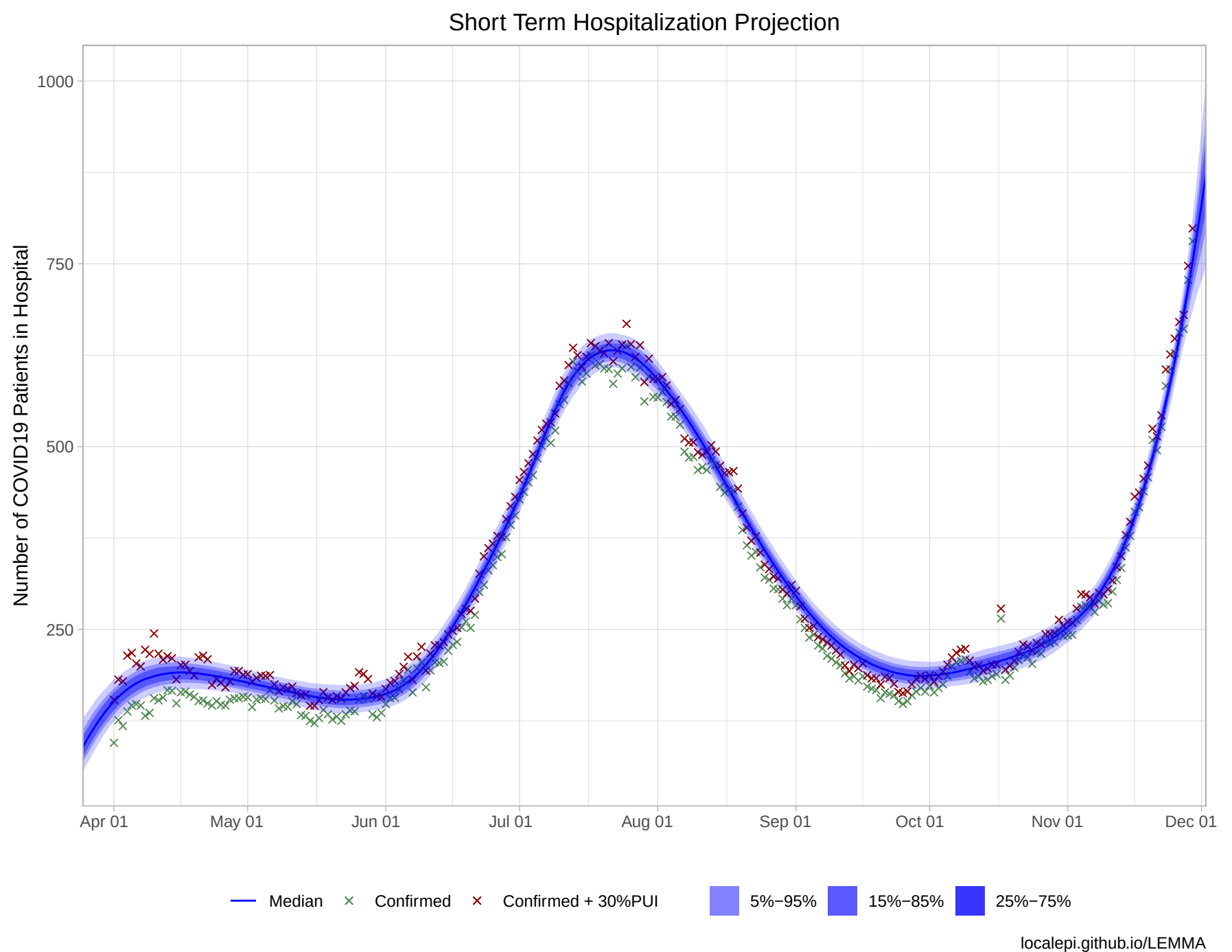
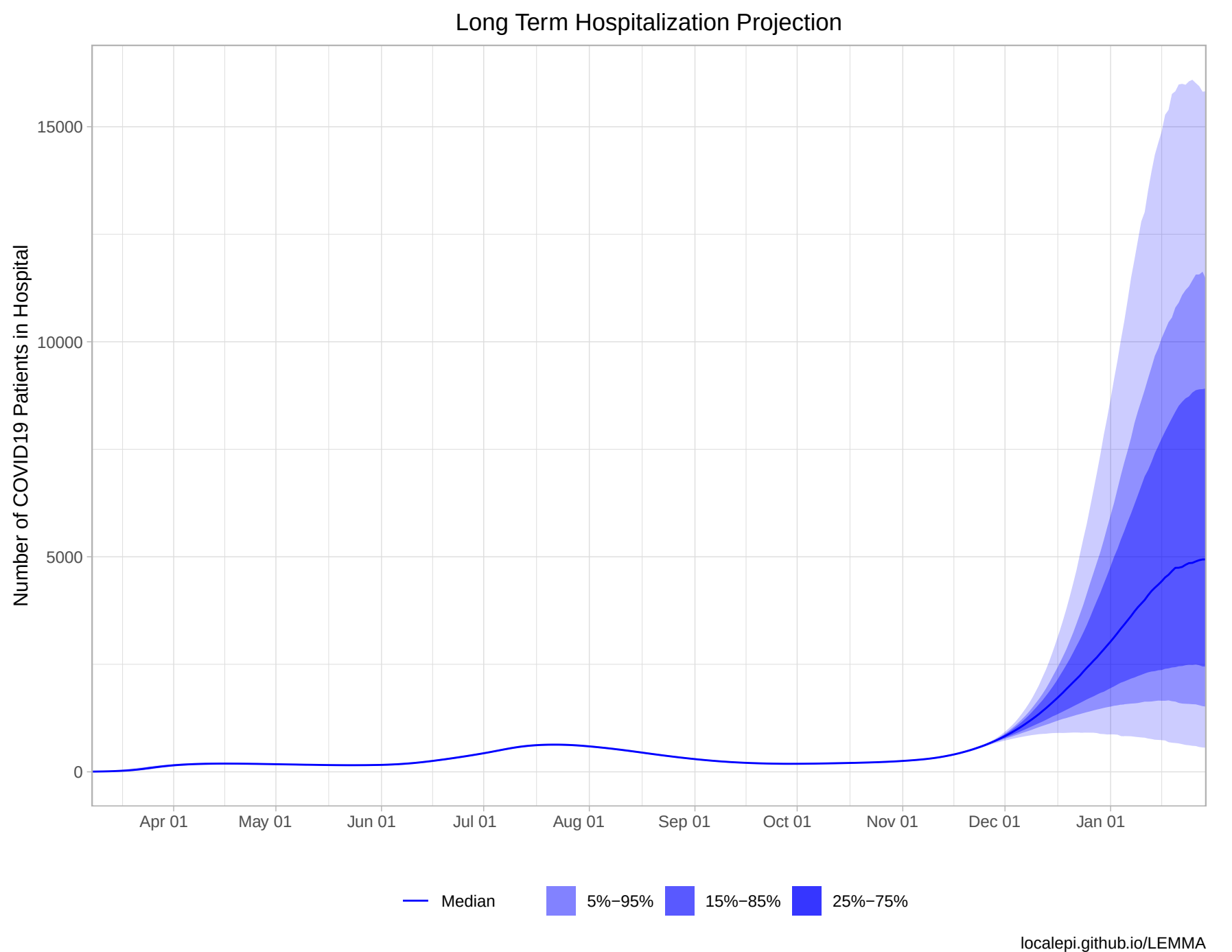
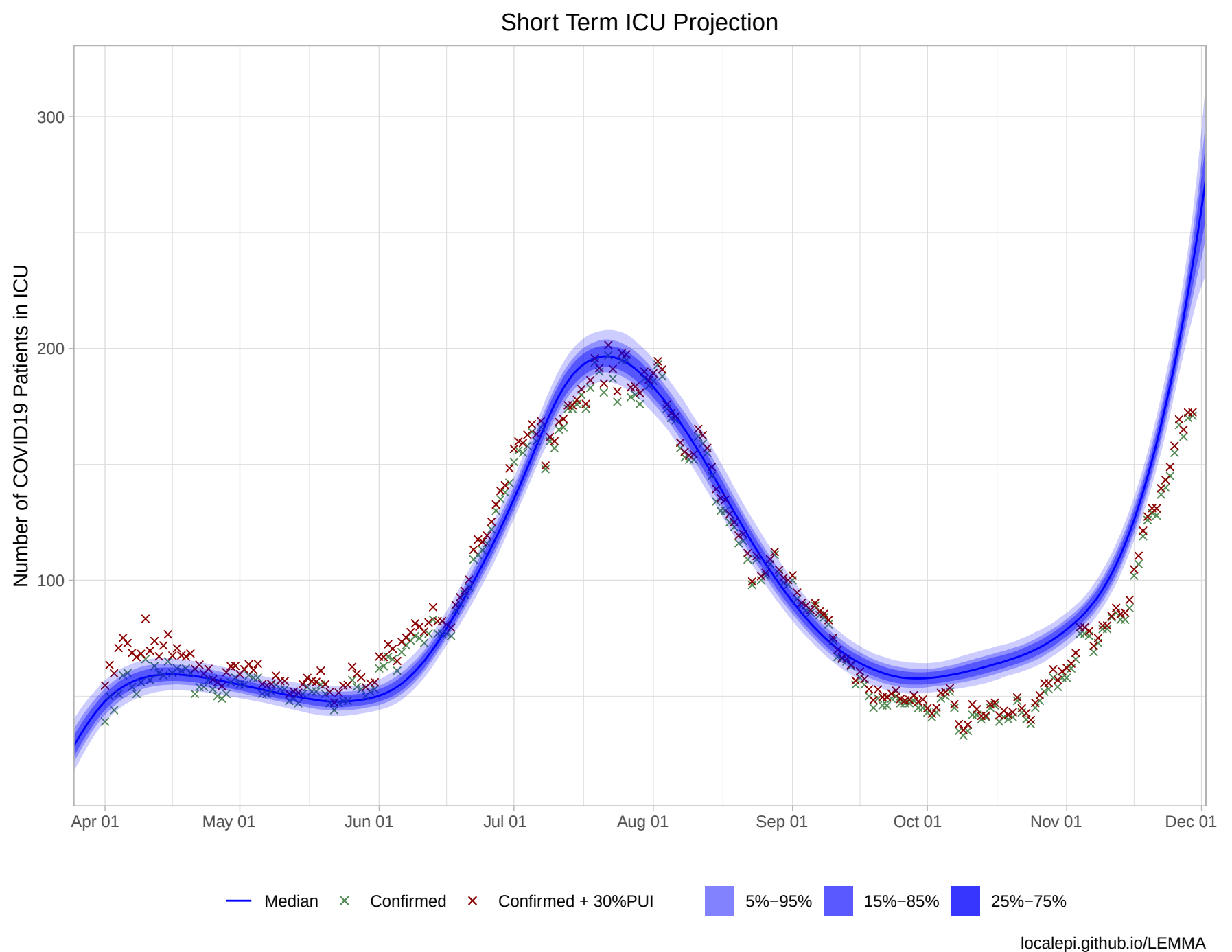
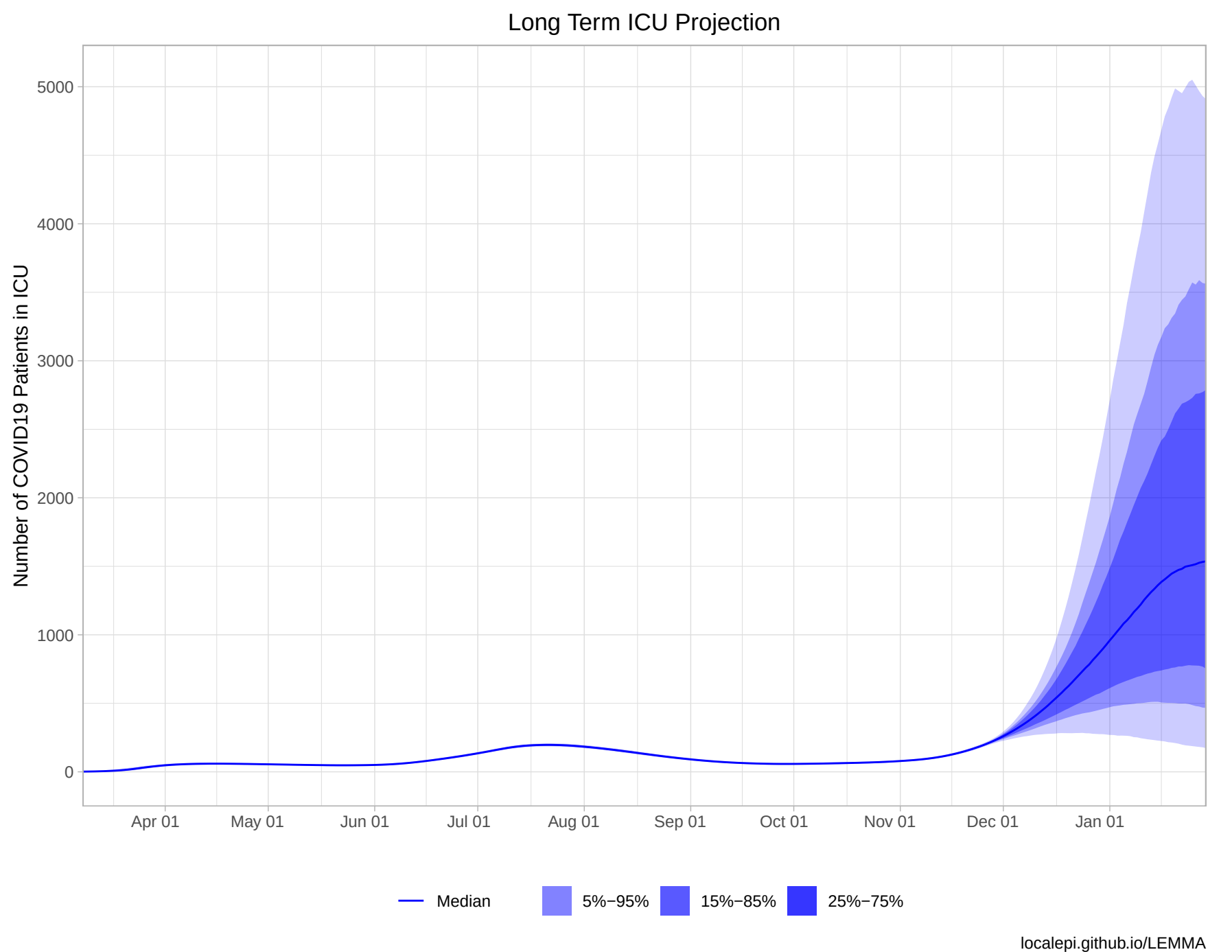
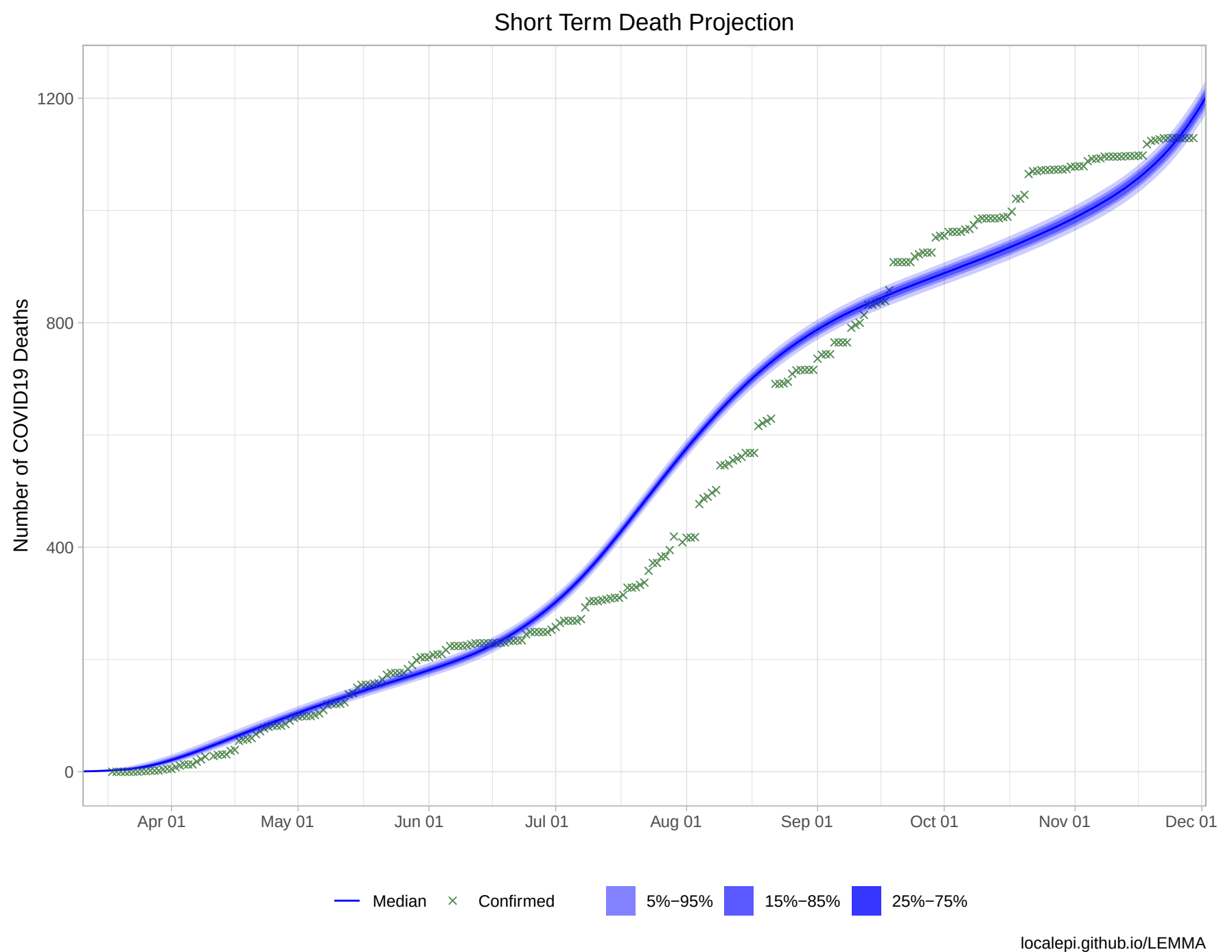
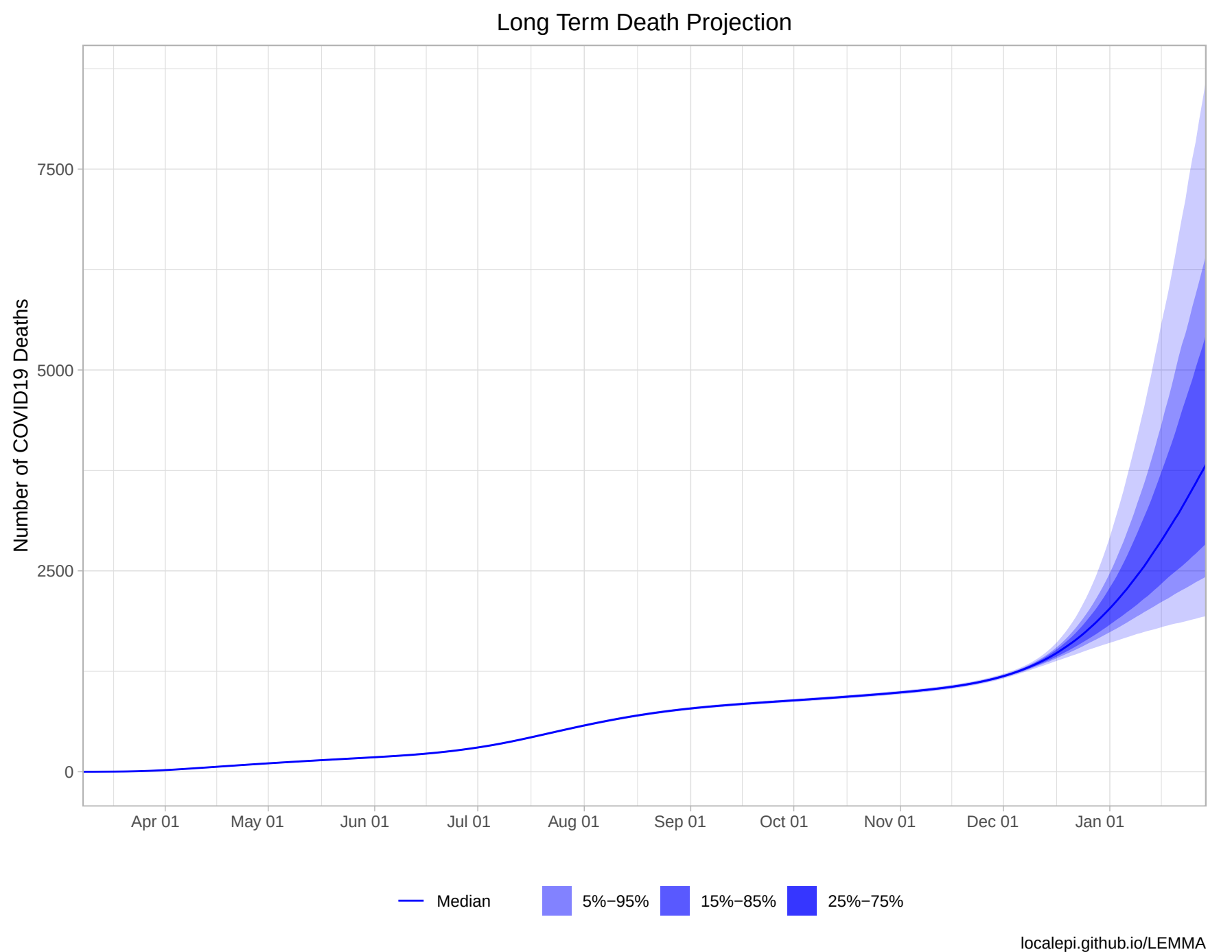

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1000
750
500
250
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

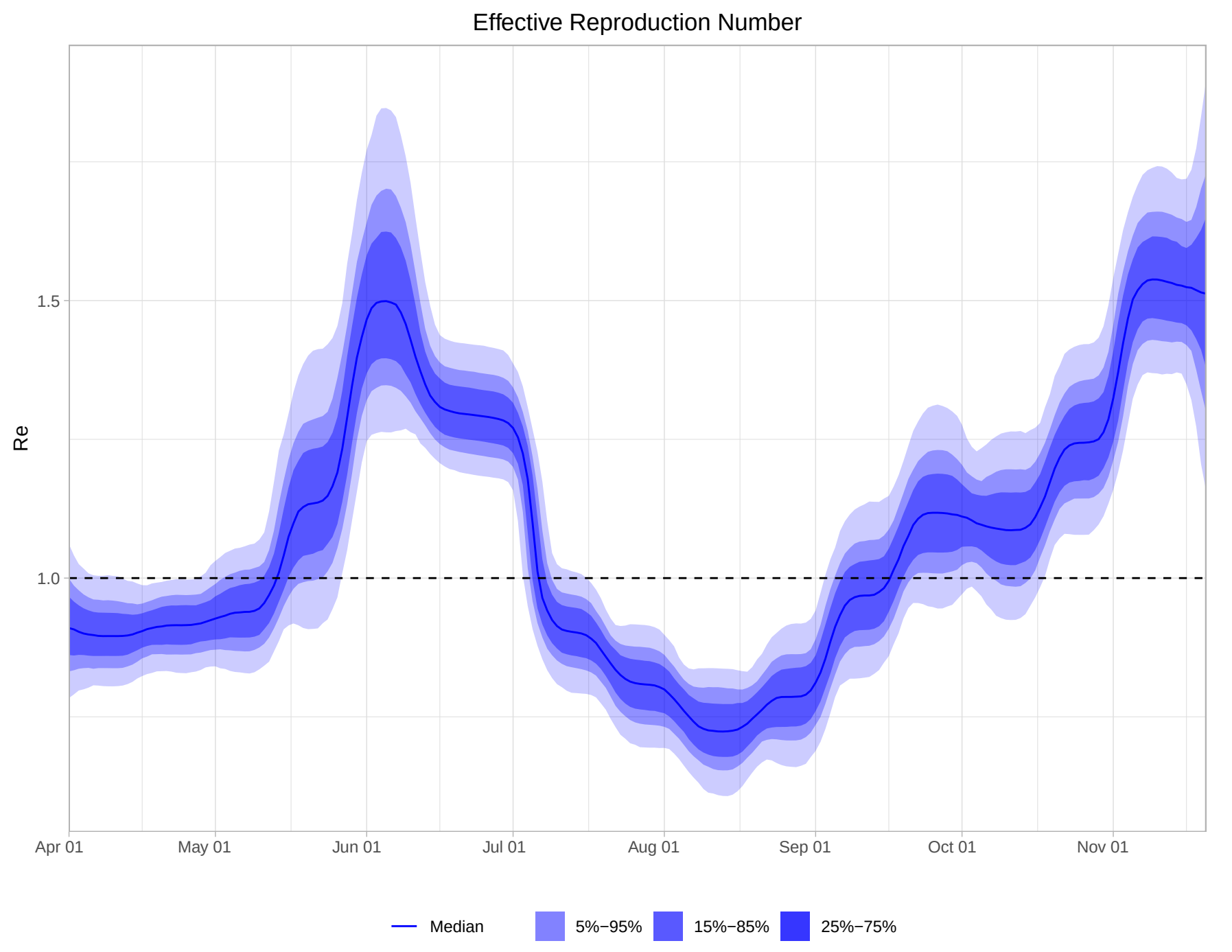

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
15000
10000
5000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
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 ICU Projection
Number of COVID19 Patients in ICU
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
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

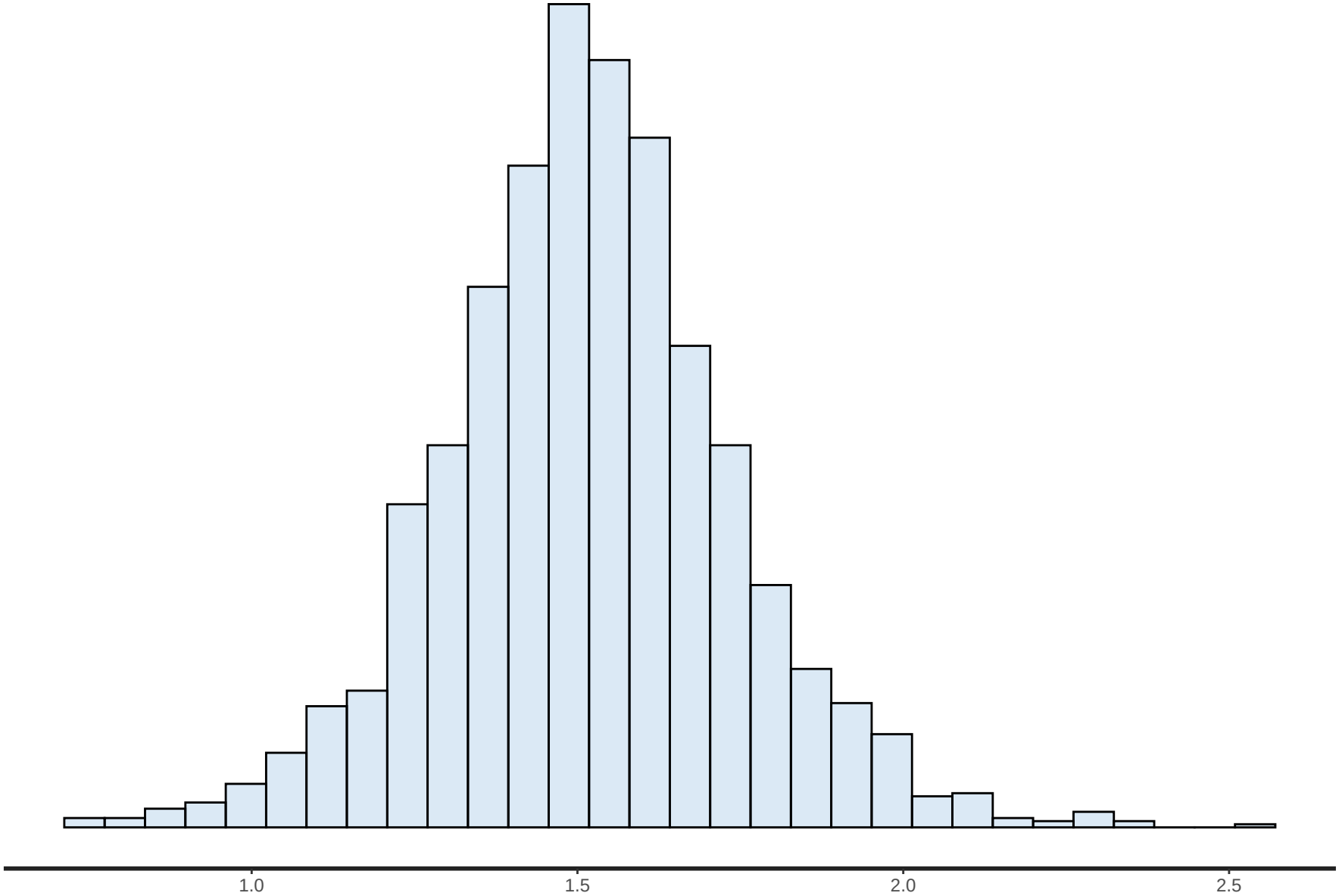

Short Term Death Projection
Number of COVID19 Deaths
1200
800
400
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

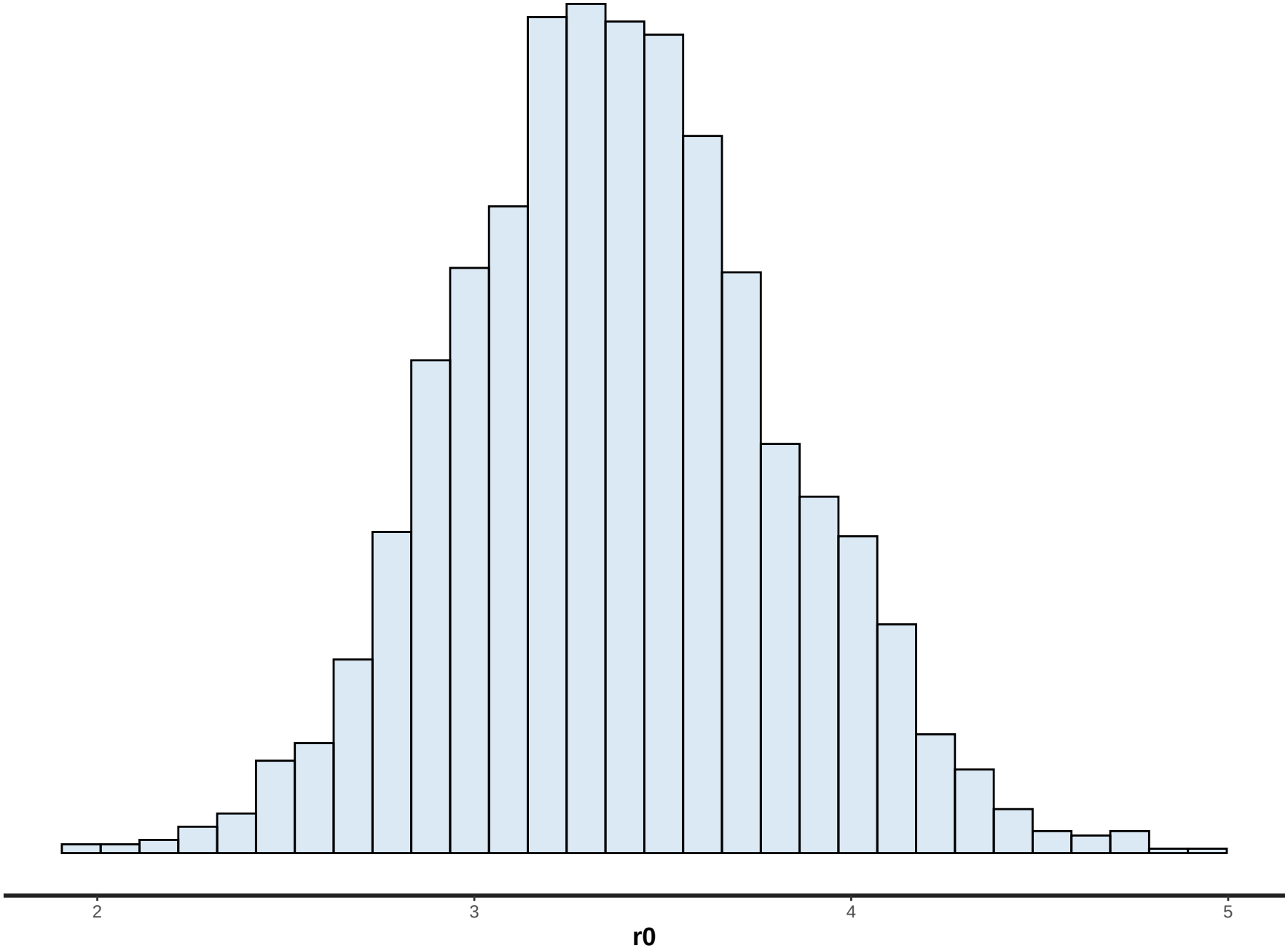

Long Term Death Projection
Number of COVID19 Deaths
7500
5000
2500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

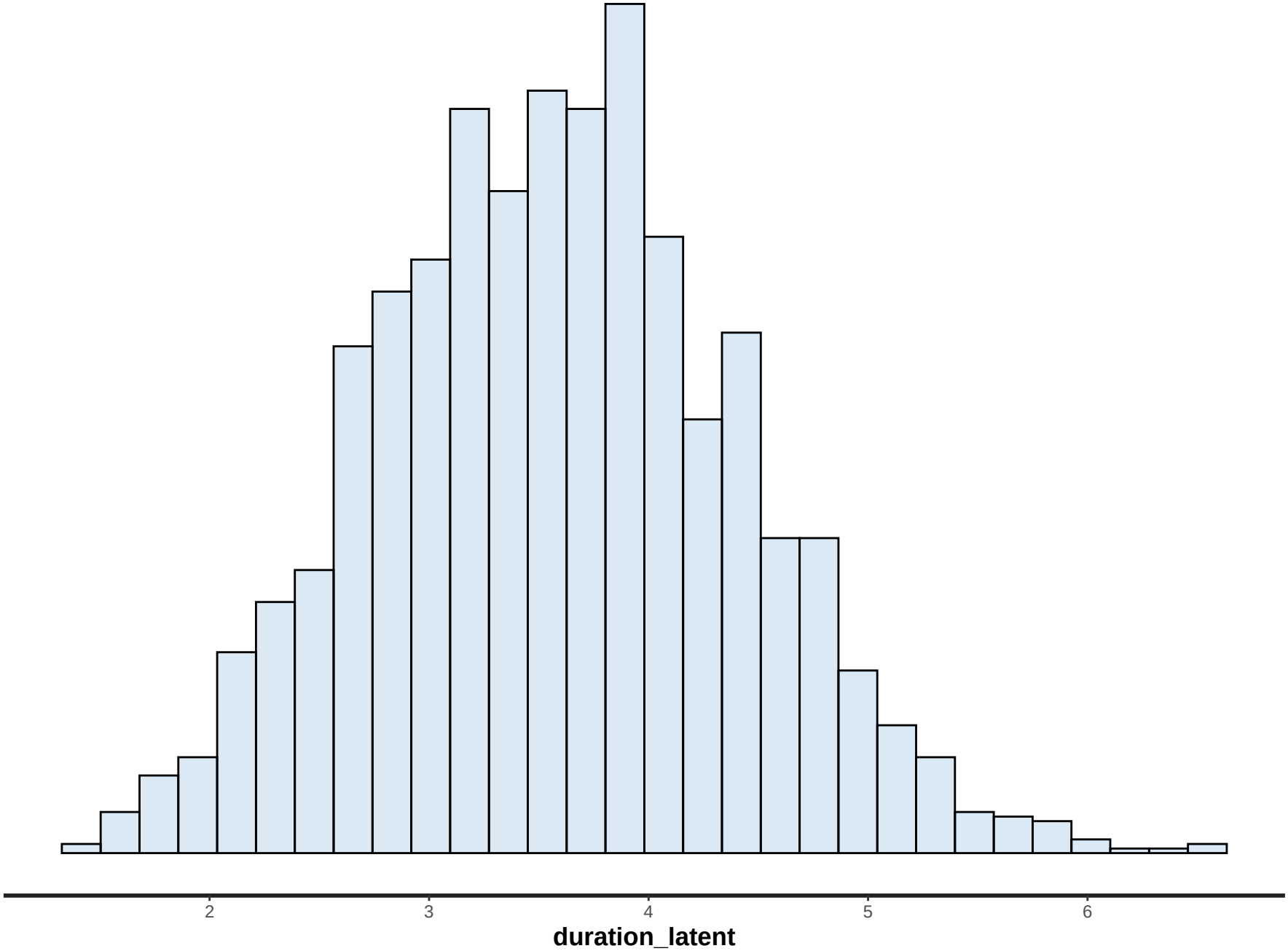

Effective Reproduction Number
Re
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

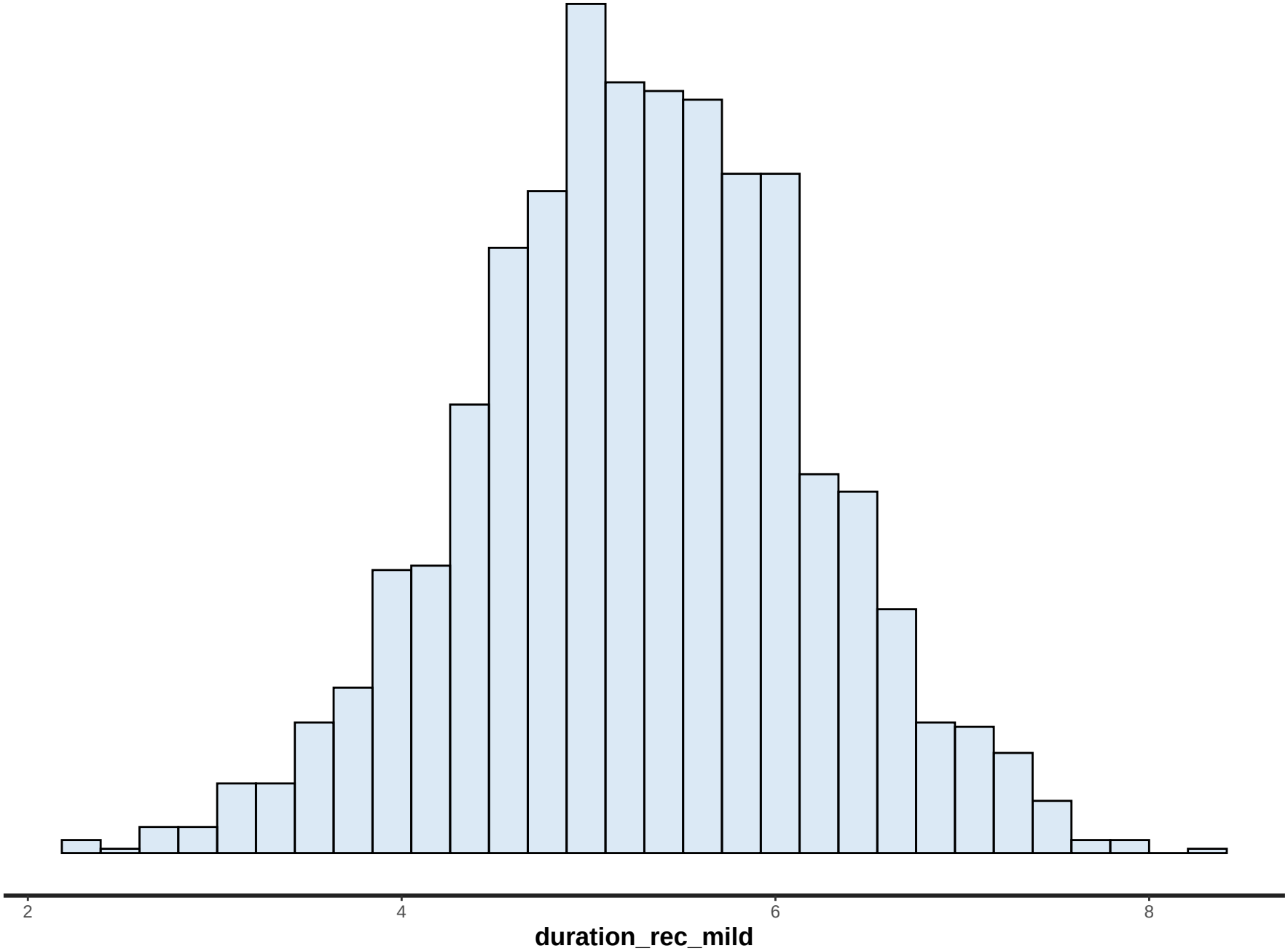
Rt as of 2020−11−20

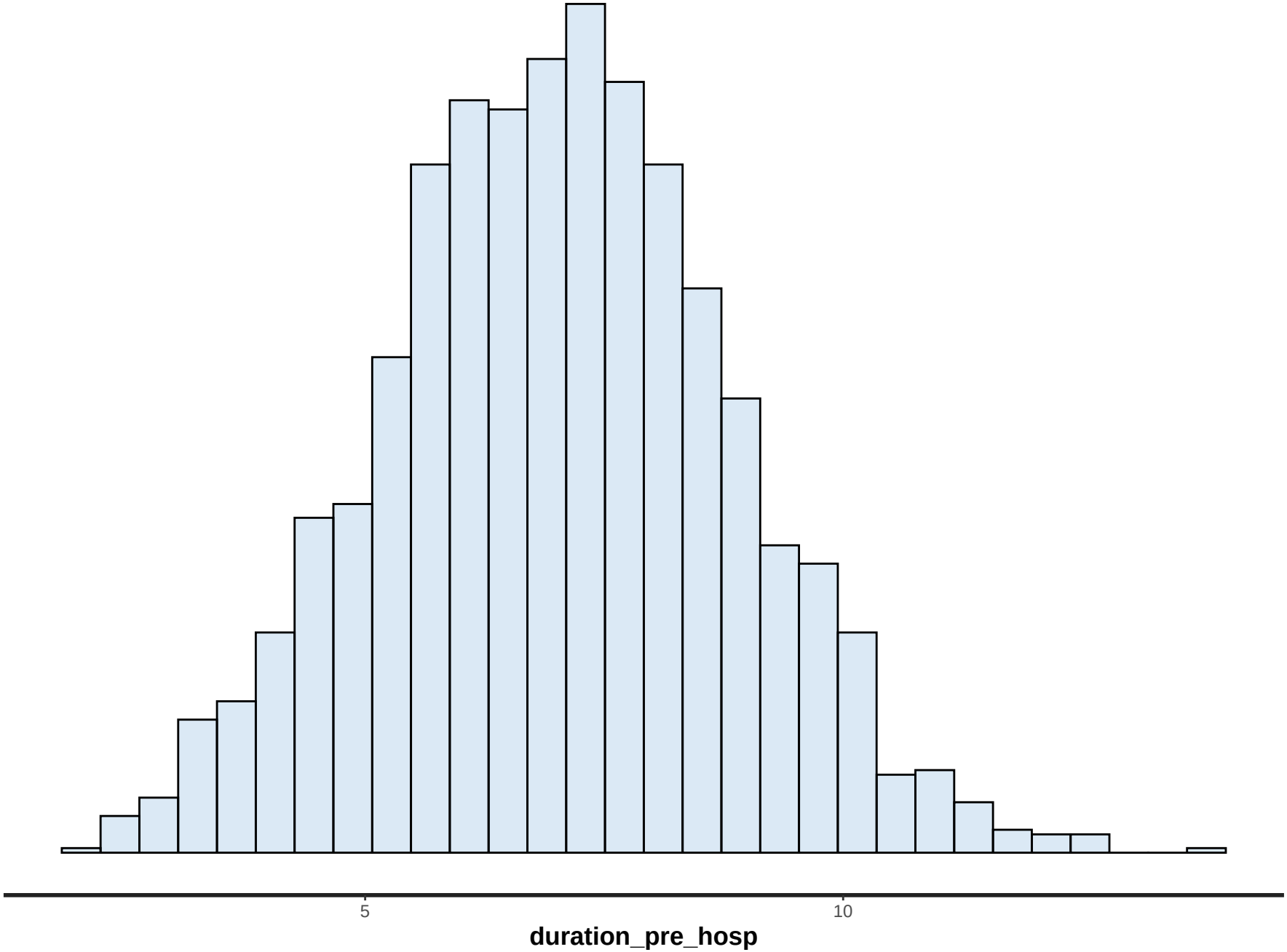
5%	10%	25%	50%	75%	90%	95%
1.16	1.25	1.38	1.51	1.65	1.79	1.90

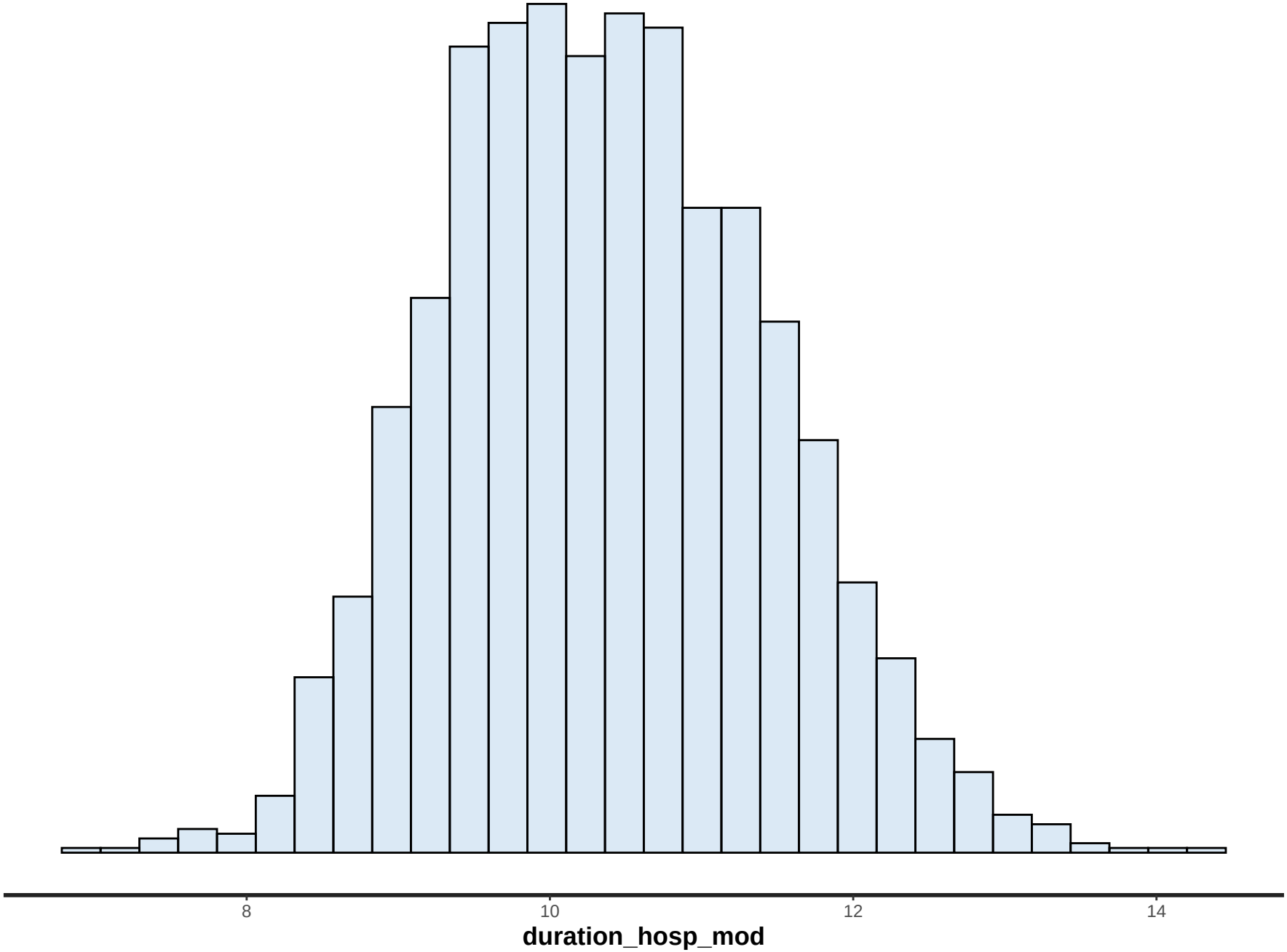


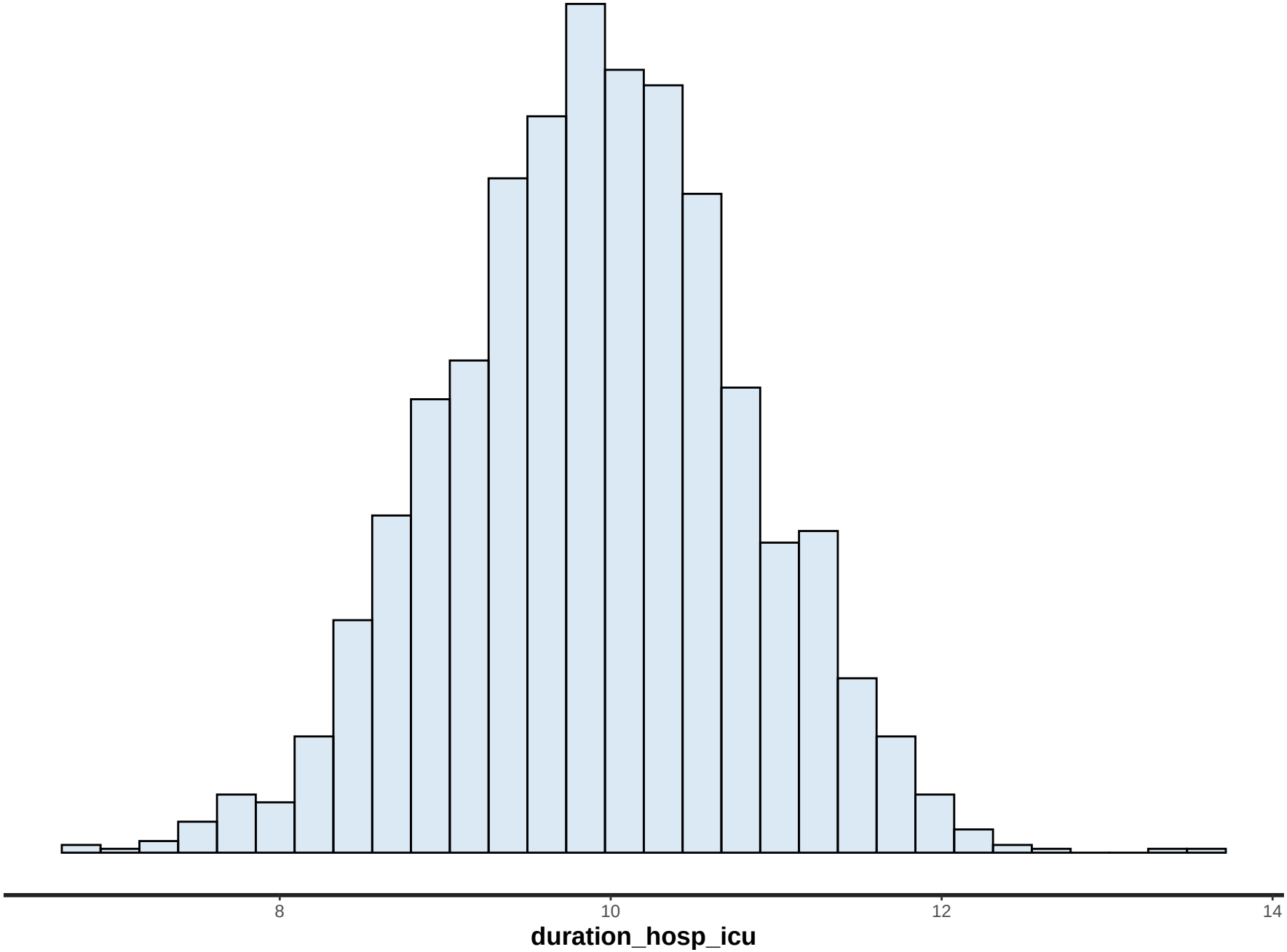

2
3
4
5
r0

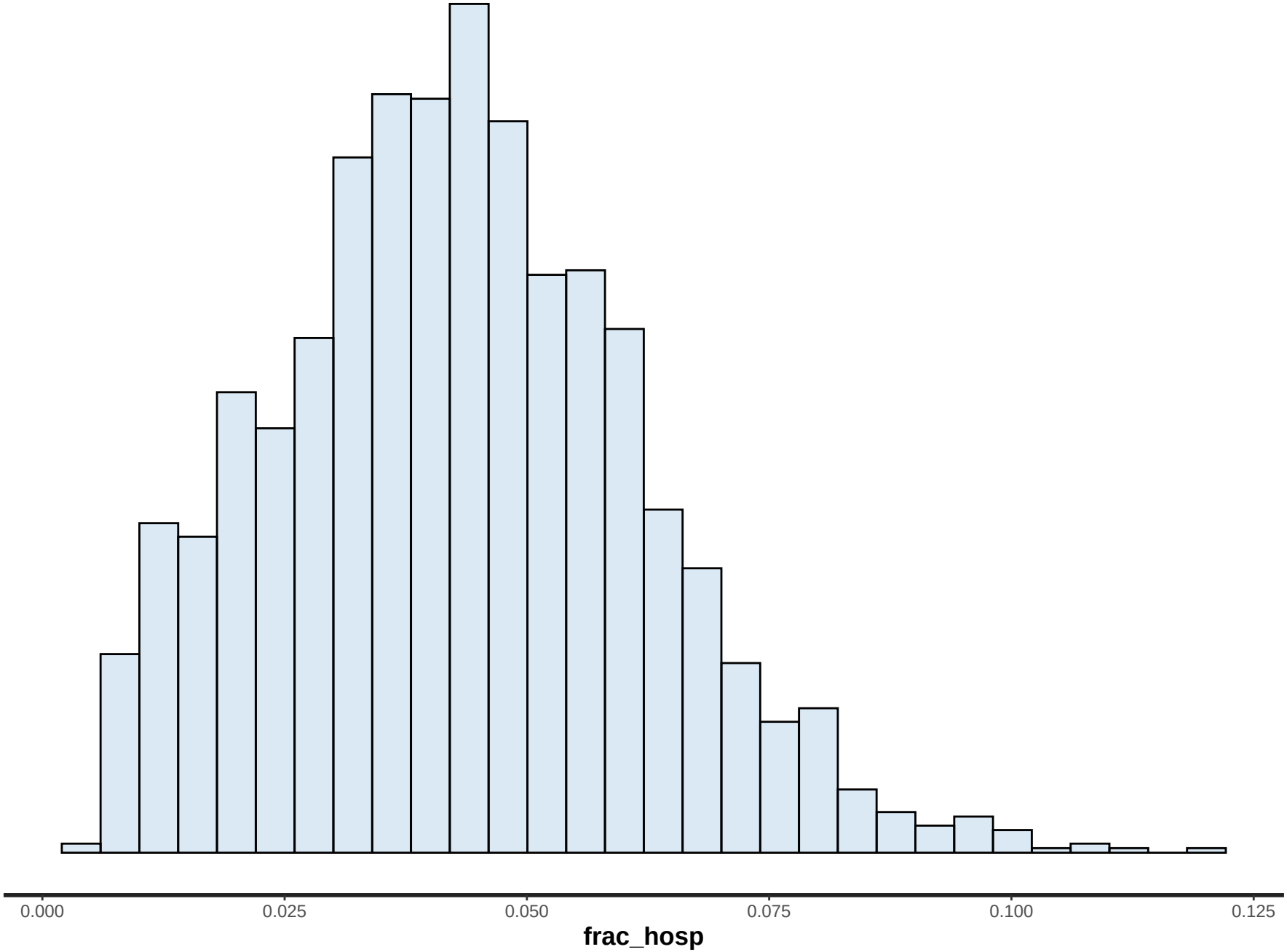

2
3
4
5
6
duration_latent

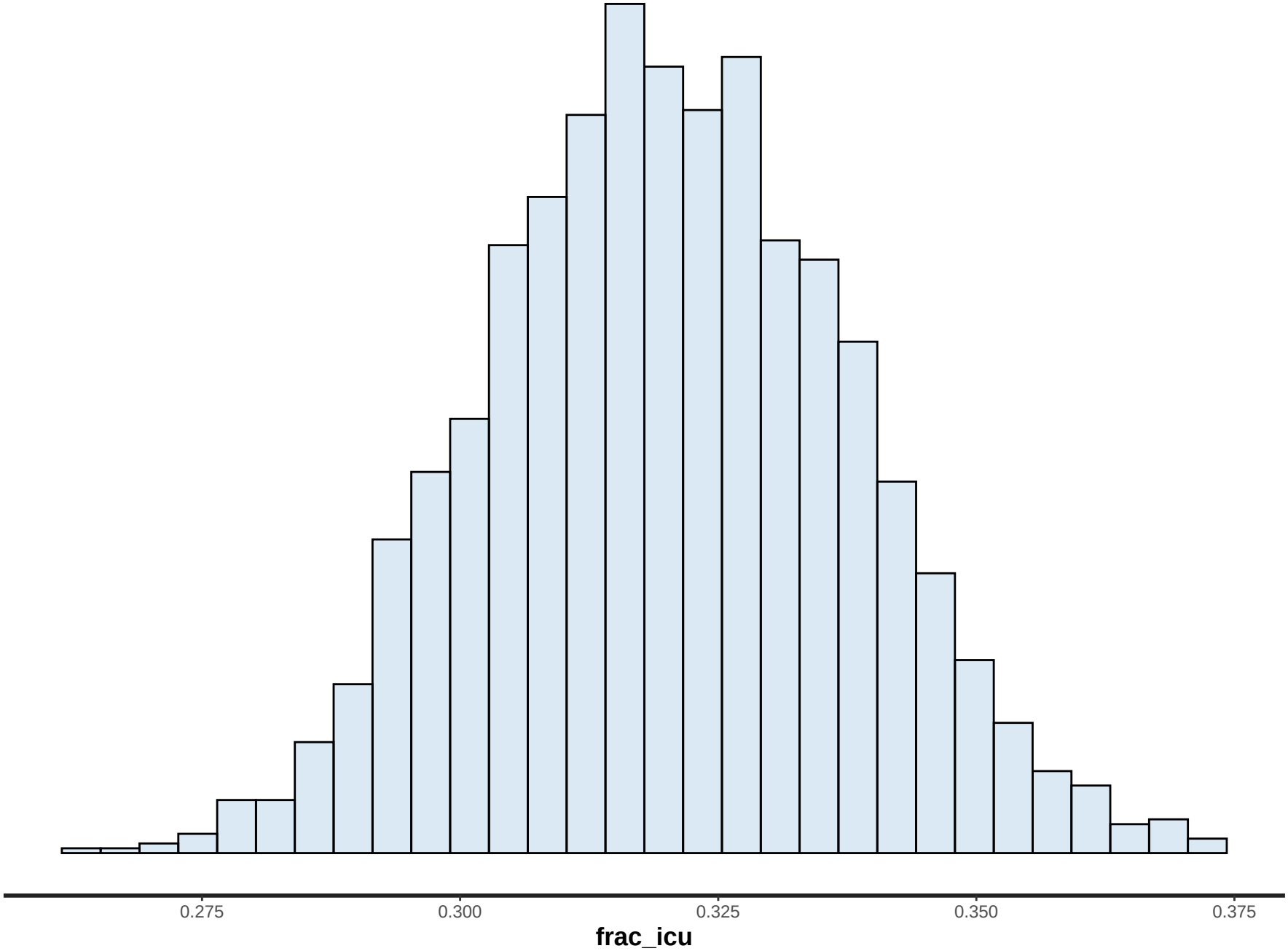

2
4
6
8
duration_rec_mild

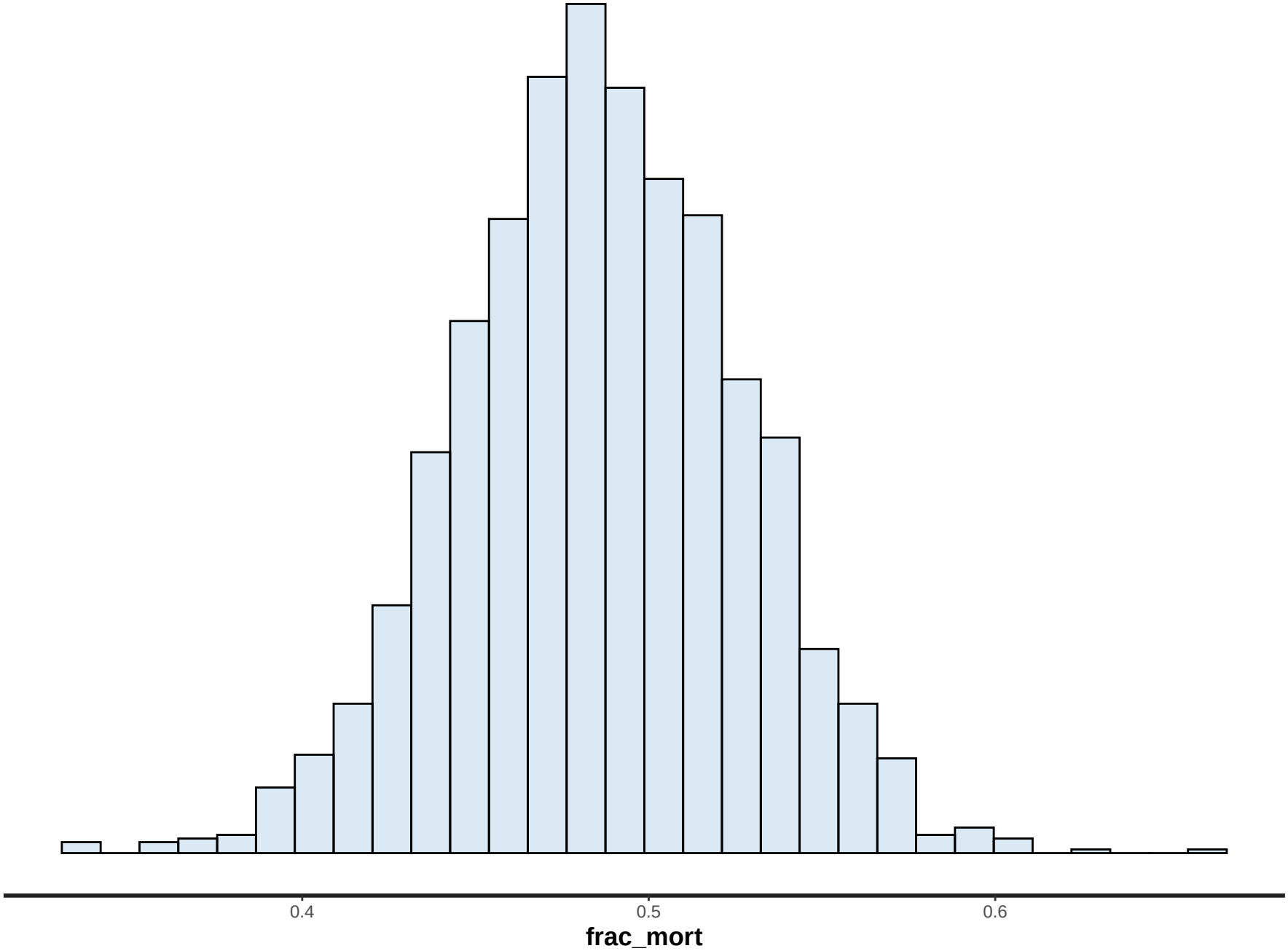

5
10
duration_pre_hosp

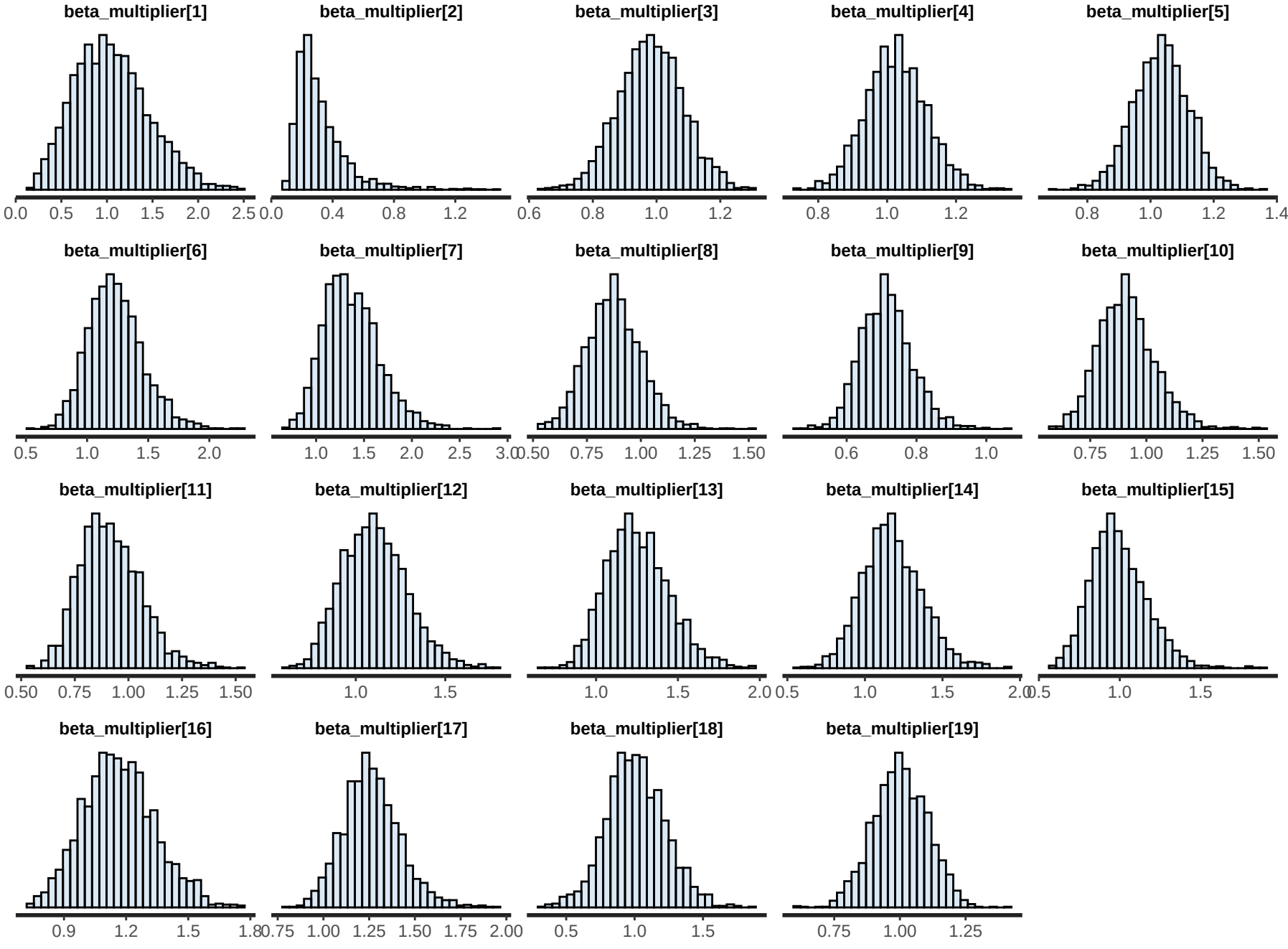

8
10
12
14
duration_hosp_mod

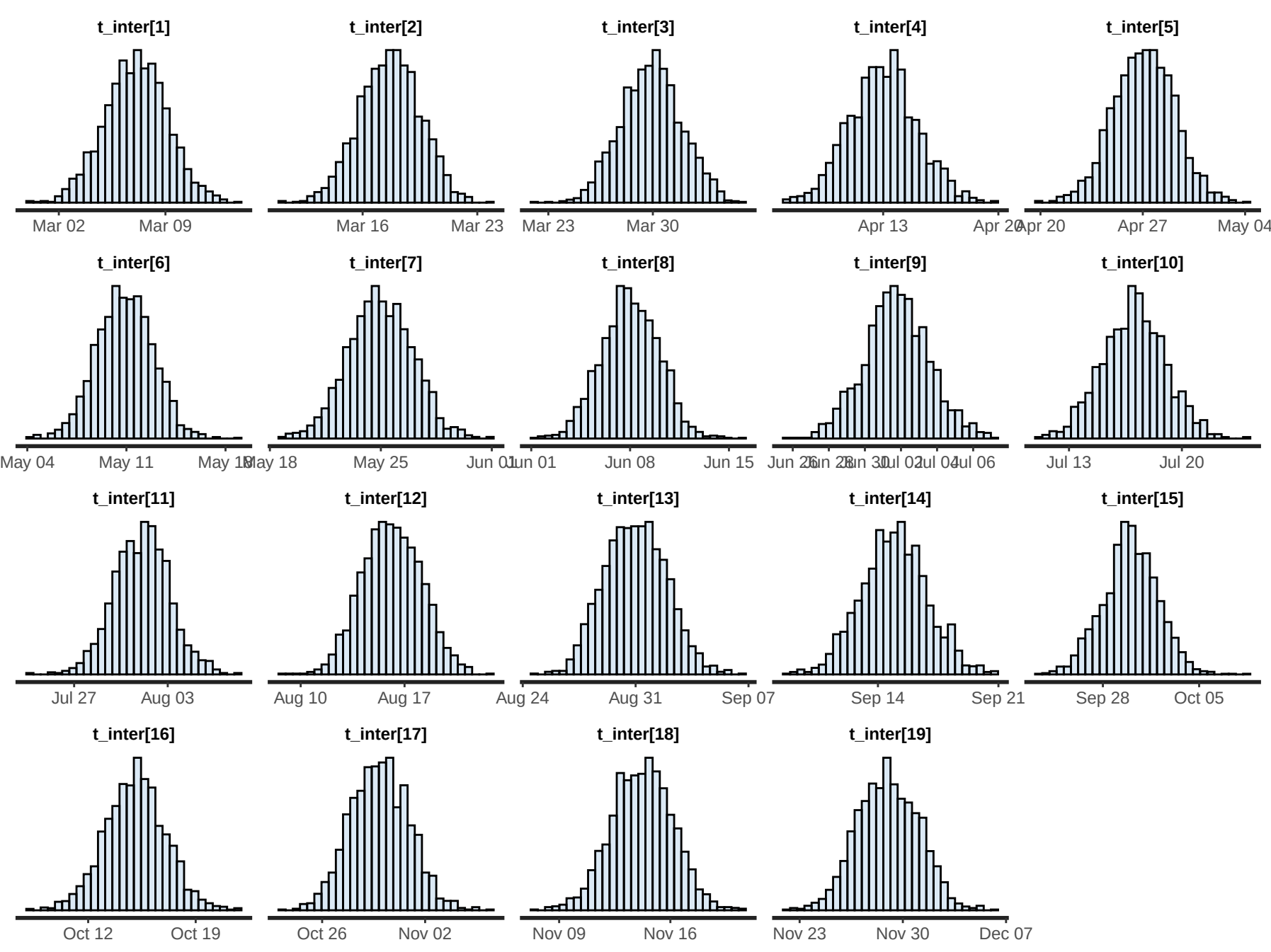

8
10
12
14
duration_hosp_icu

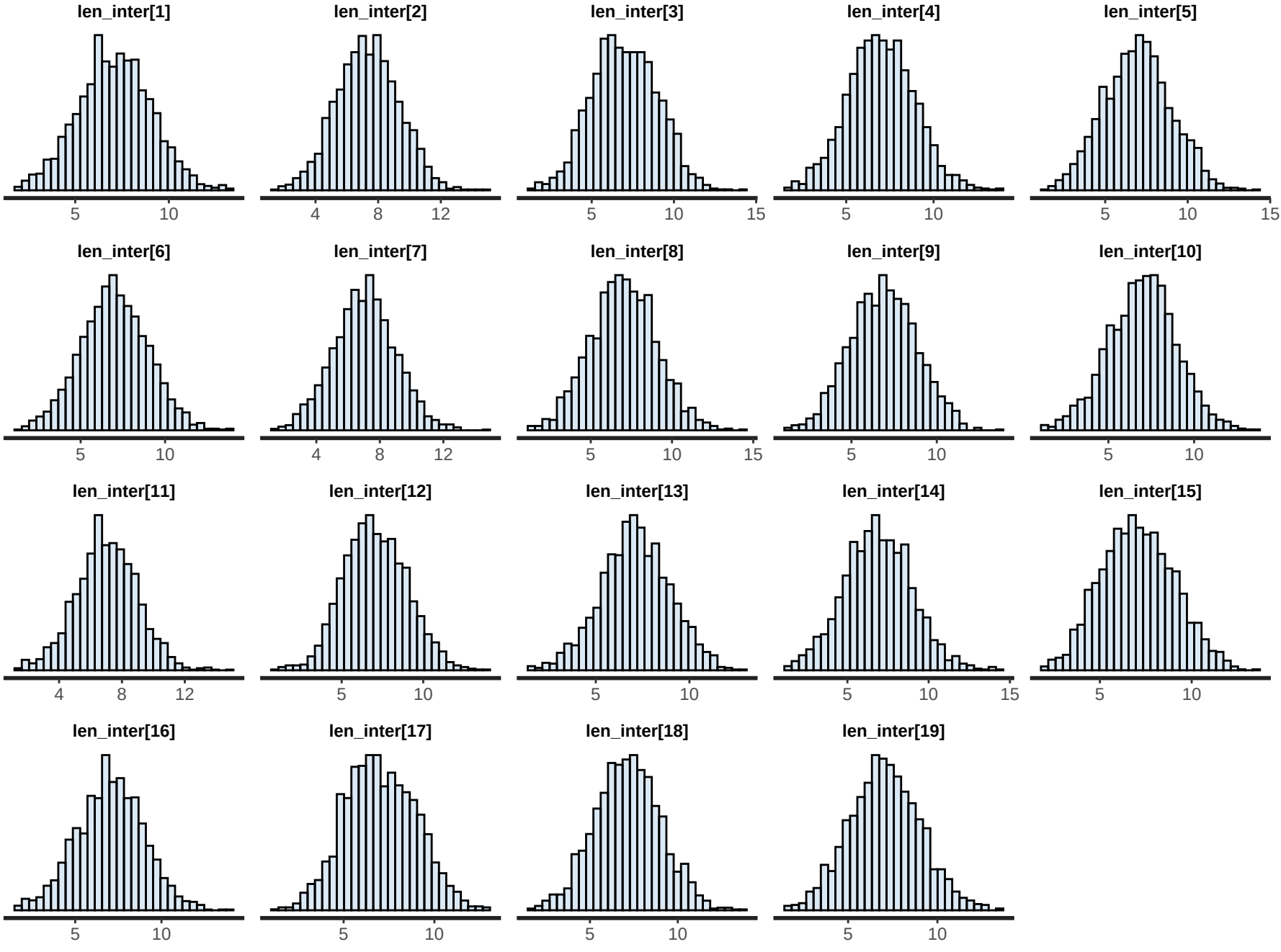

0.000
0.025
0.050
0.075
0.100
0.125
frac_hosp

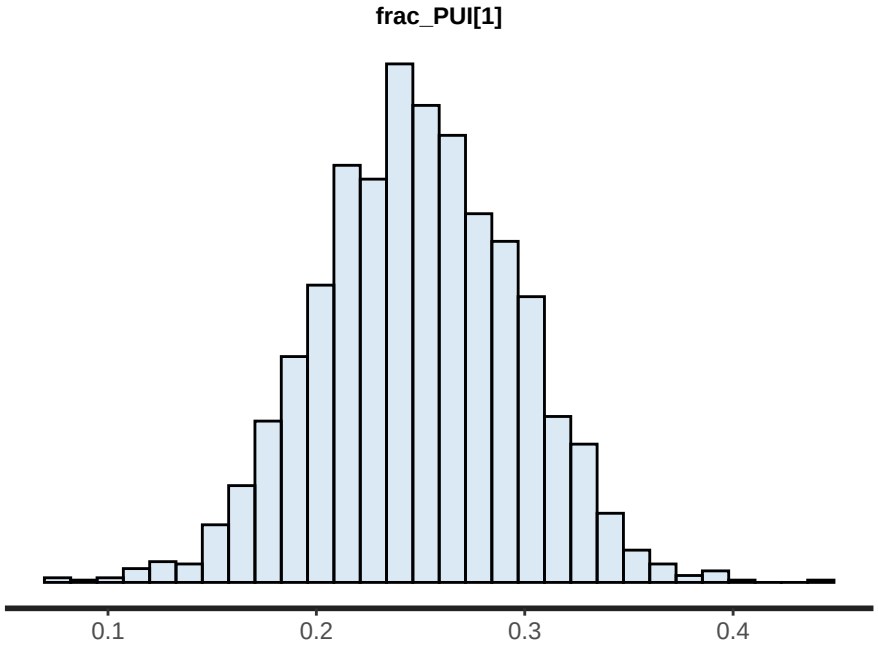

0.275
0.300
0.325
0.350
0.375
frac_icu

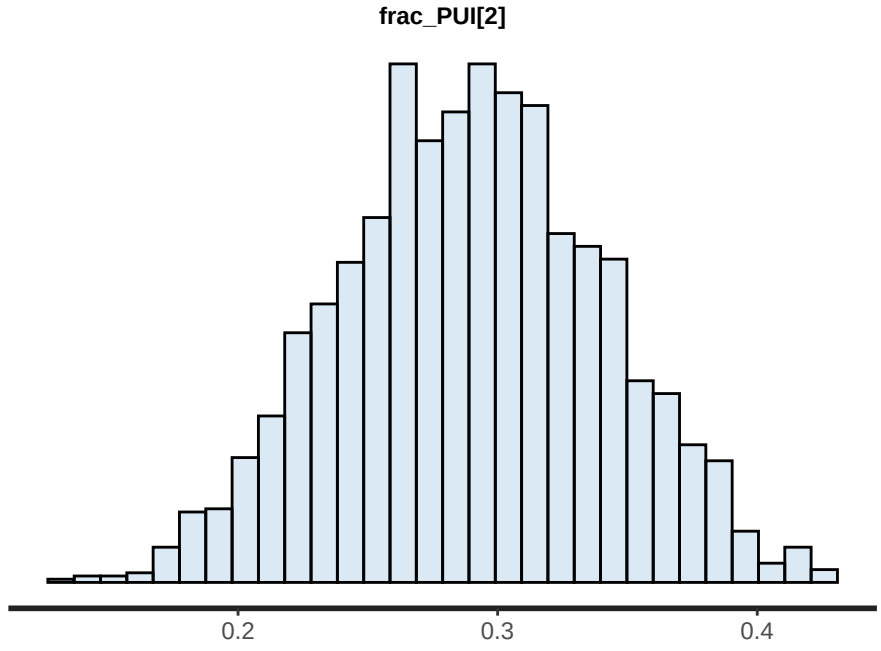

0.4
0.5
0.6
frac_mort

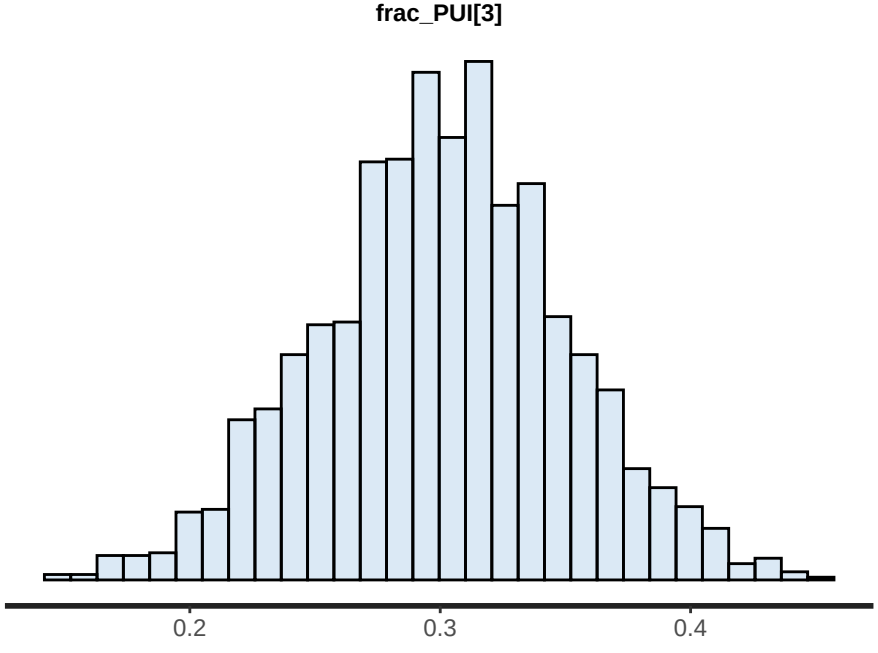

beta_multiplier[1]
0.0 0.5 1.0 1.5 2.0 2.5
beta_multiplier[2]
0.0 0.4 0.8 1.2
beta_multiplier[3]
0.6 0.8 1.0 1.2
beta_multiplier[4]
0.8 1.0 1.2
beta_multiplier[5]
0.8 1.0 1.2 1.4
beta_multiplier[6]
0.5 1.0 1.5 2.0
beta_multiplier[7]
1.0 1.5 2.0 2.5 3.0
beta_multiplier[8]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[9]
0.6 0.8 1.0
beta_multiplier[10]
0.75 1.00 1.25 1.50
beta_multiplier[11]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[12]
1.0 1.5
beta_multiplier[13]
1.0 1.5 2.0
beta_multiplier[14]
0.5 1.0 1.5 2.0
beta_multiplier[15]
0.5 1.0 1.5
beta_multiplier[16]
0.9 1.2 1.5 1.8
beta_multiplier[17]
0.75 1.00 1.25 1.50 1.75 2.00
beta_multiplier[18]
0.5 1.0 1.5
beta_multiplier[19]
0.75 1.00 1.25

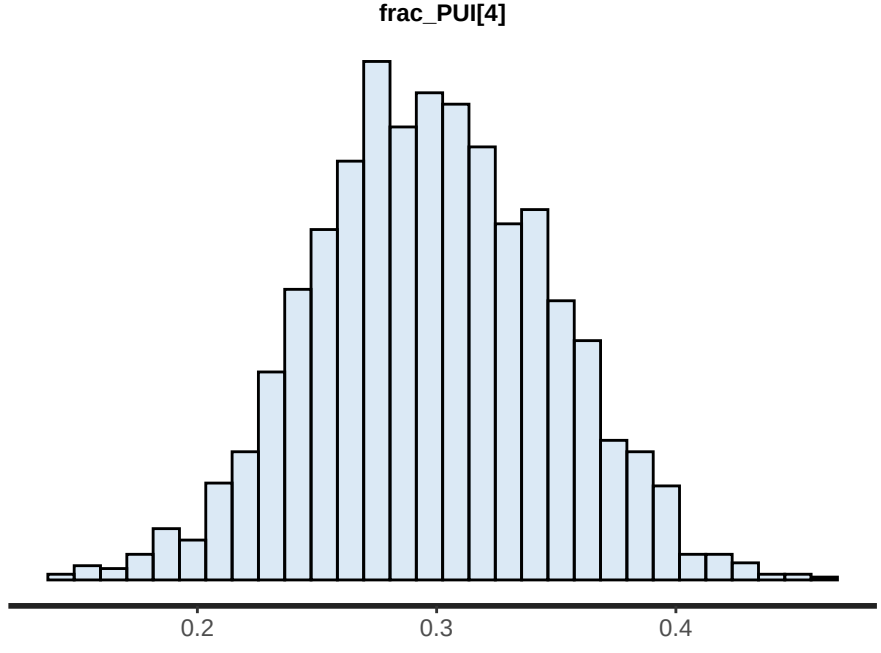

t_inter[1]
Mar 02
Mar 09
t_inter[2]
Mar 16
Mar 23
t_inter[3]
Mar 23
Mar 30
t_inter[4]
Apr 13
Apr 20
t_inter[5]
Apr 20
Apr 27
May 04
t_inter[6]
May 04
May 11
May 18
t_inter[7]
May 18
May 25
Jun 01
t_inter[8]
Jun 01
Jun 08
Jun 15
t_inter[9]
Jun 26
Jun 28
Jun 30
Jul 02
Jul 04
Jul 06
t_inter[10]
Jul 13
Jul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

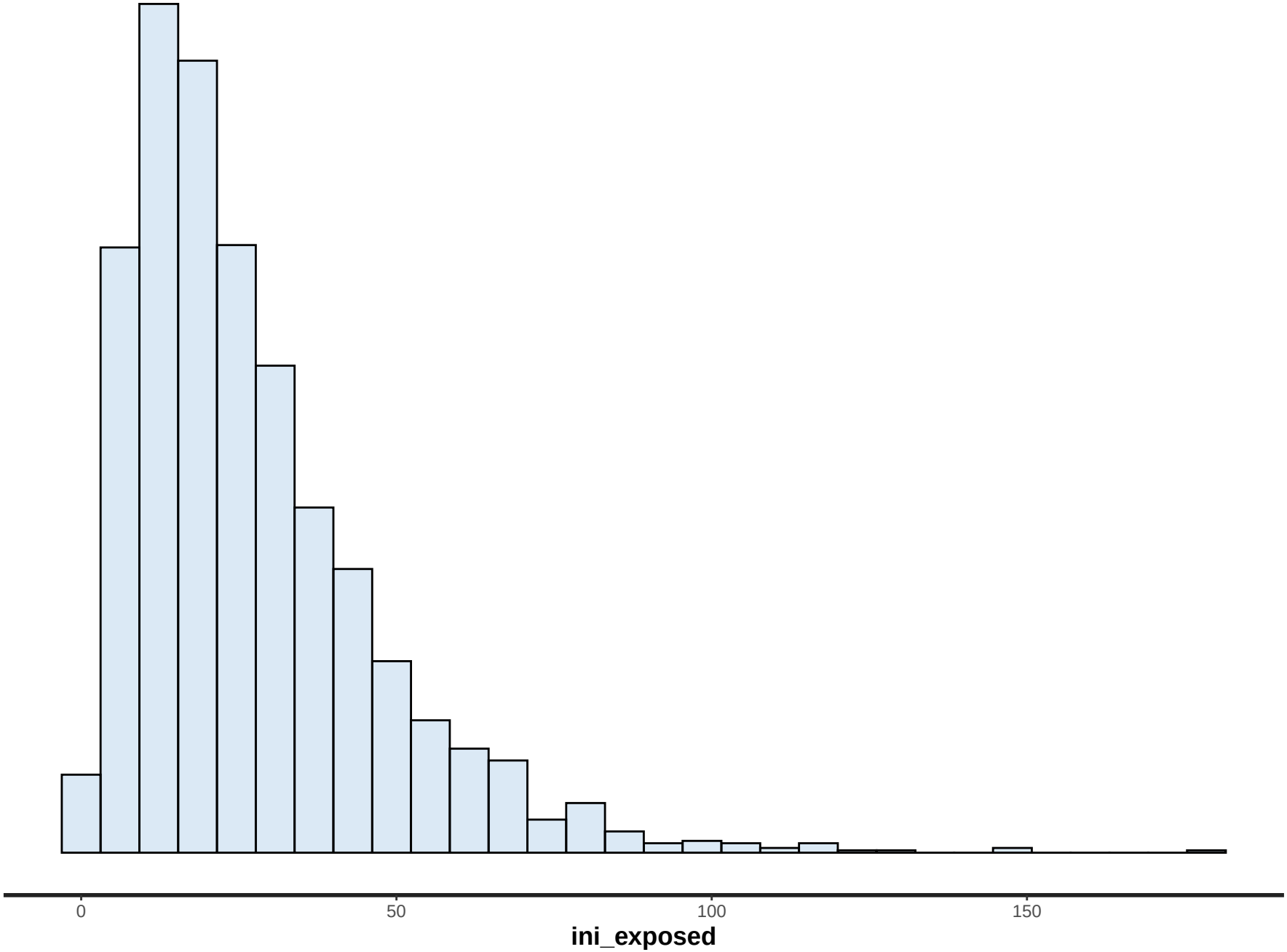

len_inter[1]
len_inter[2]
len_inter[3]
len_inter[4]
len_inter[5]
len_inter[6]
len_inter[7]
len_inter[8]
len_inter[9]
len_inter[10]
len_inter[11]
len_inter[12]
len_inter[13]
len_inter[14]
len_inter[15]
len_inter[16]
len_inter[17]
len_inter[18]
len_inter[19]

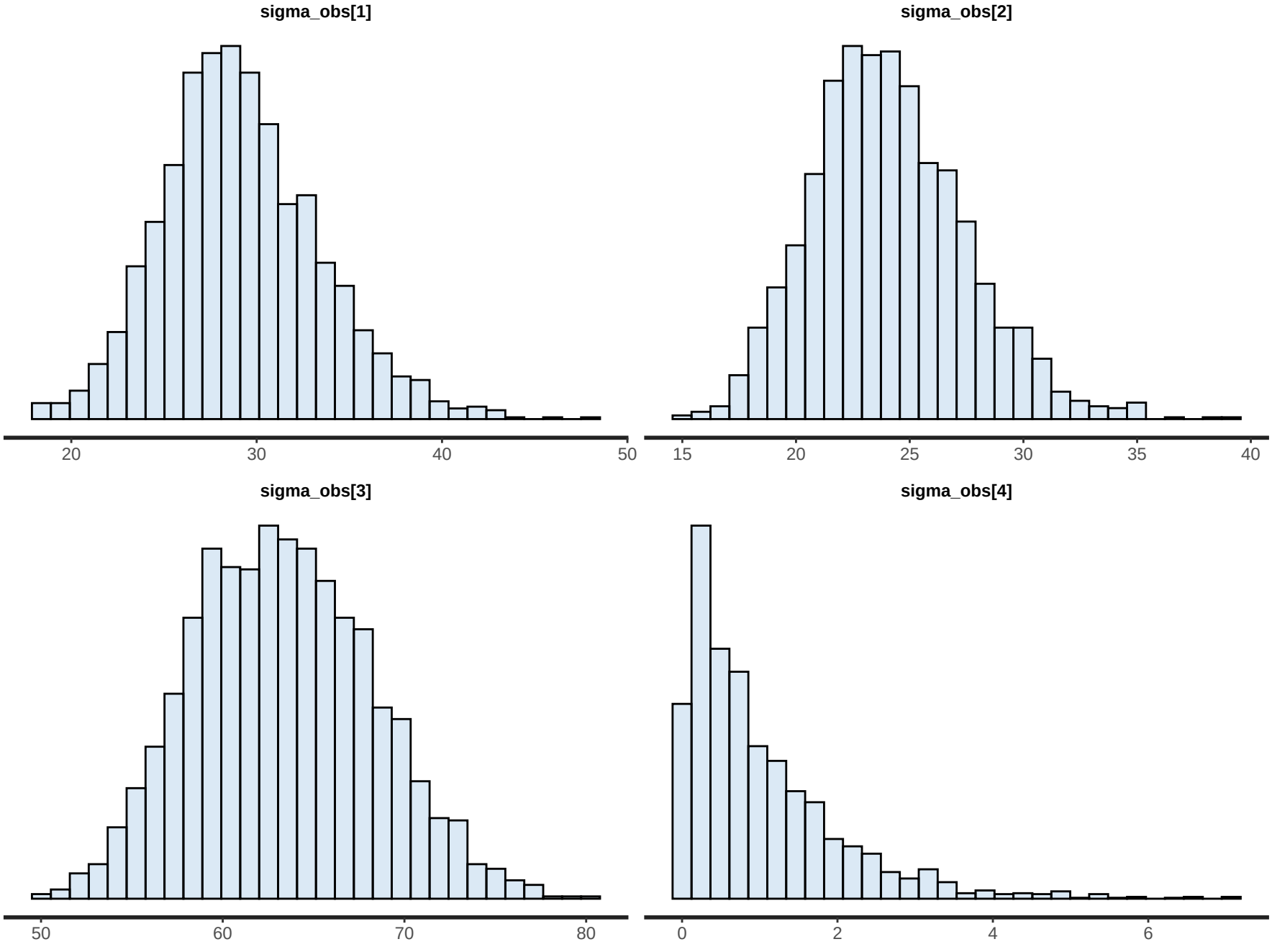

frac_PUI[1]
0.1
0.2
0.3
0.4


frac_PUI[2]
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
50
100
150
ini_exposed


sigma_obs[1]
20
30
40
50
sigma_obs[2]
15
20
25
30
35
40
sigma_obs[3]
50
60
70
80
sigma_obs[4]
0
2
4
6