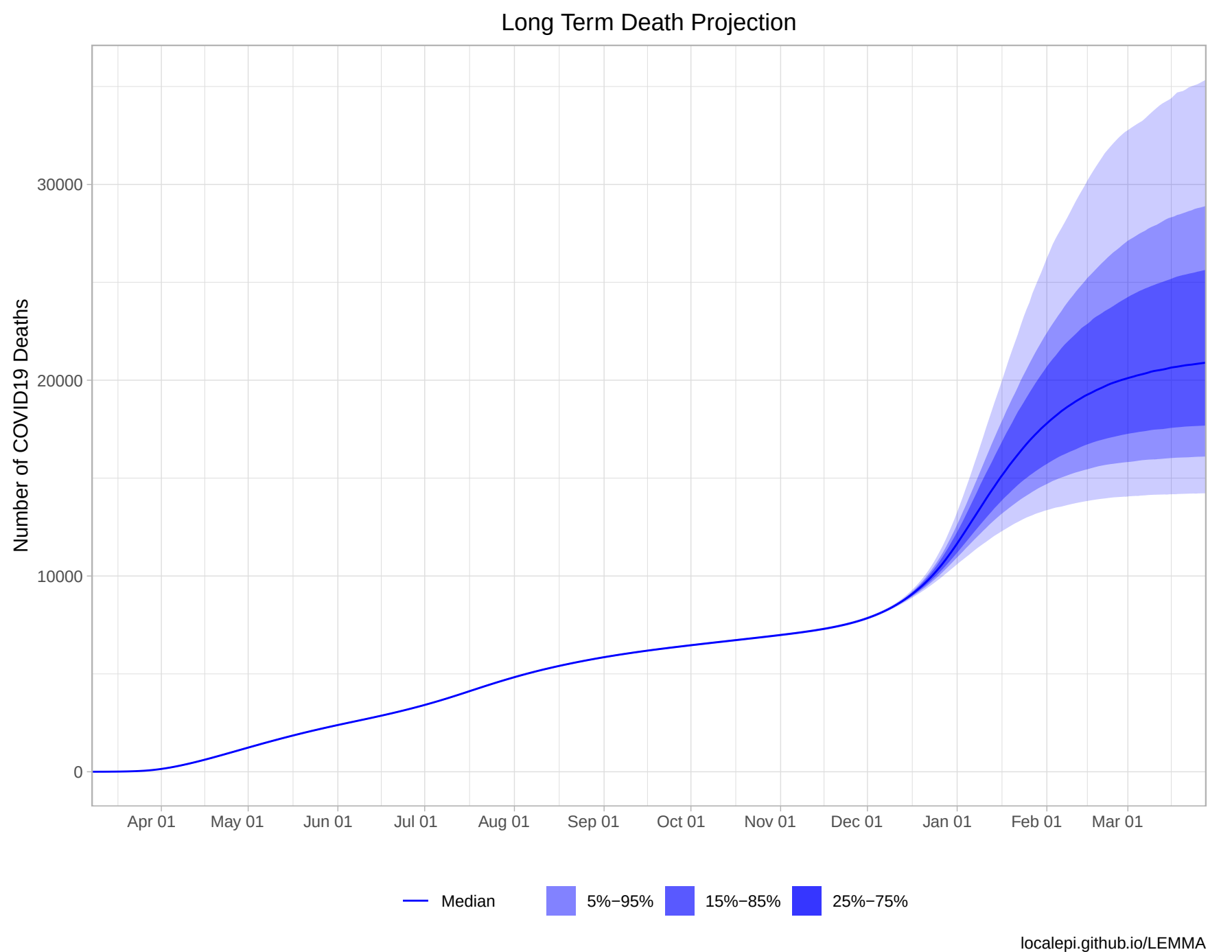

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
3000
2000
1000
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

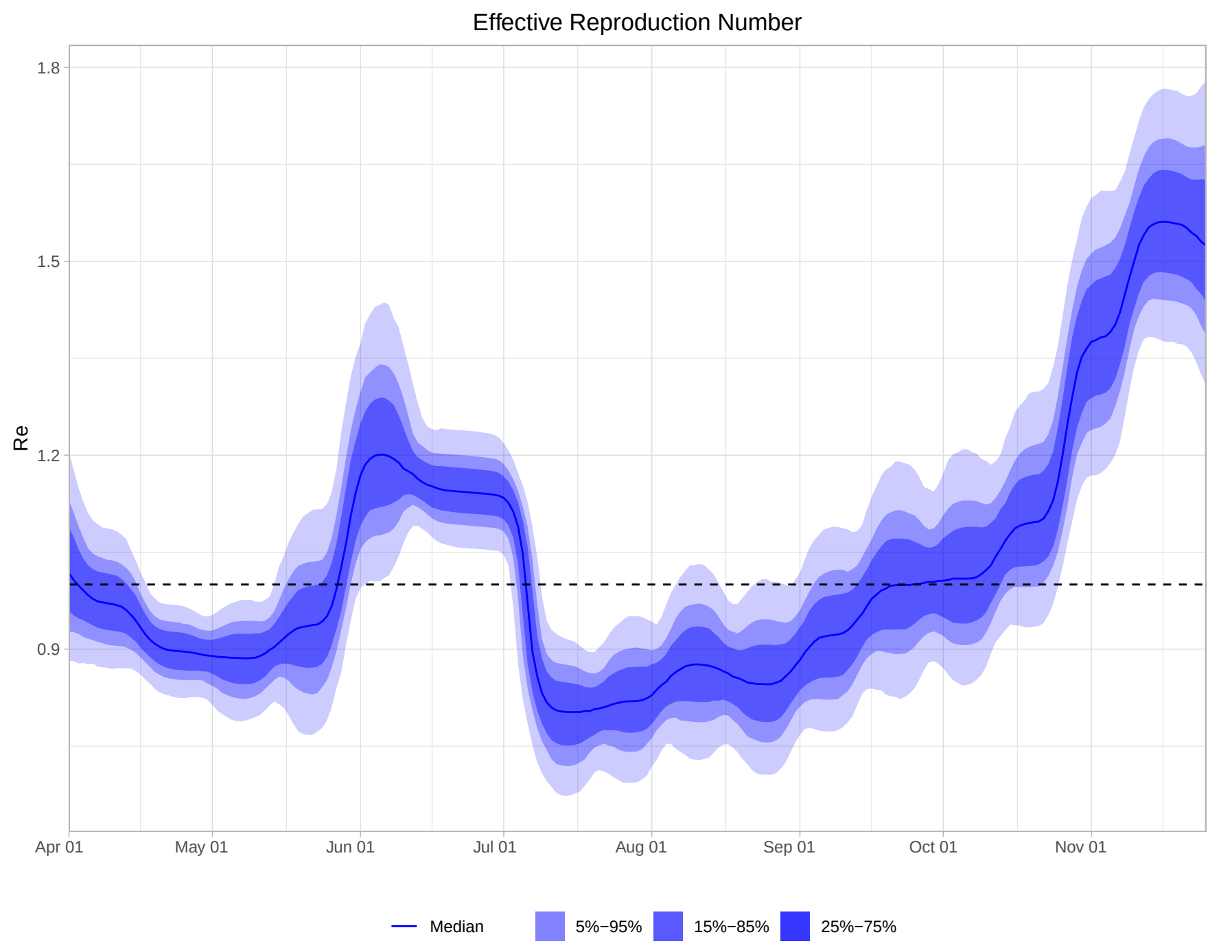

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
20000
15000
10000
5000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
1200
900
600
300
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
6000
4000
2000
0
Apr 01
May 01
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

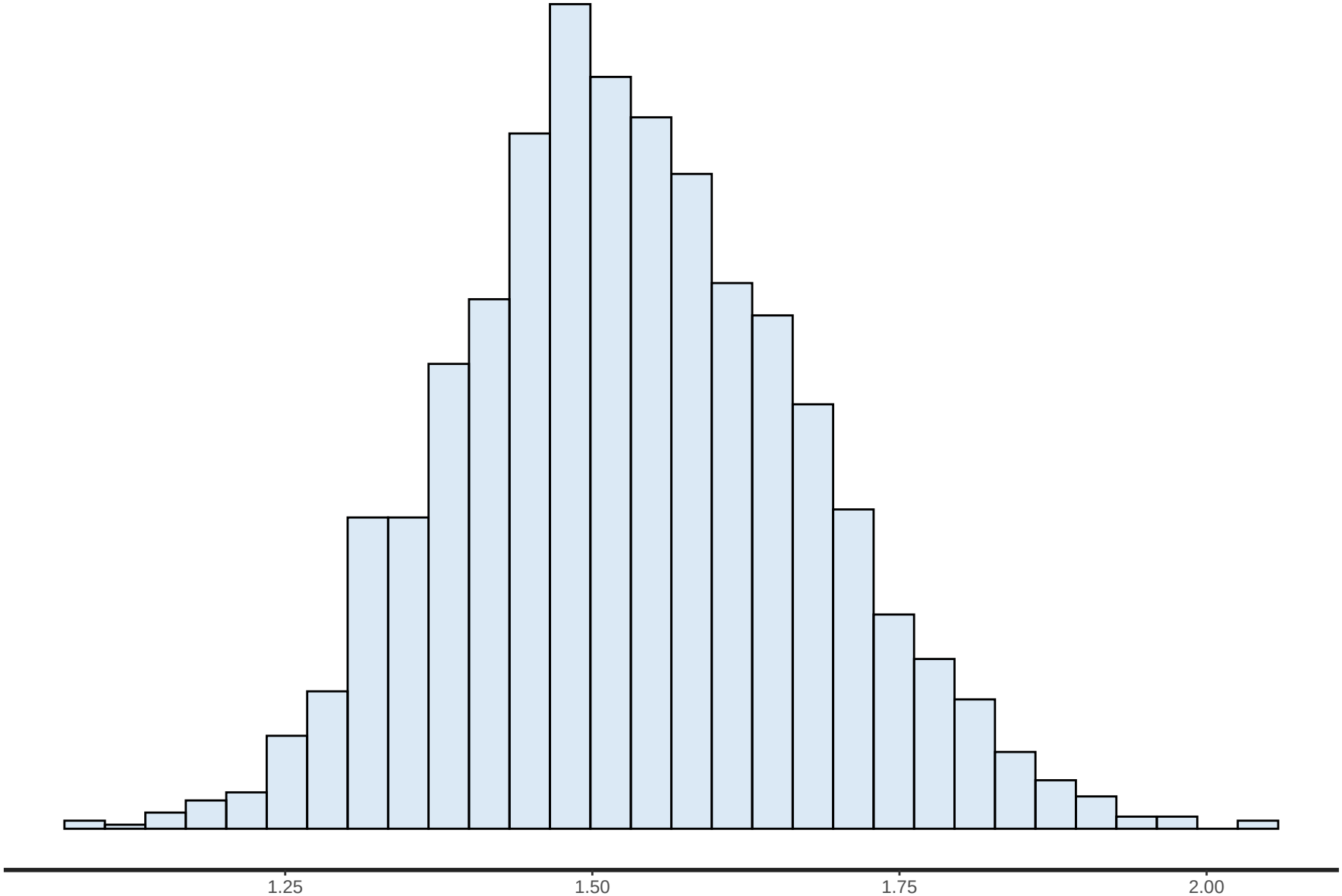

Short Term Death Projection
Number of COVID19 Deaths
8000
6000
4000
2000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

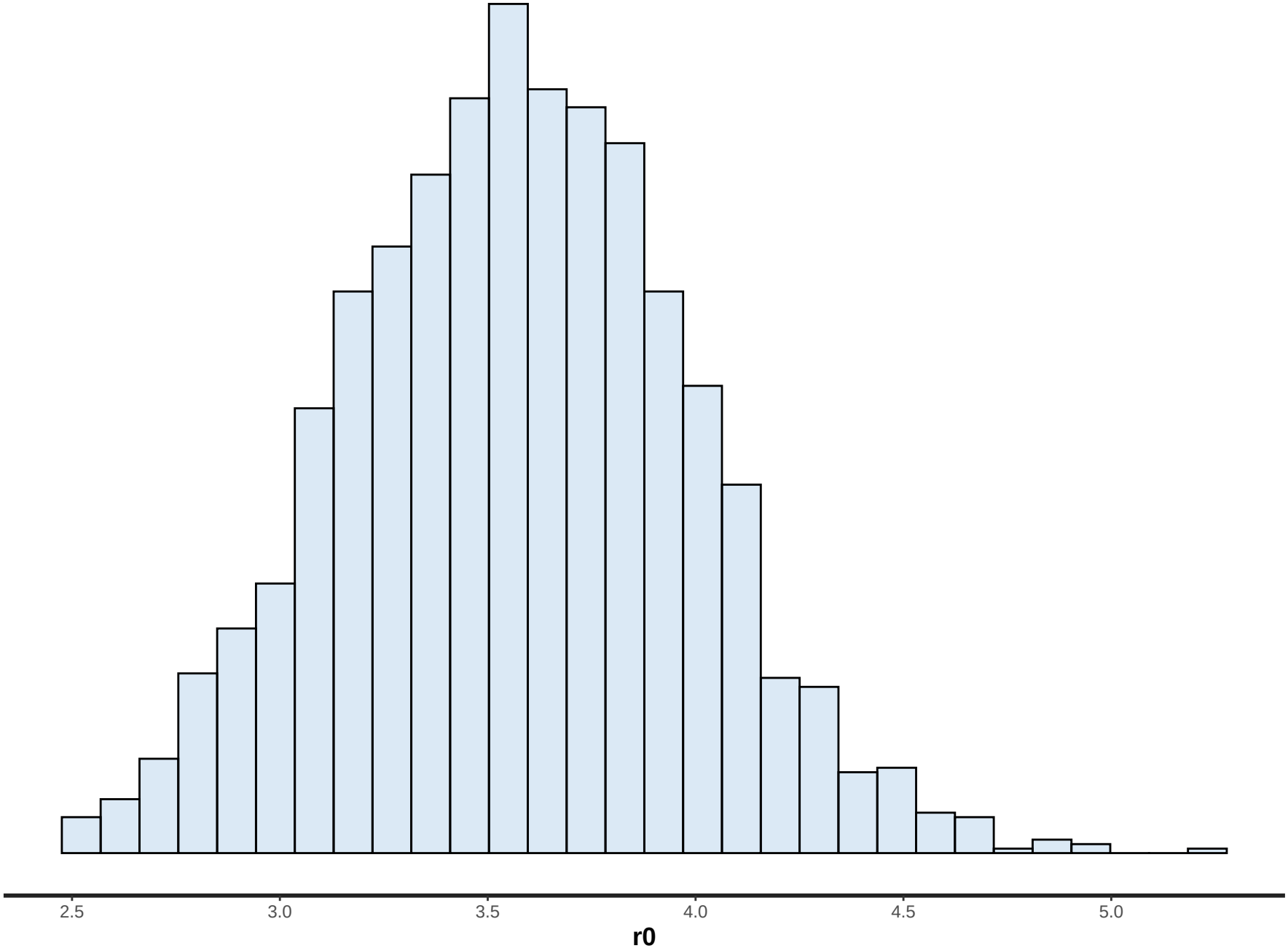

Long Term Death Projection
Number of COVID19 Deaths
30000
20000
10000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

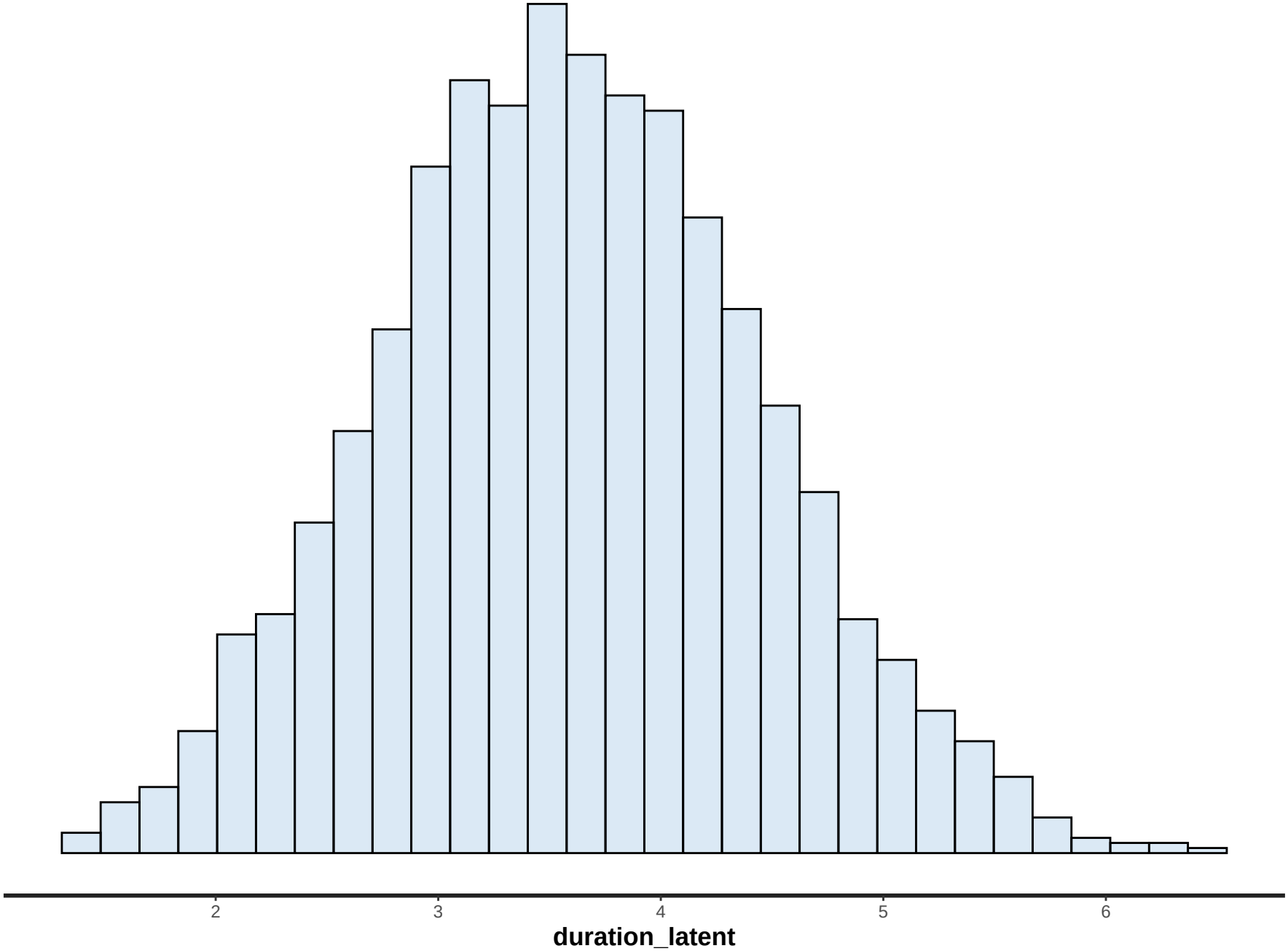

Effective Reproduction Number
Re
1.8
1.5
1.2
0.9
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

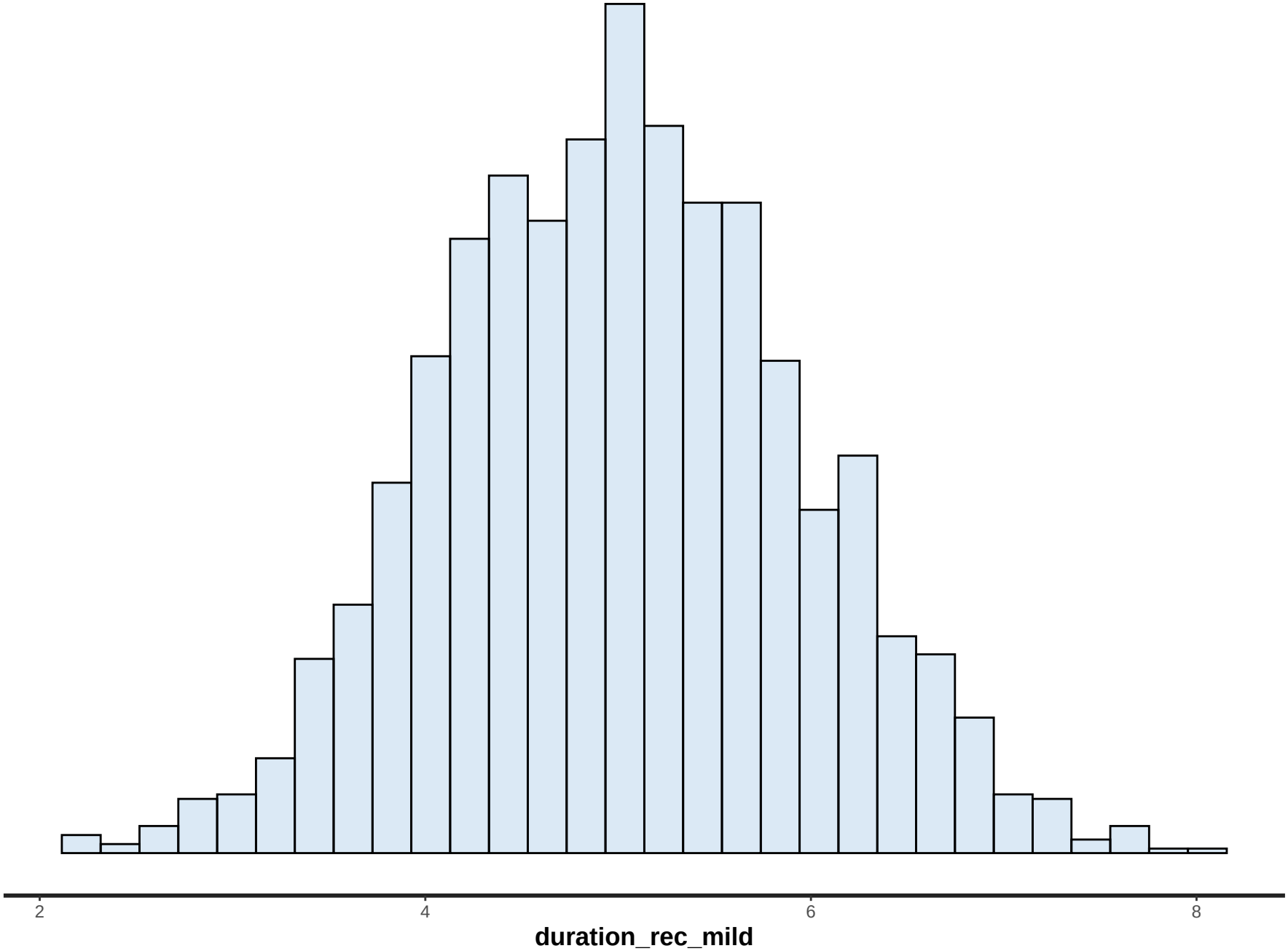
Rt as of 2020−11−25

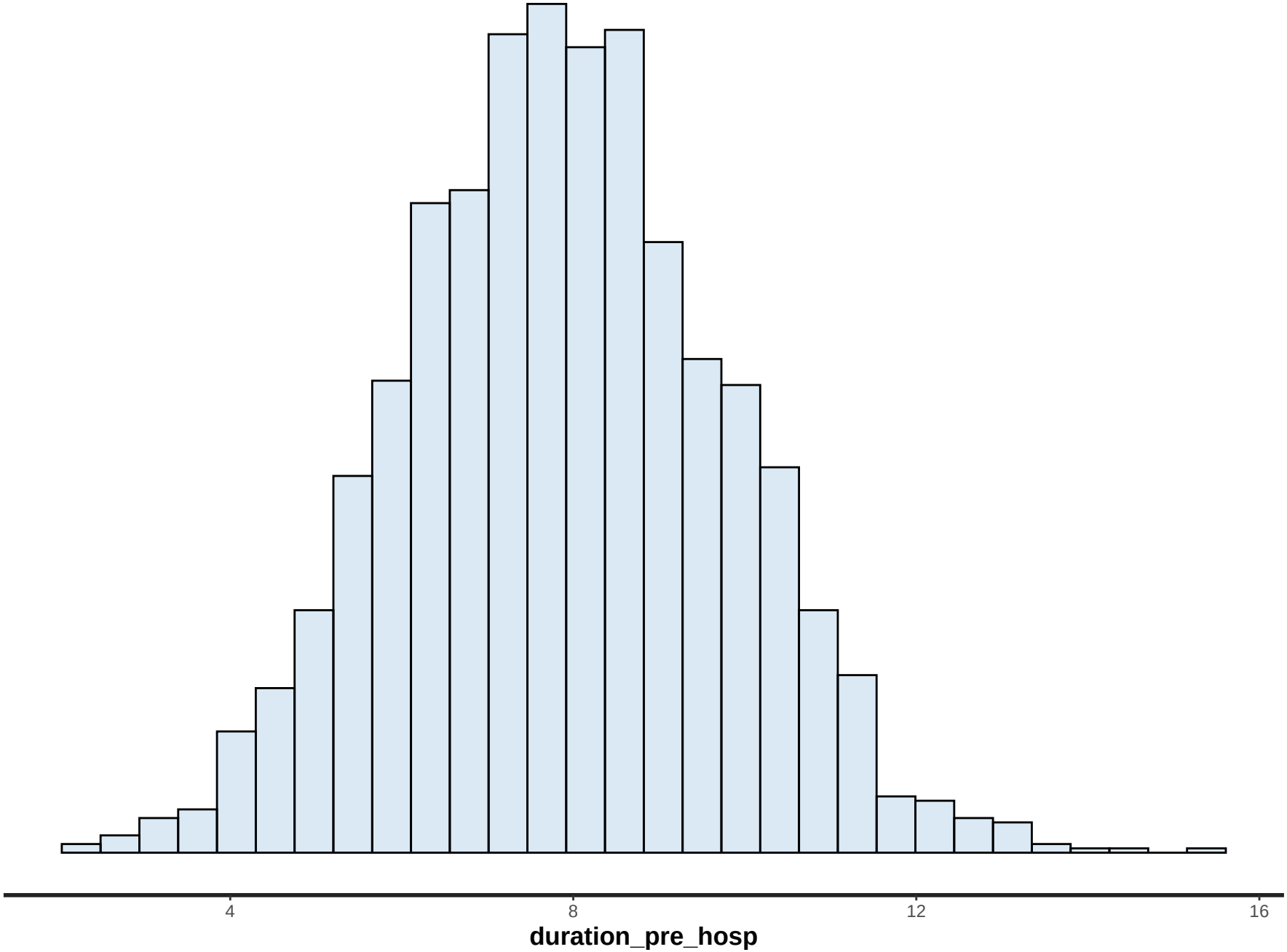
5%	10%	25%	50%	75%	90%	95%
1.31	1.35	1.44	1.52	1.63	1.72	1.78

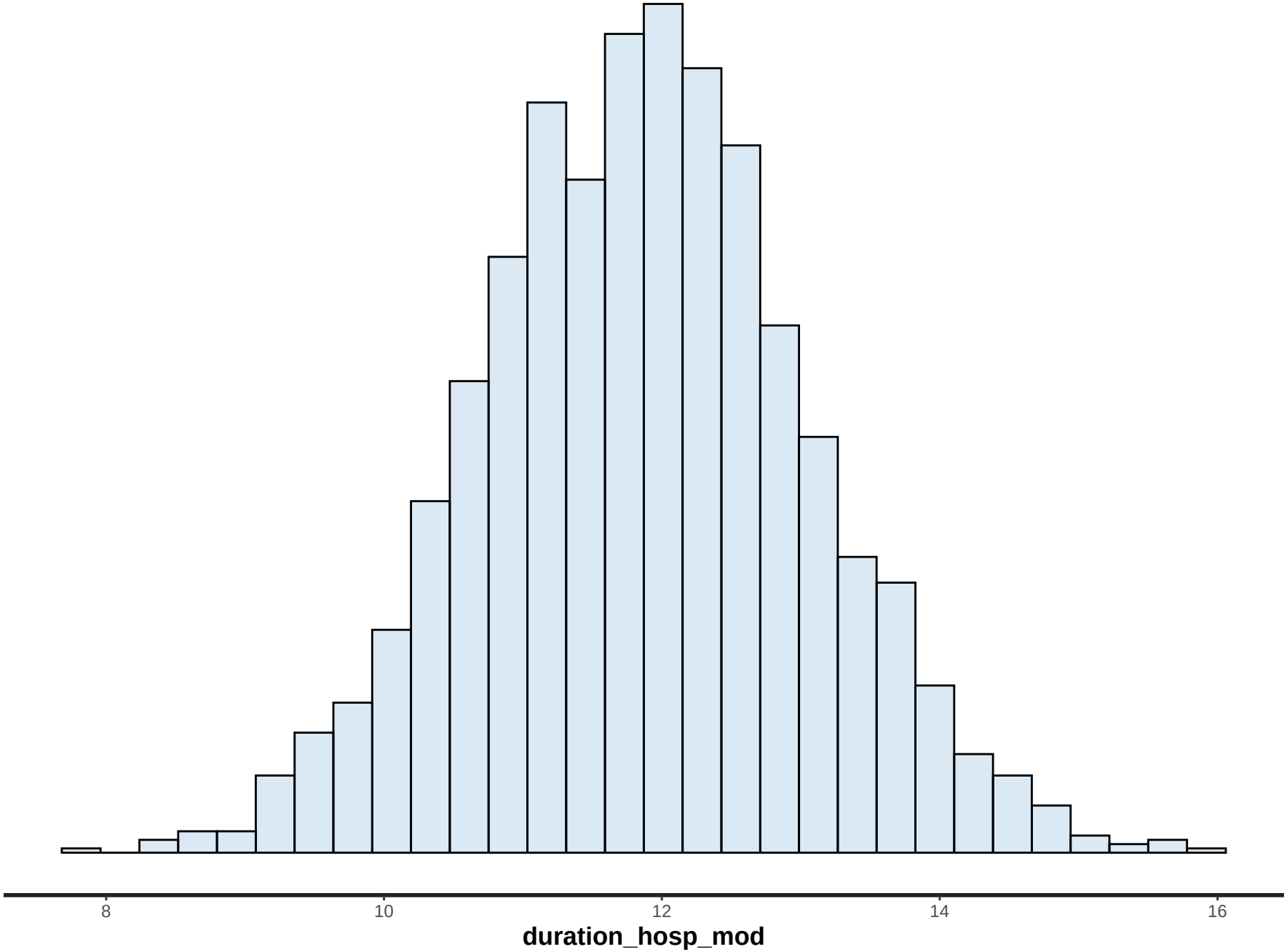


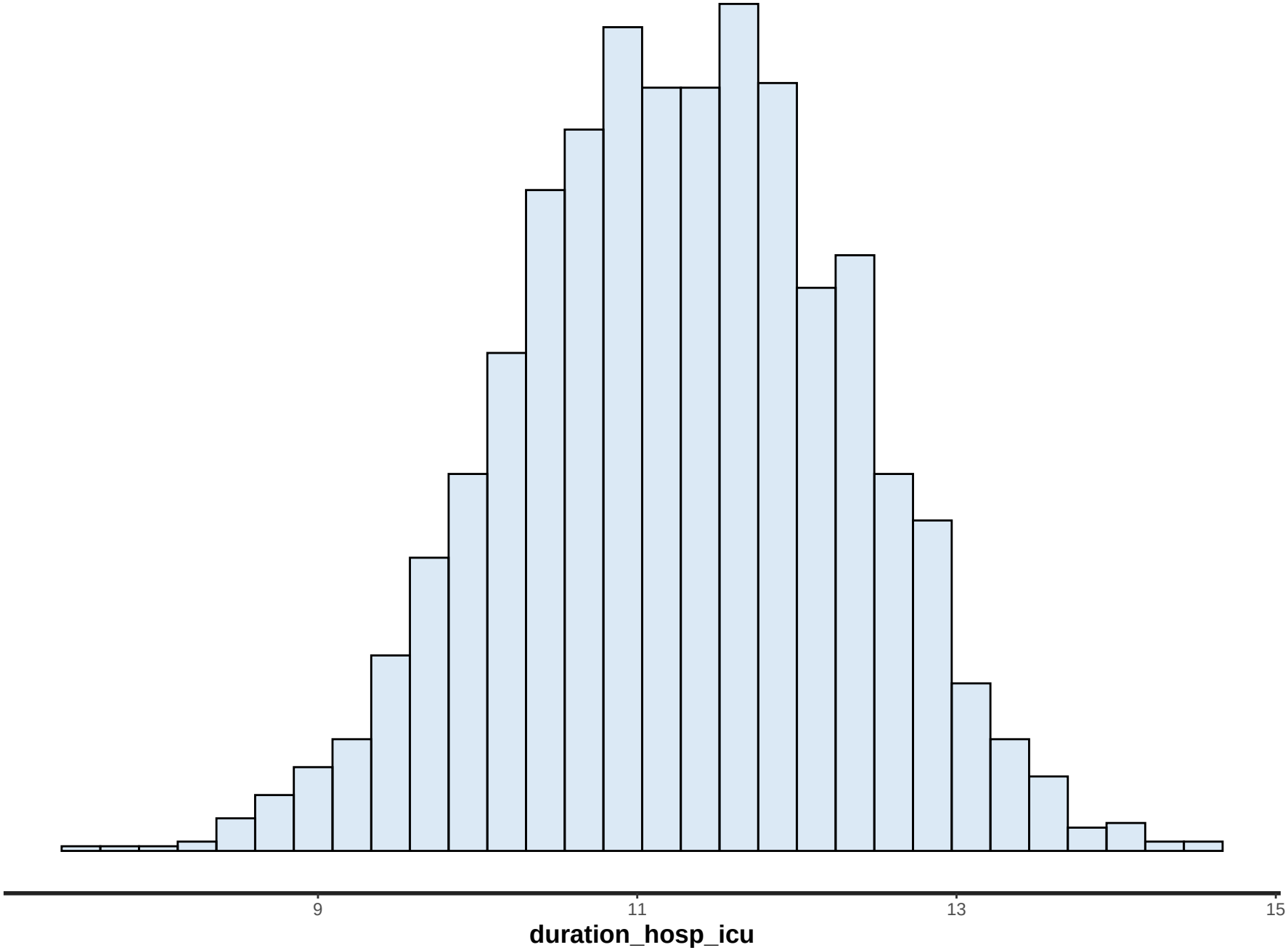

2.5
3.0
3.5
4.0
4.5
5.0
r0

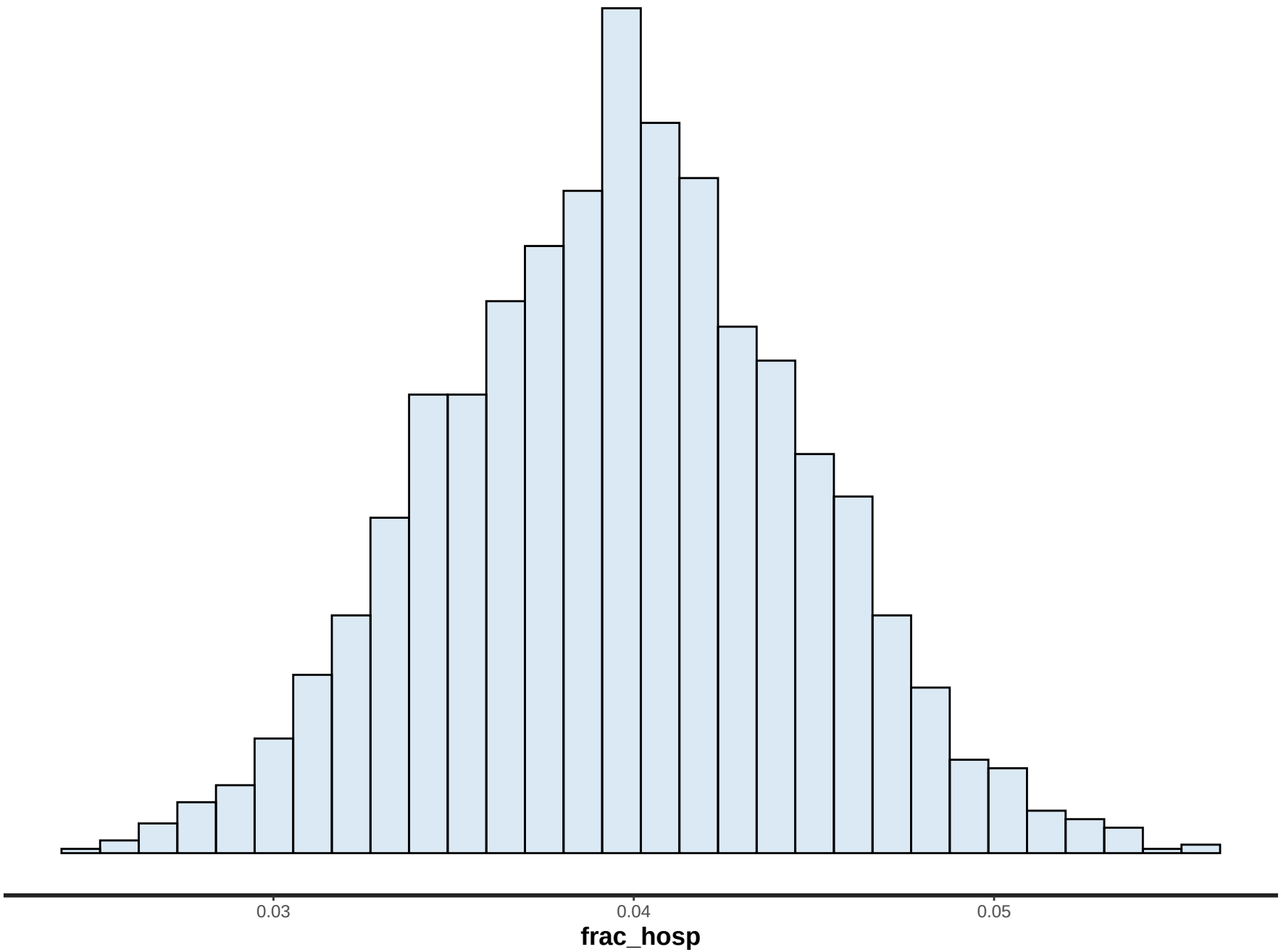

2
3
4
5
6
duration_latent

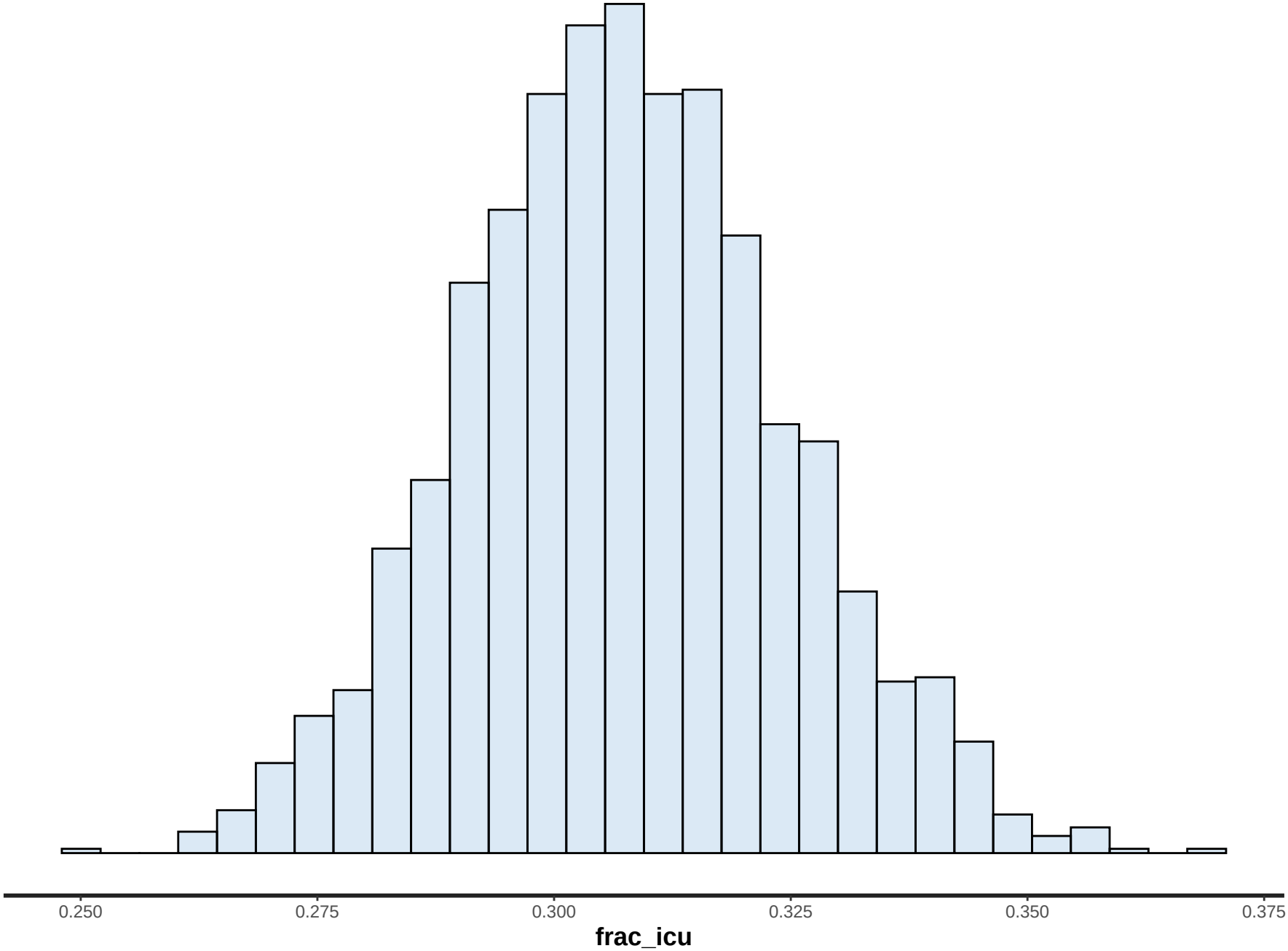

2
4
6
8
duration_rec_mild

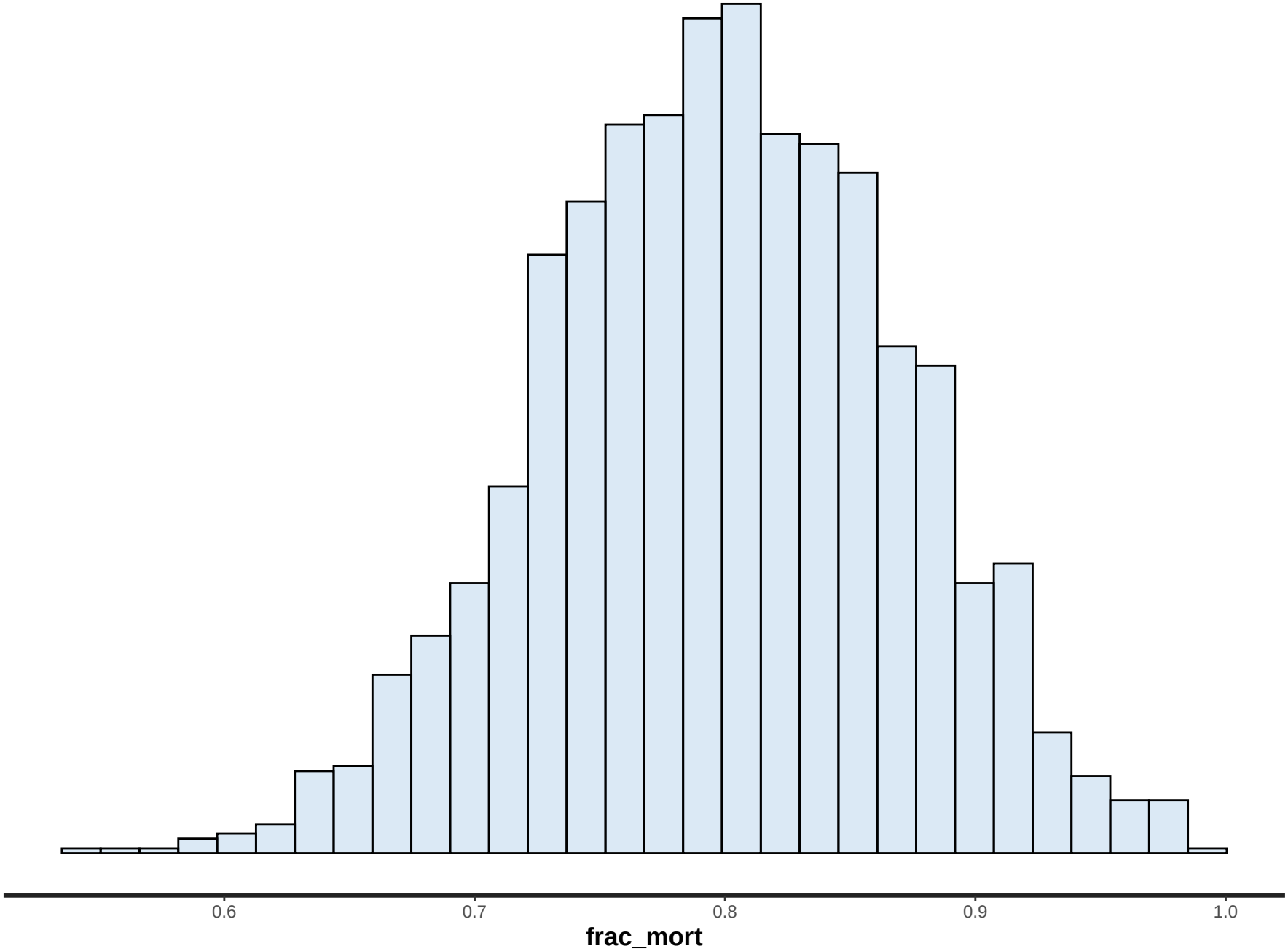

4
8
12
16
duration_pre_hosp

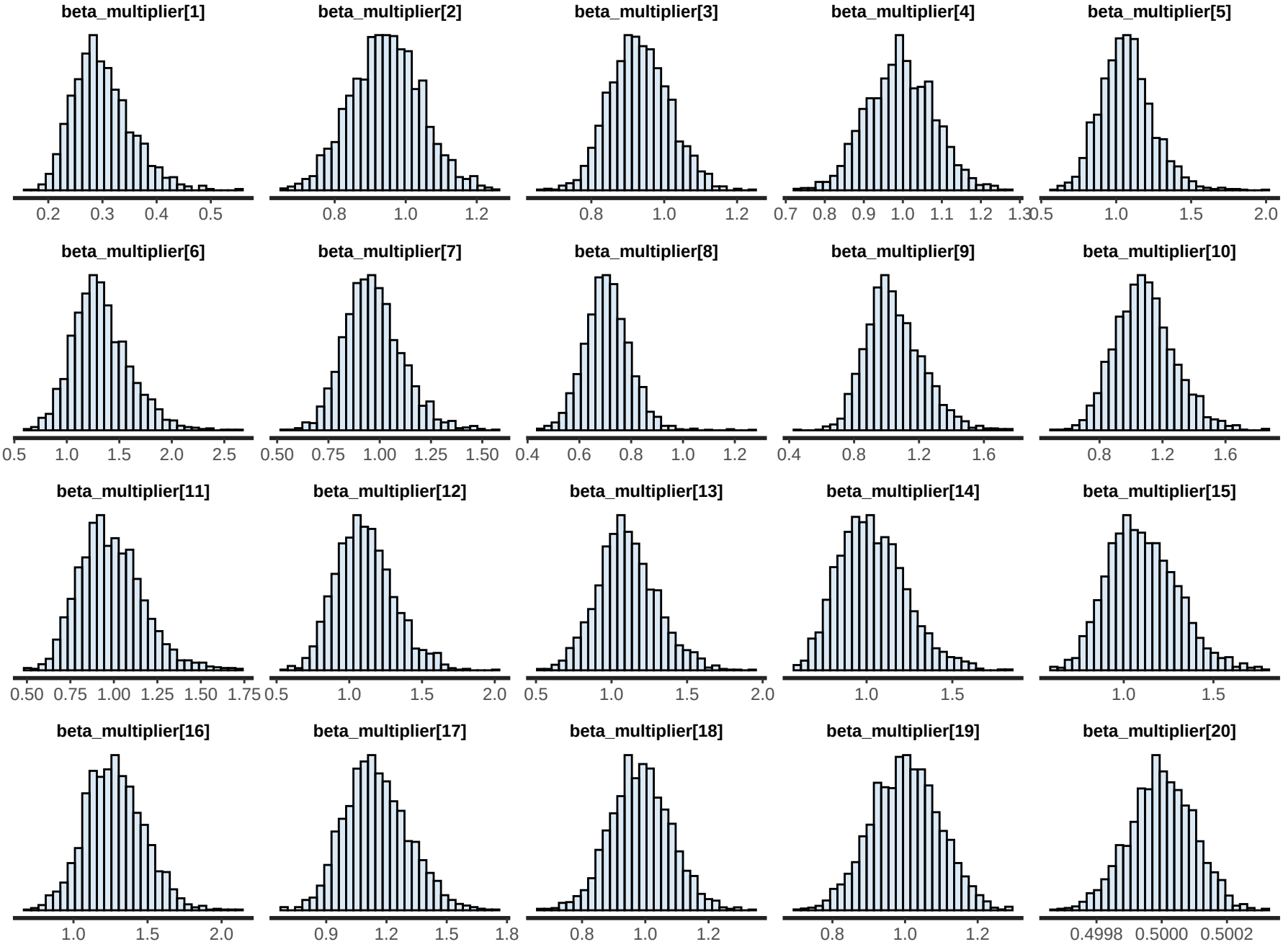

8
10
12
14
16
duration_hosp_mod

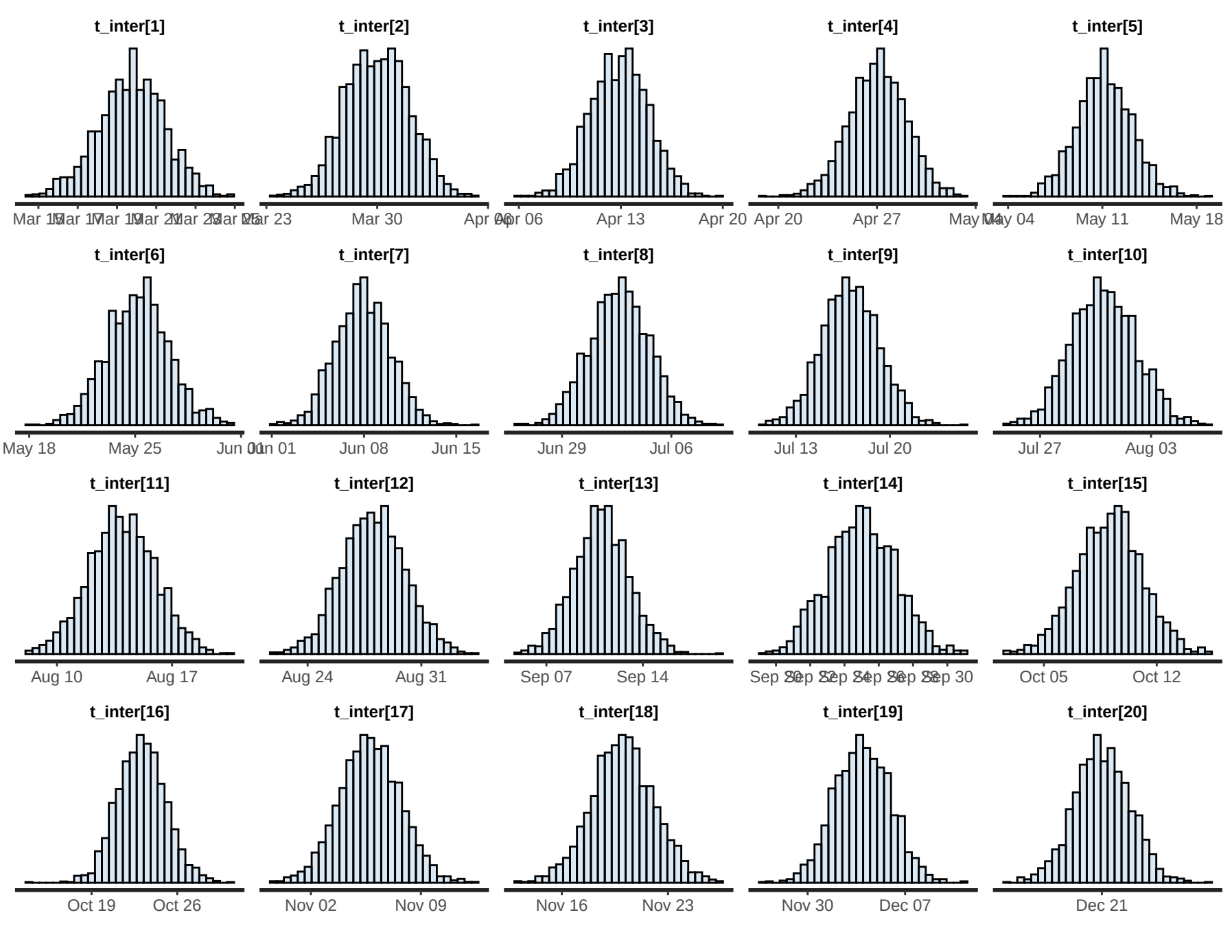

9
11
13
15
duration_hosp_icu

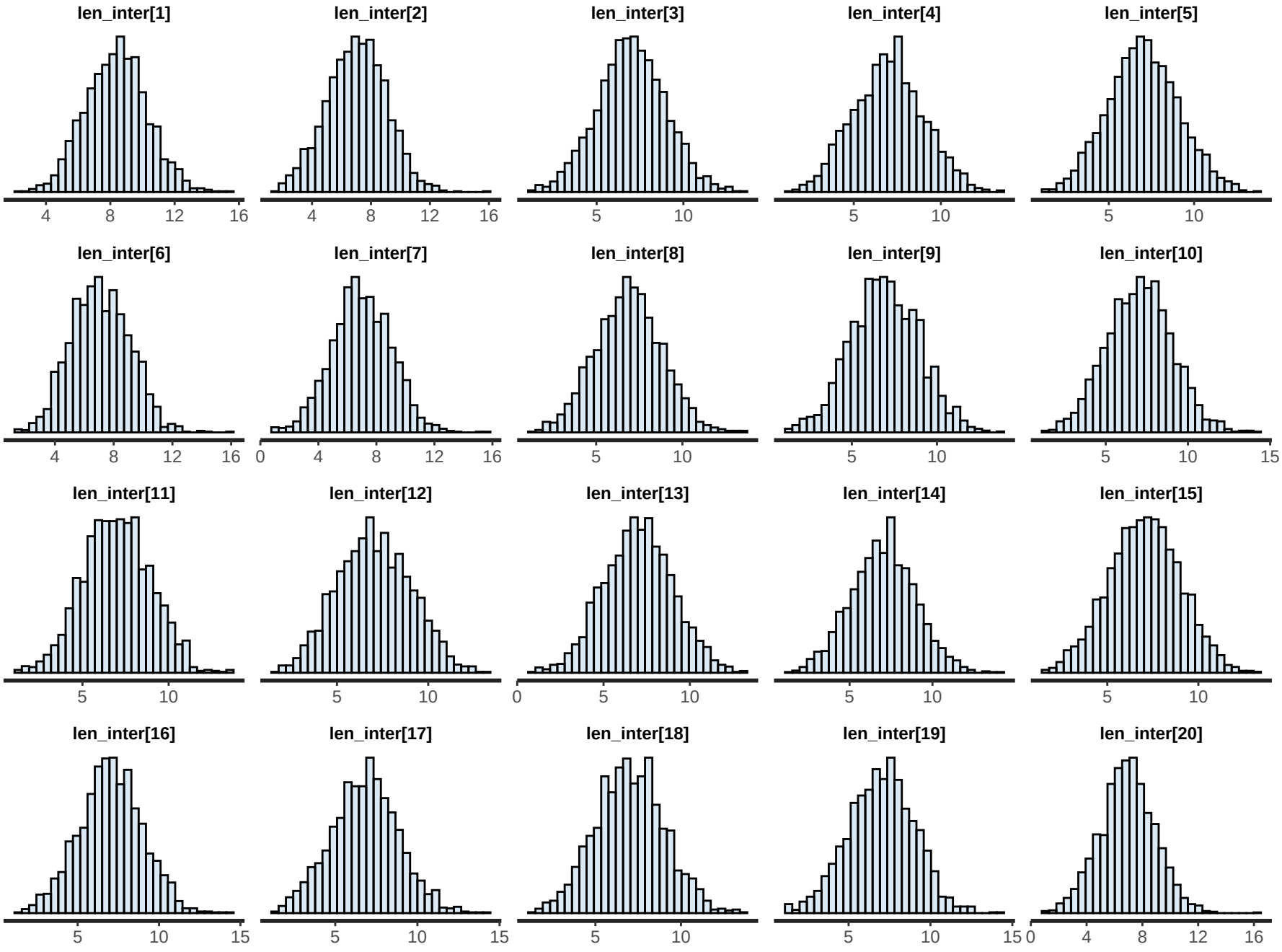

0.03
0.04
0.05
frac_hosp

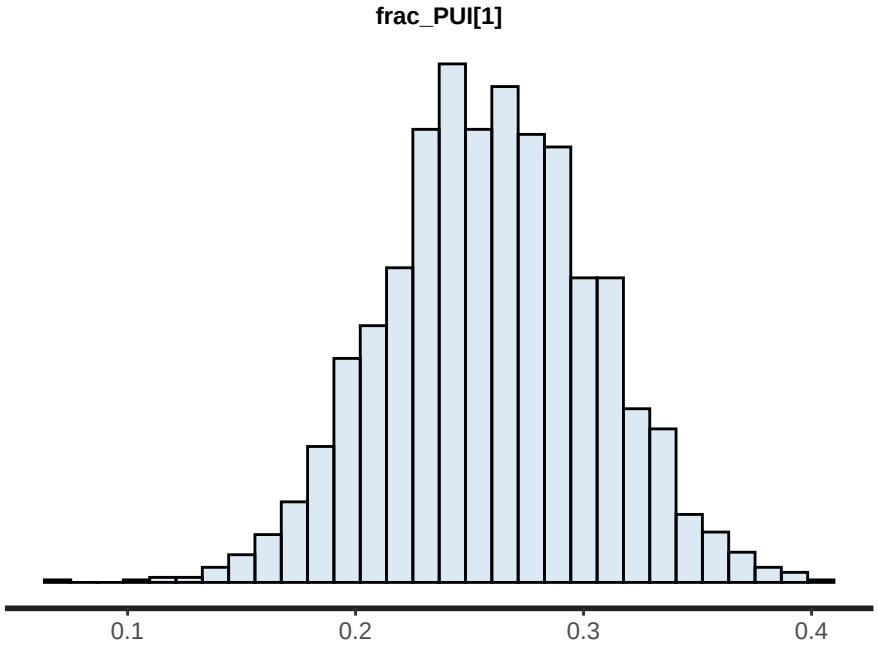

0.250
0.275
0.300
0.325
0.350
0.375
frac_icu

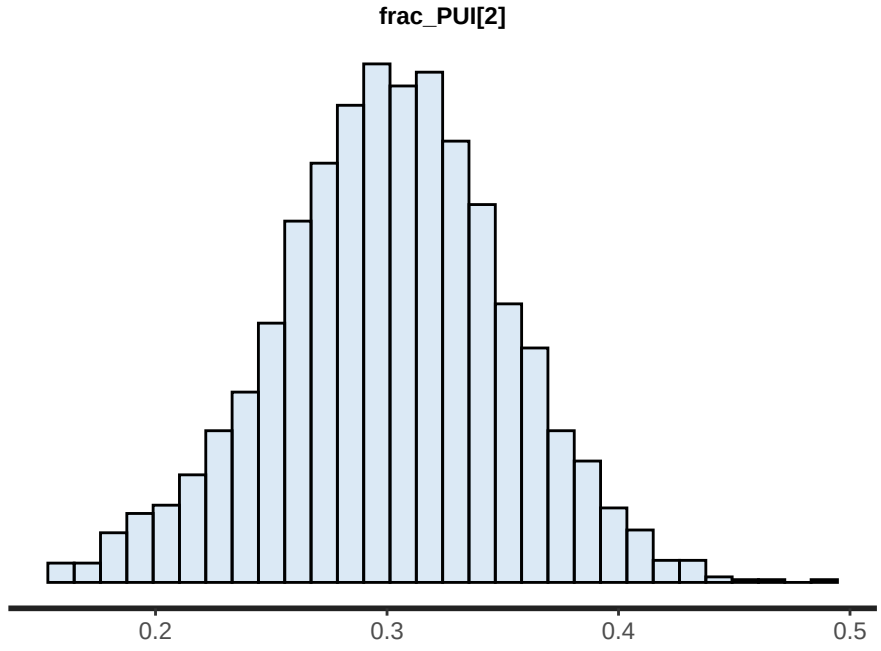

0.6
0.7
0.8
0.9
1.0
frac_mort

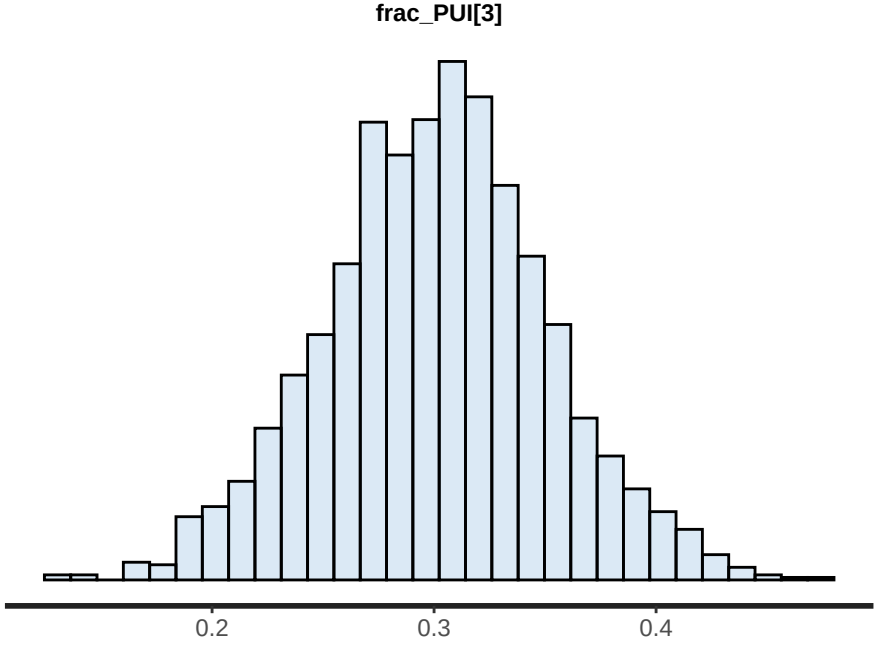

beta_multiplier[1]
0.2 0.3 0.4 0.5
beta_multiplier[2]
0.8 1.0 1.2
beta_multiplier[3]
0.8 1.0 1.2
beta_multiplier[4]
0.7 0.8 0.9 1.0 1.1 1.2 1.3
beta_multiplier[5]
0.5 1.0 1.5 2.0
beta_multiplier[6]
0.5 1.0 1.5 2.0 2.5
beta_multiplier[7]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[8]
0.4 0.6 0.8 1.0 1.2
beta_multiplier[9]
0.4 0.8 1.2 1.6
beta_multiplier[10]
0.8 1.2 1.6
beta_multiplier[11]
0.50 0.75 1.00 1.25 1.50 1.75
beta_multiplier[12]
0.5 1.0 1.5 2.0
beta_multiplier[13]
0.5 1.0 1.5 2.0
beta_multiplier[14]
1.0 1.5
beta_multiplier[15]
1.0 1.5
beta_multiplier[16]
1.0 1.5 2.0
beta_multiplier[17]
0.9 1.2 1.5 1.8
beta_multiplier[18]
0.8 1.0 1.2
beta_multiplier[19]
0.8 1.0 1.2
beta_multiplier[20]
0.4998 0.5000 0.5002

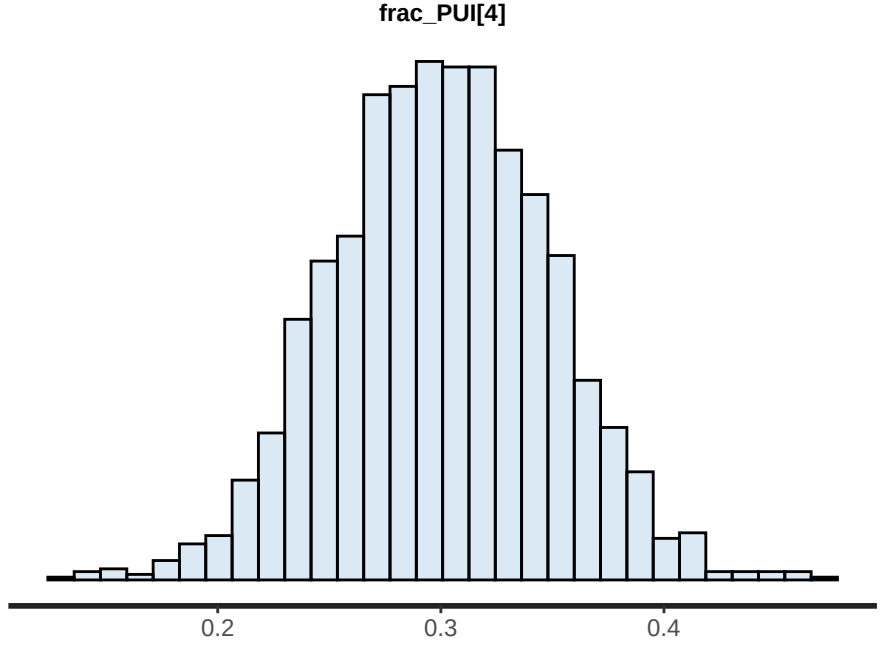

t_inter[1]
Mar 15
Mar 17
Mar 19
Mar 21
Mar 23
Mar 25
t_inter[2]
Mar 23
Mar 30
Apr 06
t_inter[3]
Apr 06
Apr 13
Apr 20
t_inter[4]
Apr 20
Apr 27
May 04
t_inter[5]
May 04
May 11
May 18
t_inter[6]
May 18
May 25
Jun 01
t_inter[7]
Jun 01
Jun 08
Jun 15
t_inter[8]
Jun 29
Jul 06
t_inter[9]
Jul 13
Jul 20
t_inter[10]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

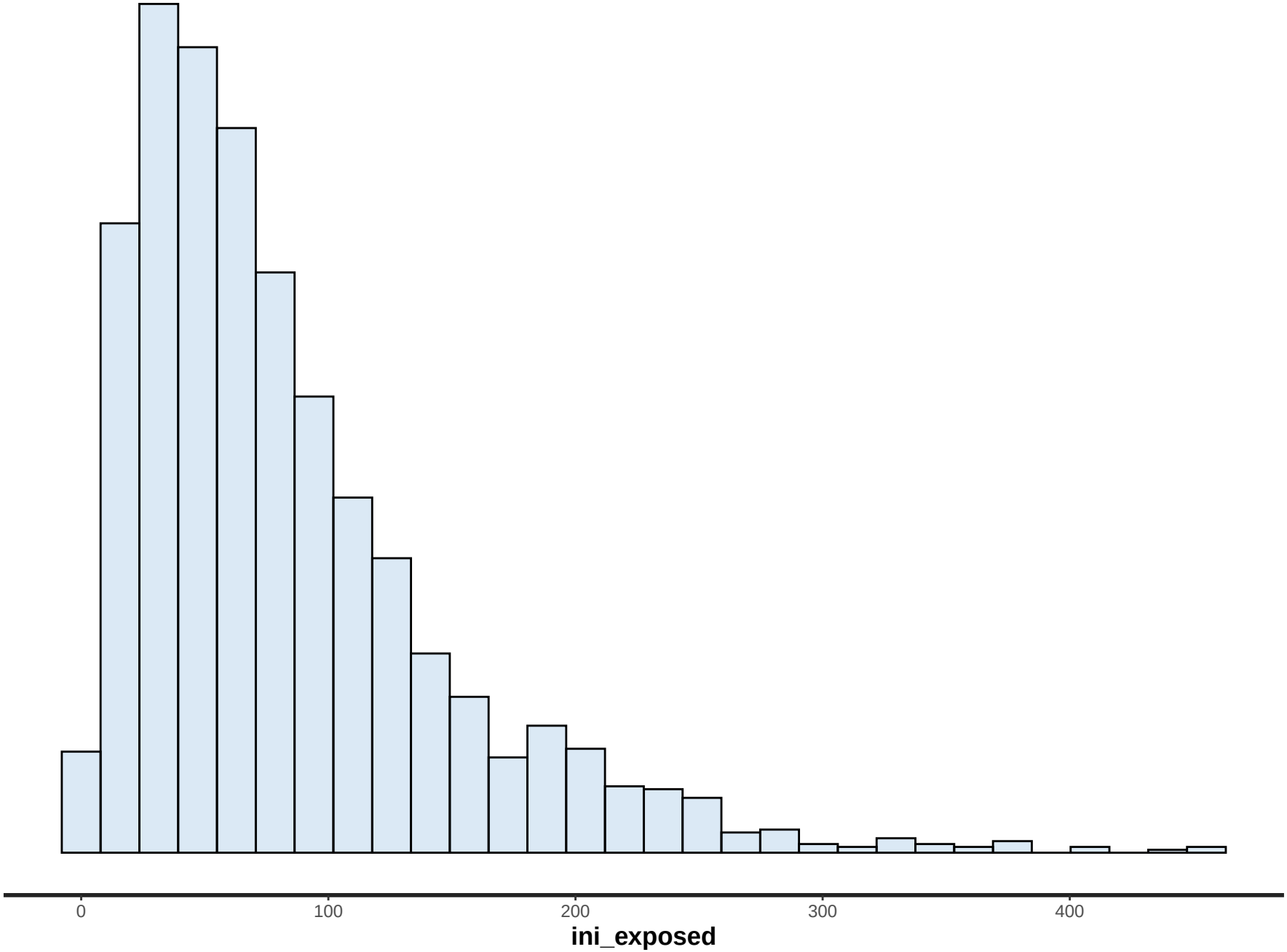

len_inter[1]
4 8 12 16
len_inter[2]
4 8 12 16
len_inter[3]
5 10
len_inter[4]
5 10
len_inter[5]
5 10
len_inter[6]
4 8 12 16
len_inter[7]
0 4 8 12 16
len_inter[8]
5 10
len_inter[9]
5 10
len_inter[10]
5 10 15
len_inter[11]
5 10
len_inter[12]
5 10
len_inter[13]
0 5 10
len_inter[14]
5 10
len_inter[15]
5 10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

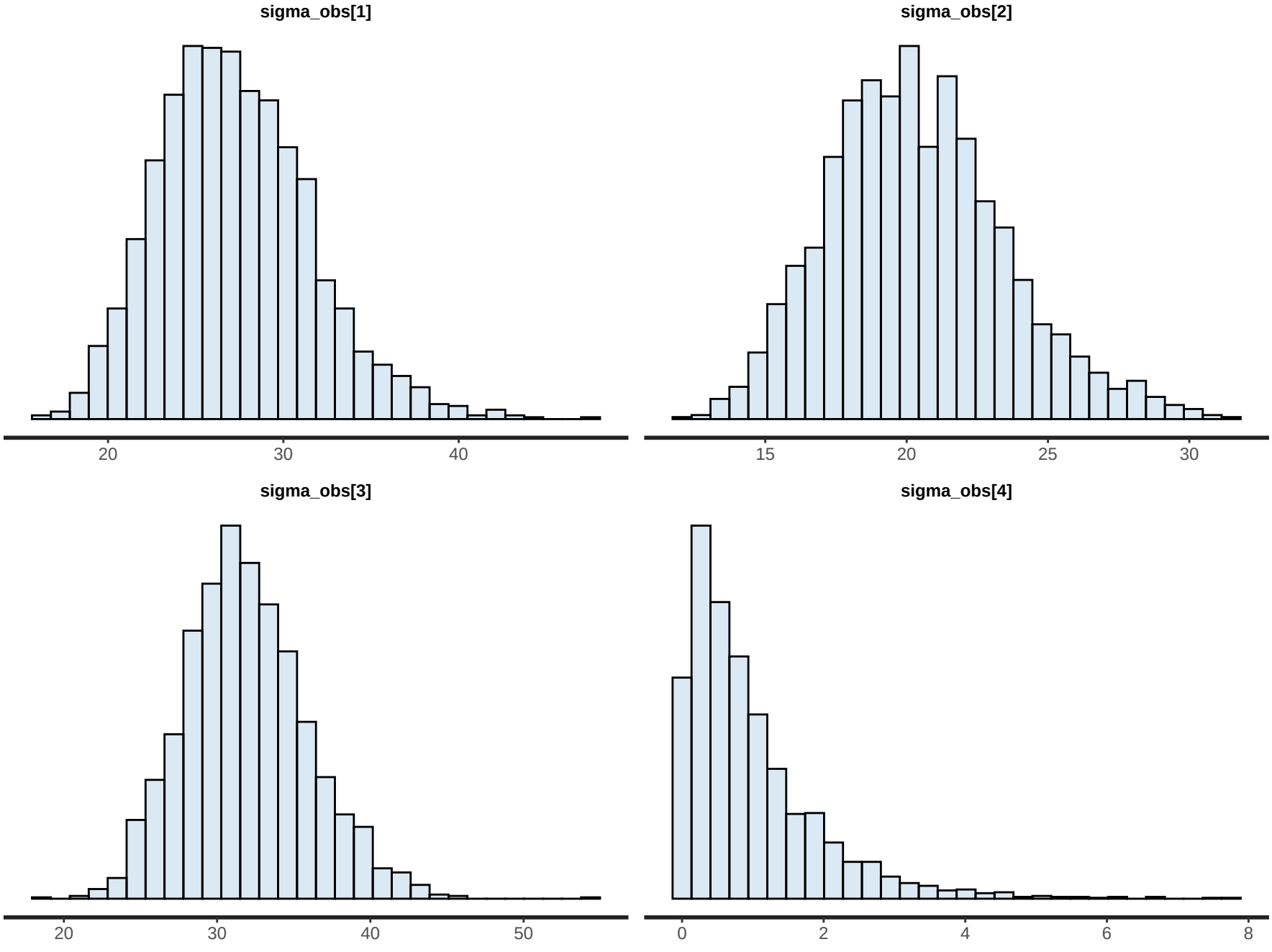

frac_PUI[1]
0.1
0.2
0.3
0.4


frac_PUI[2]
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
100
200
300
400
ini_exposed


sigma_obs[1]
20
30
40
sigma_obs[2]
15
20
25
30
sigma_obs[3]
20
30
40
50
sigma_obs[4]
0
2
4
6
8