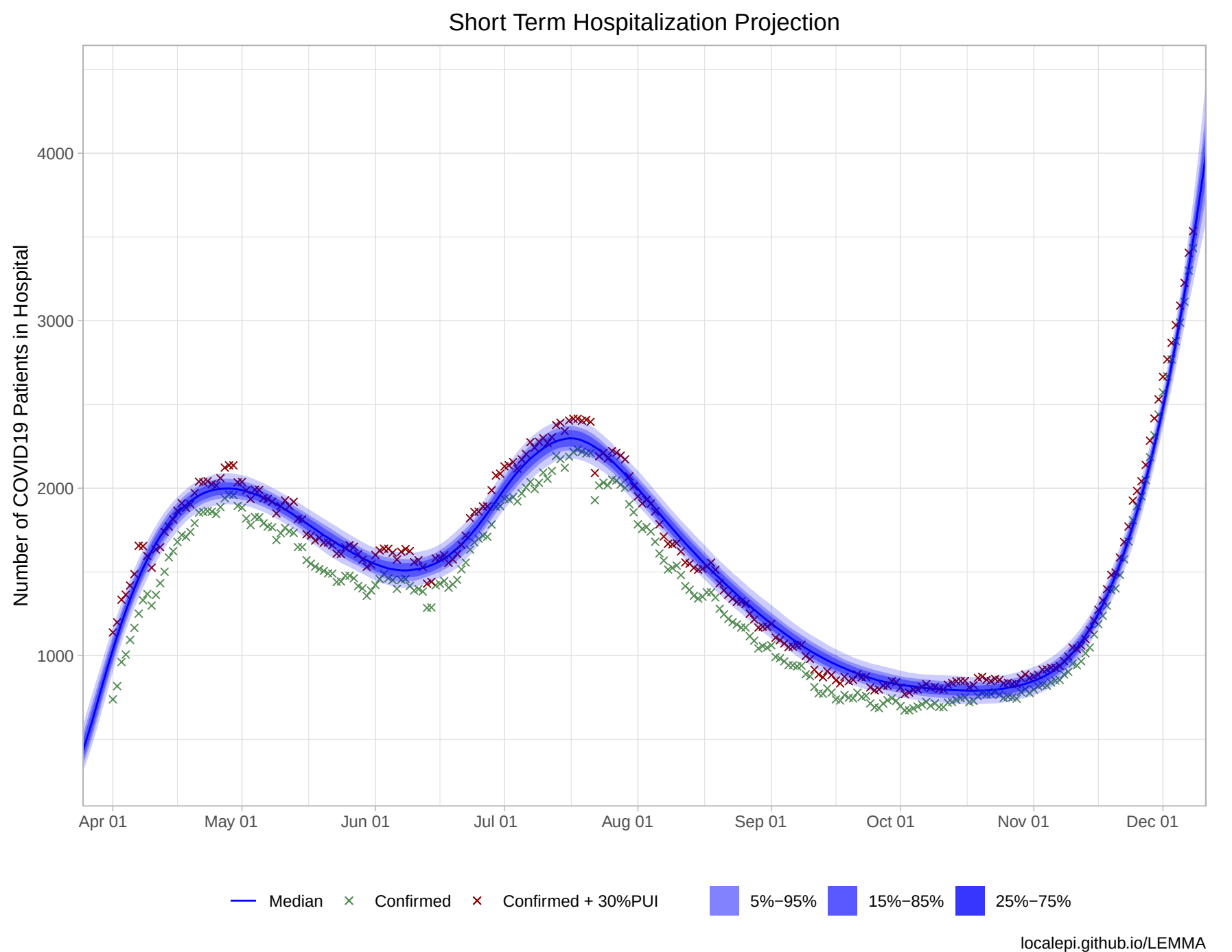
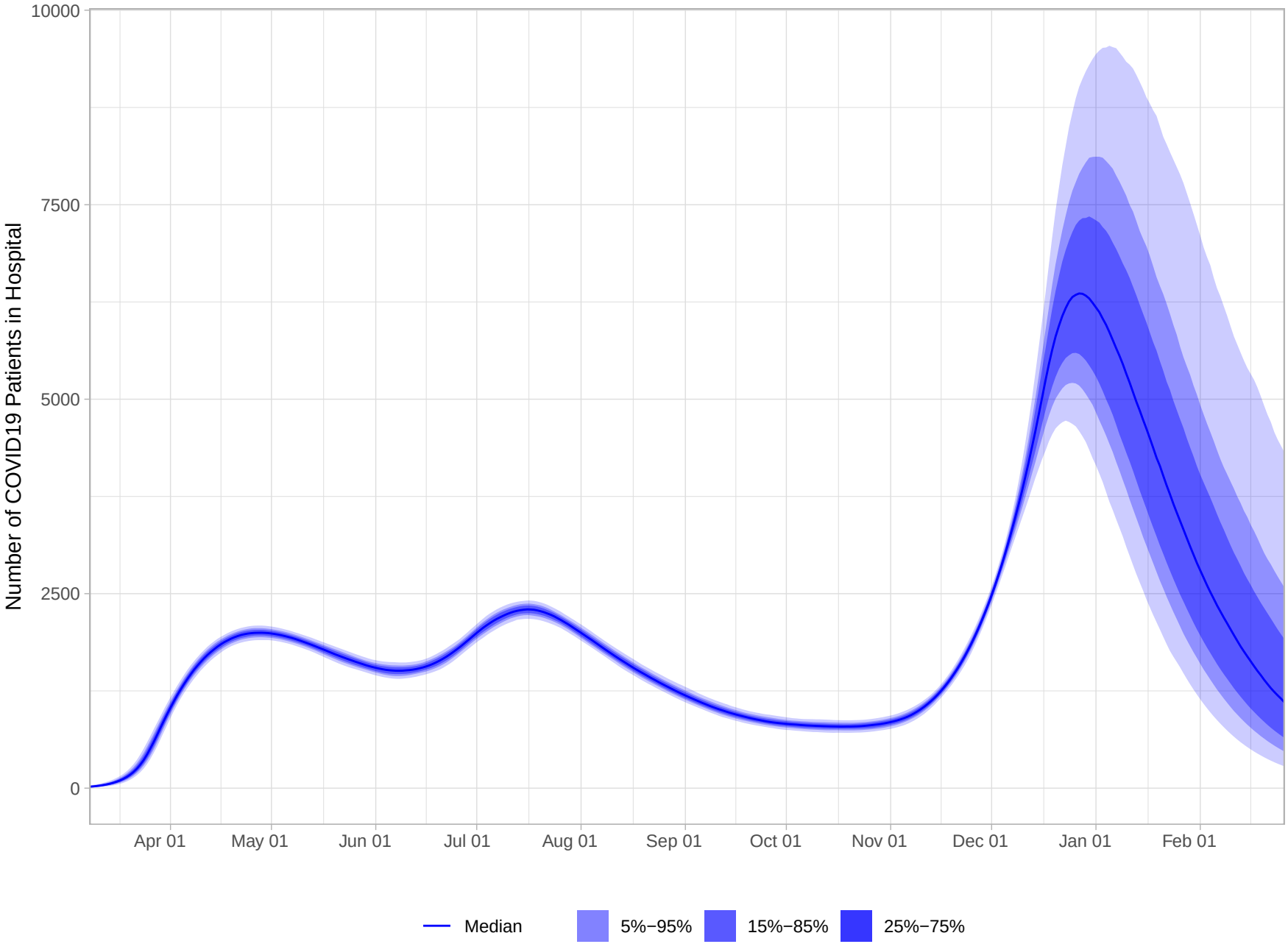
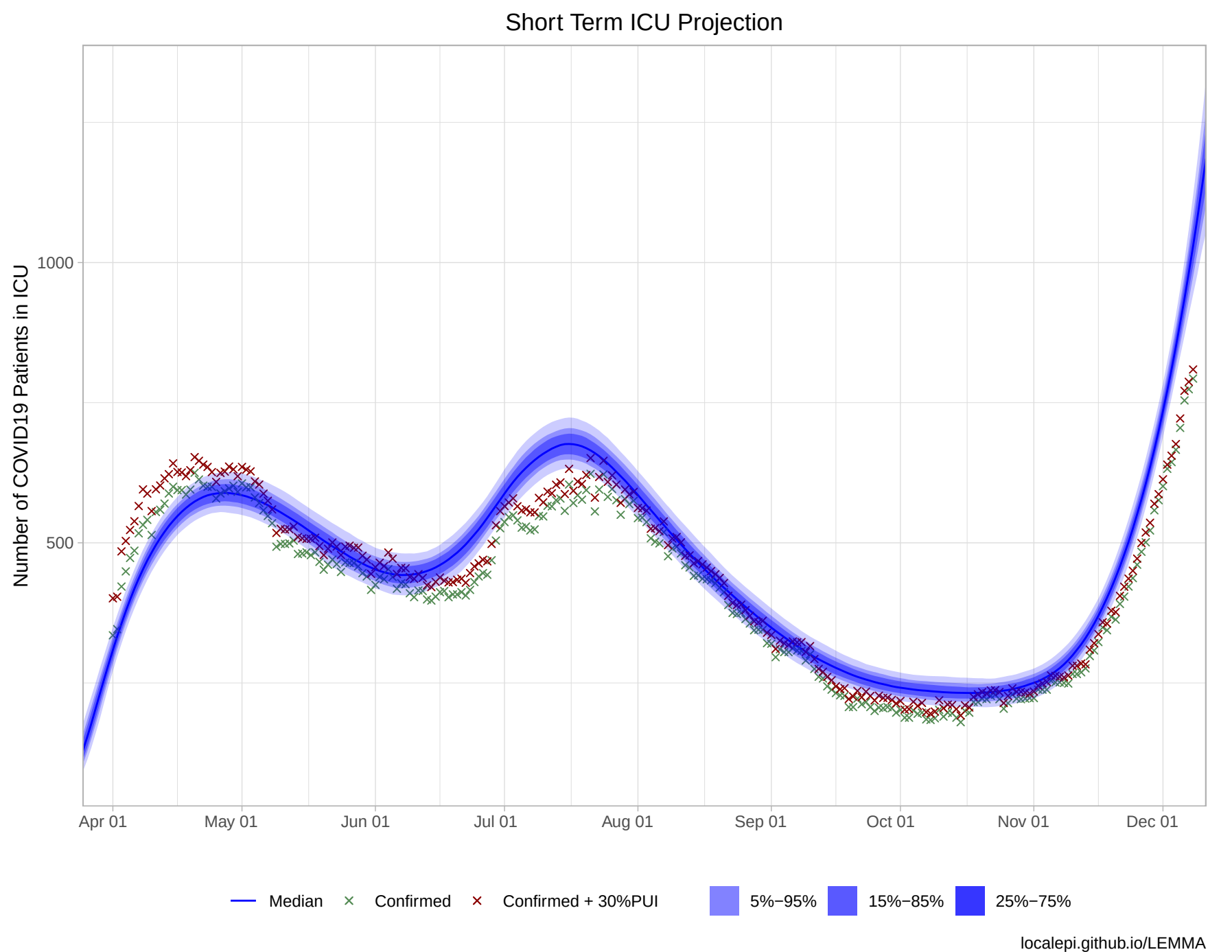
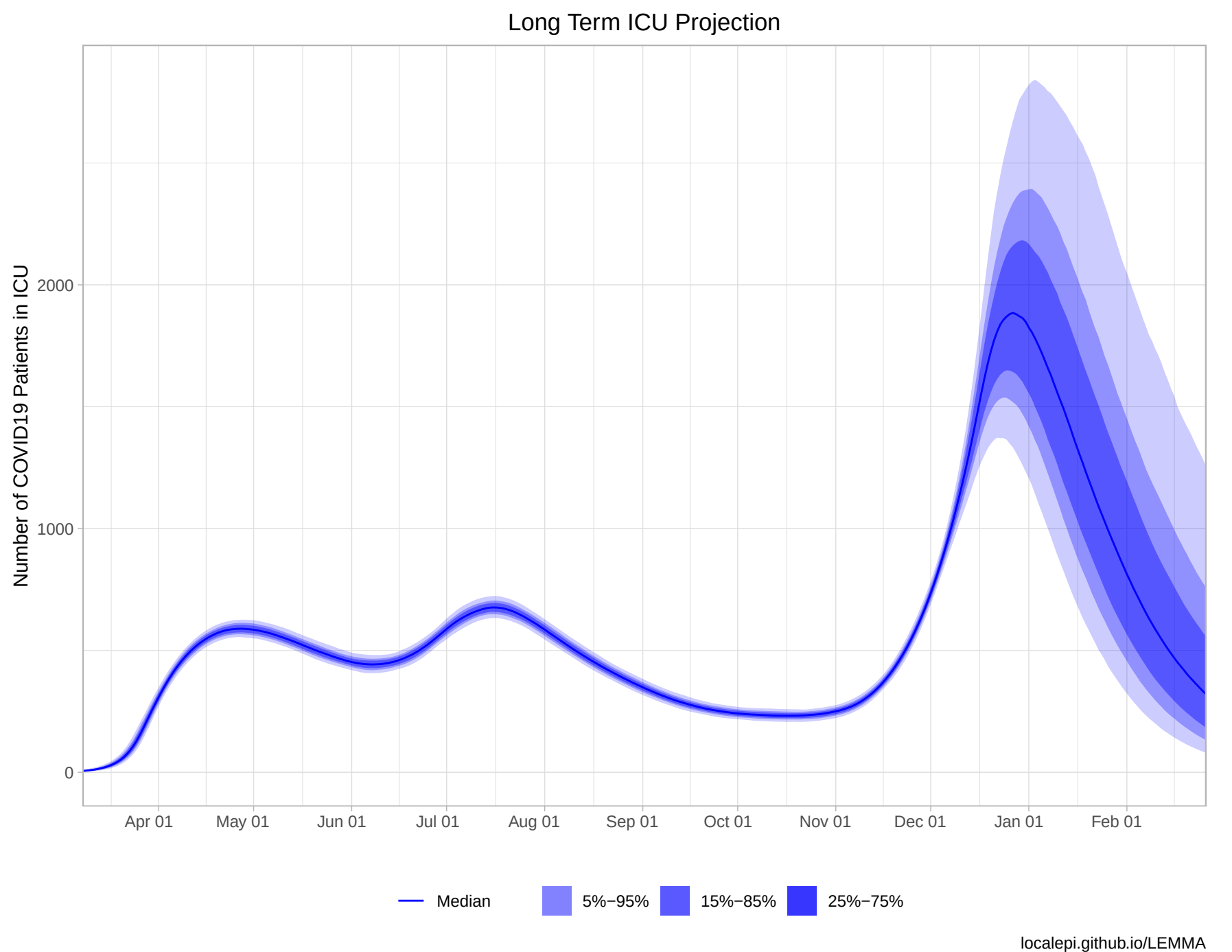
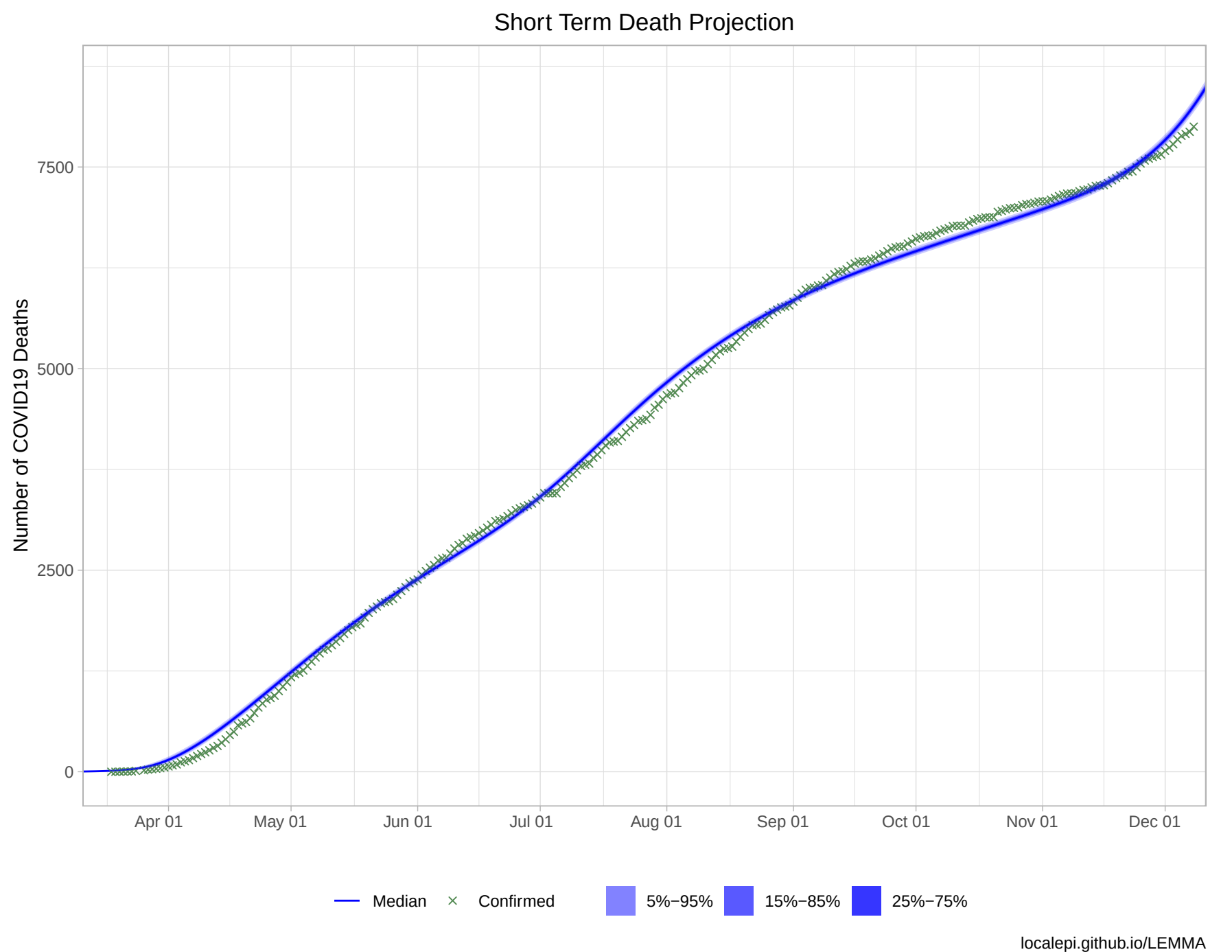
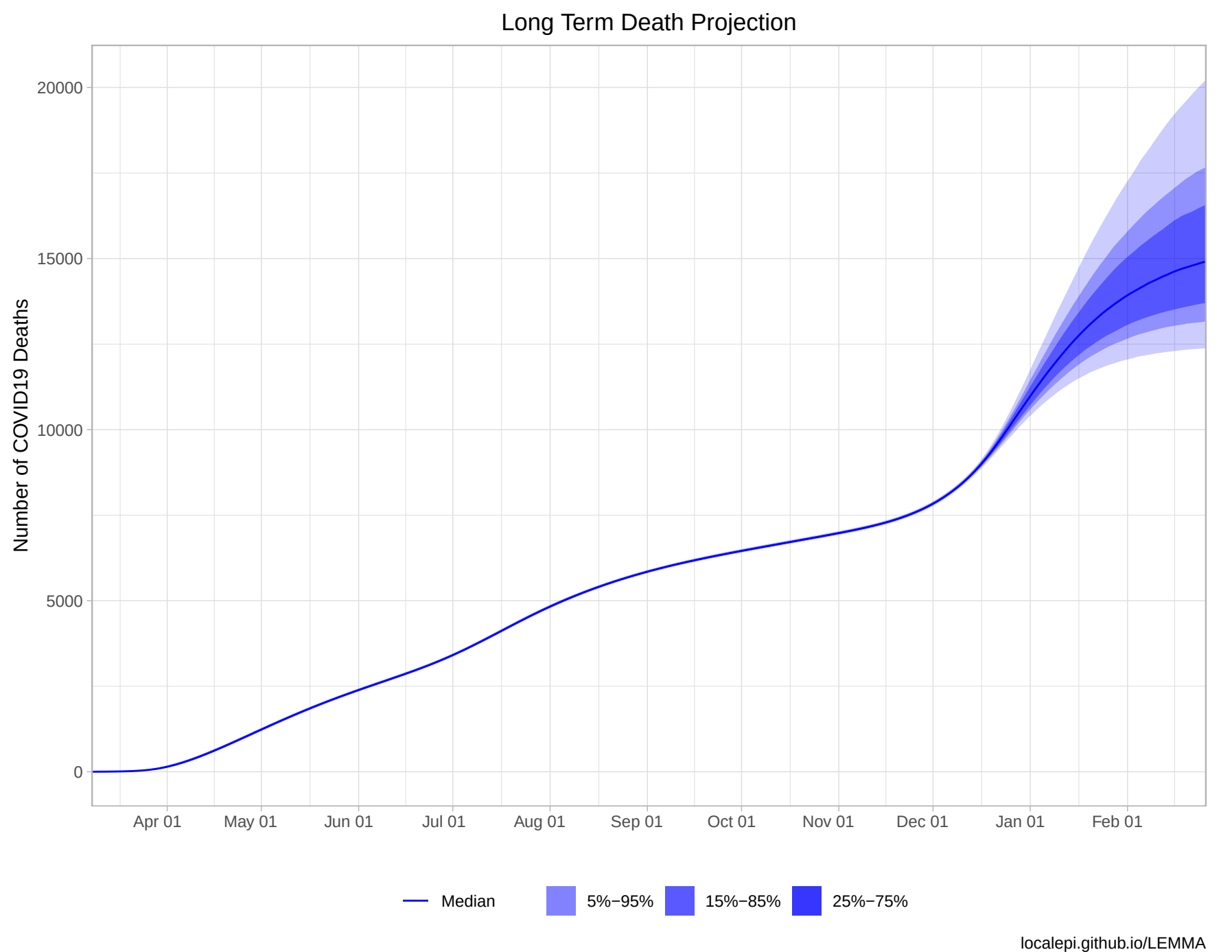

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
4000
3000
2000
1000
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

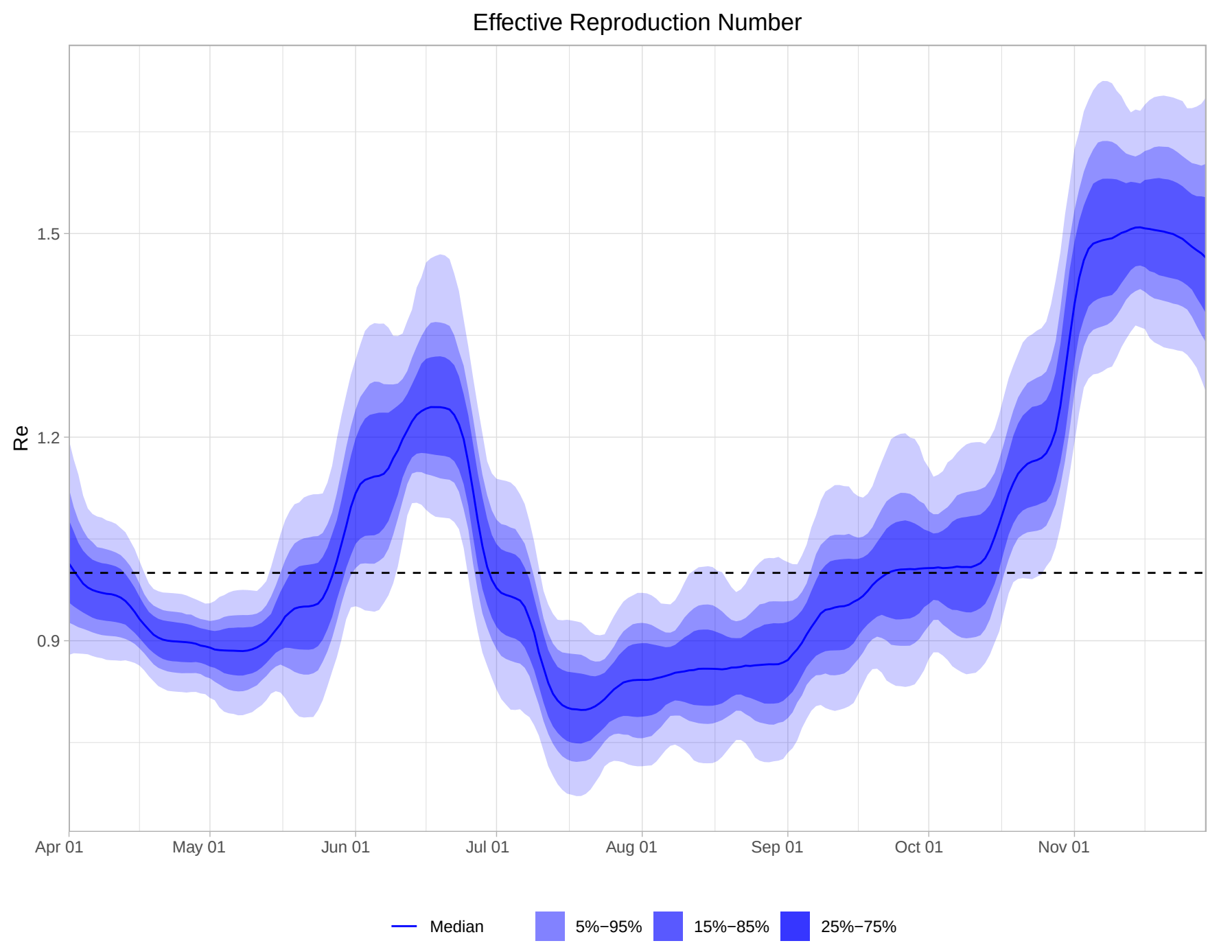

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
10000
7500
5000
2500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
1000
500
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
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

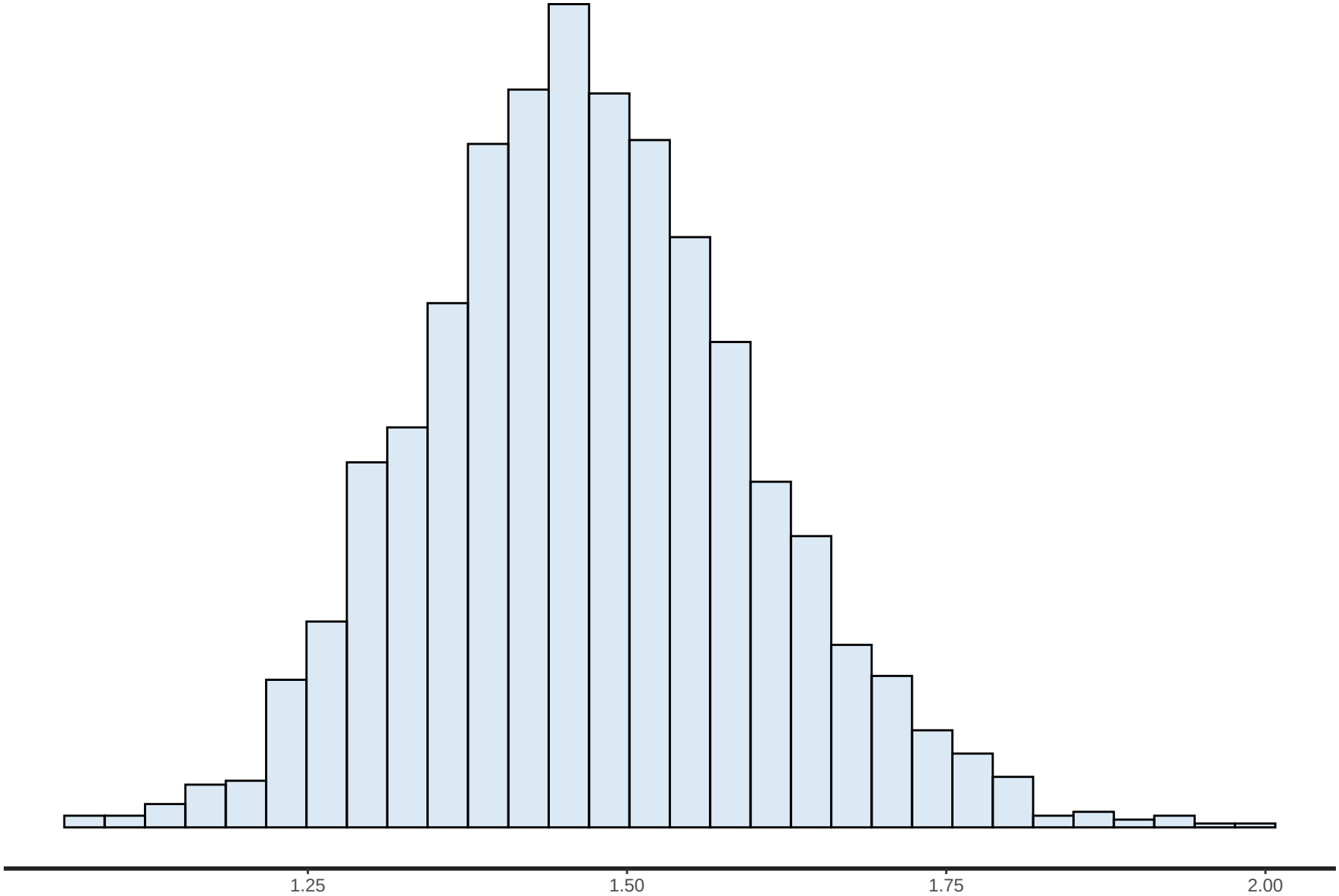

Short Term Death Projection
Number of COVID19 Deaths
7500
5000
2500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

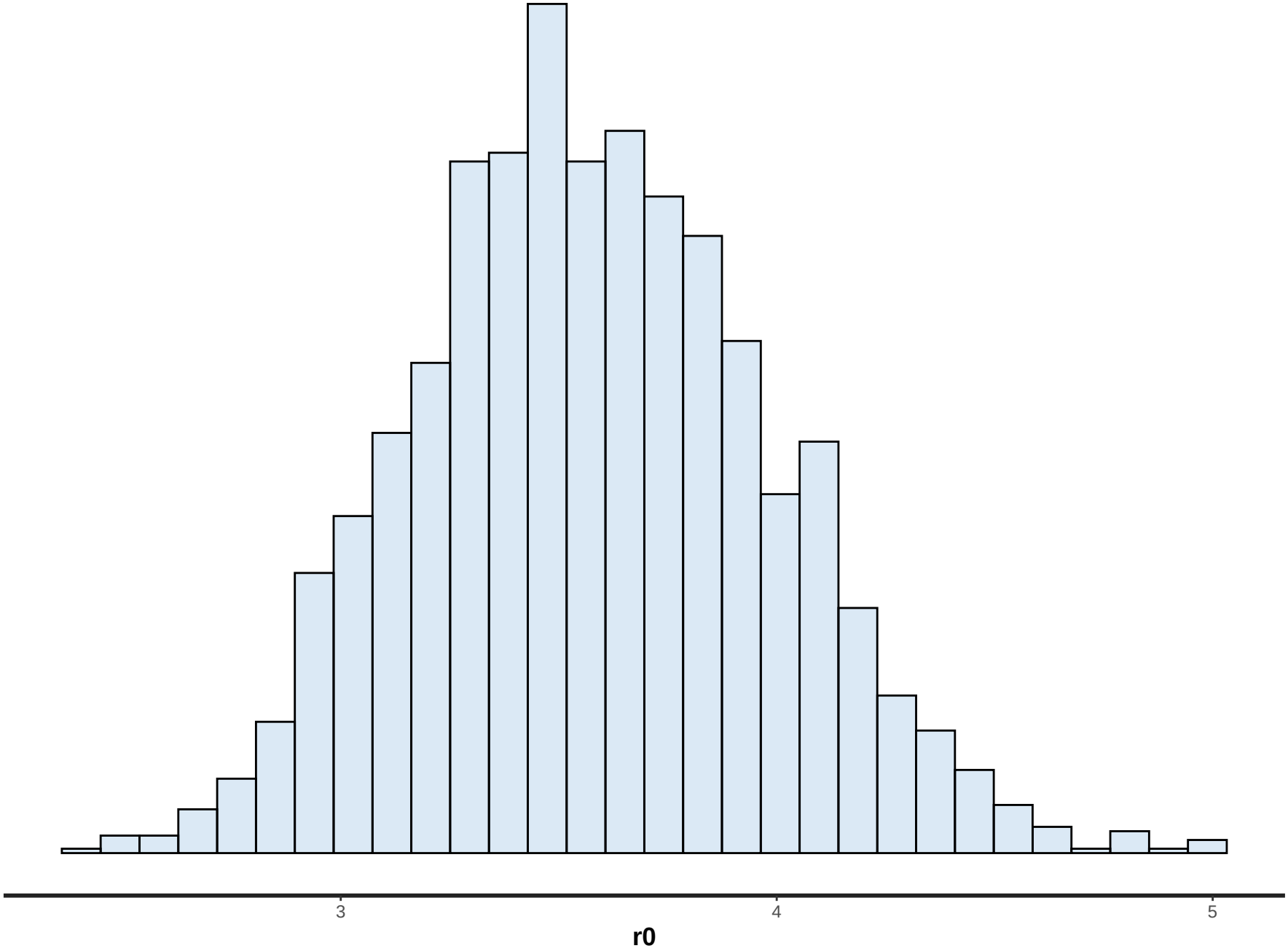

Long Term Death Projection
Number of COVID19 Deaths
20000
15000
10000
5000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

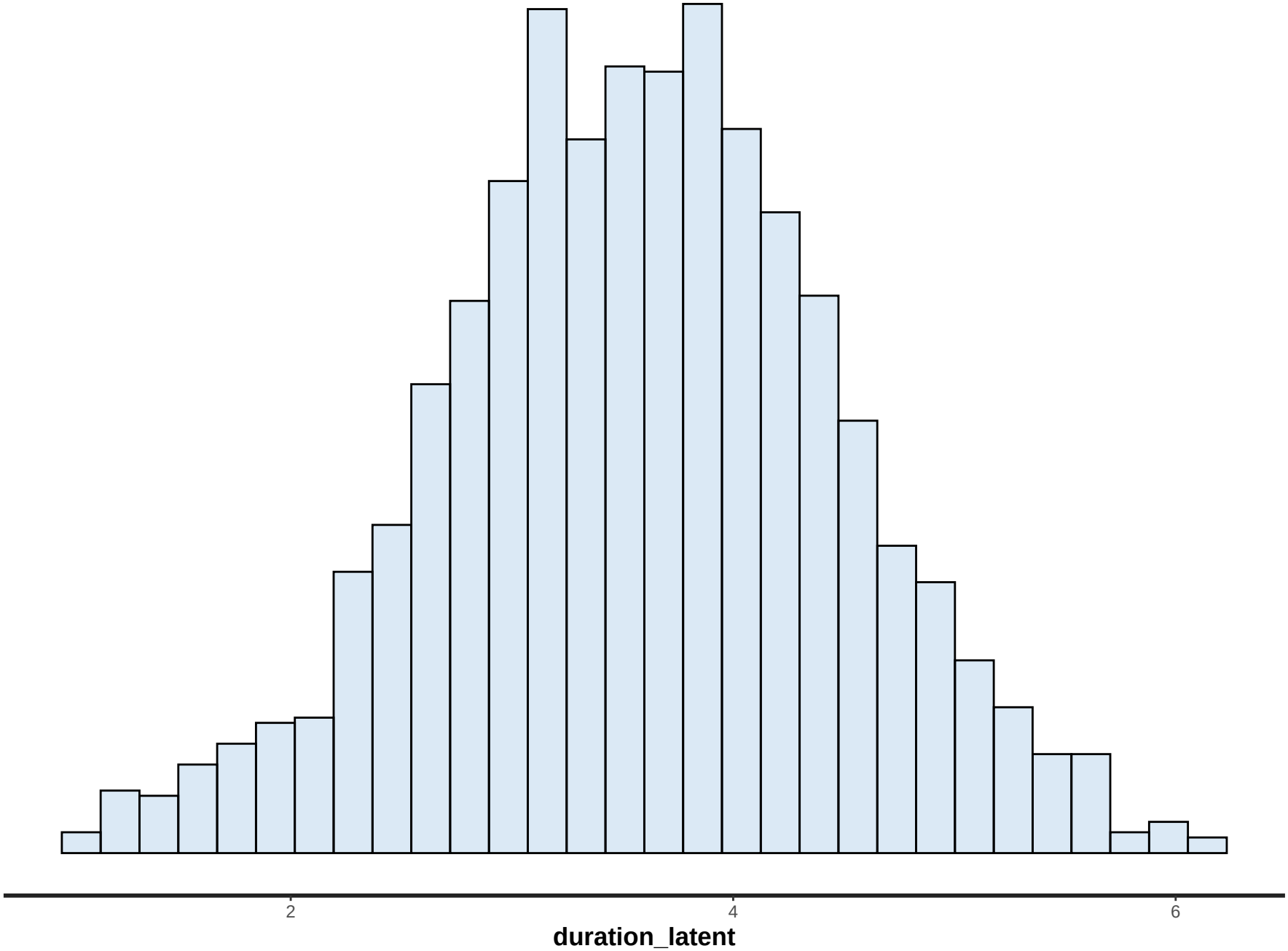

Effective Reproduction Number
Re
1.5
1.2
0.9
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

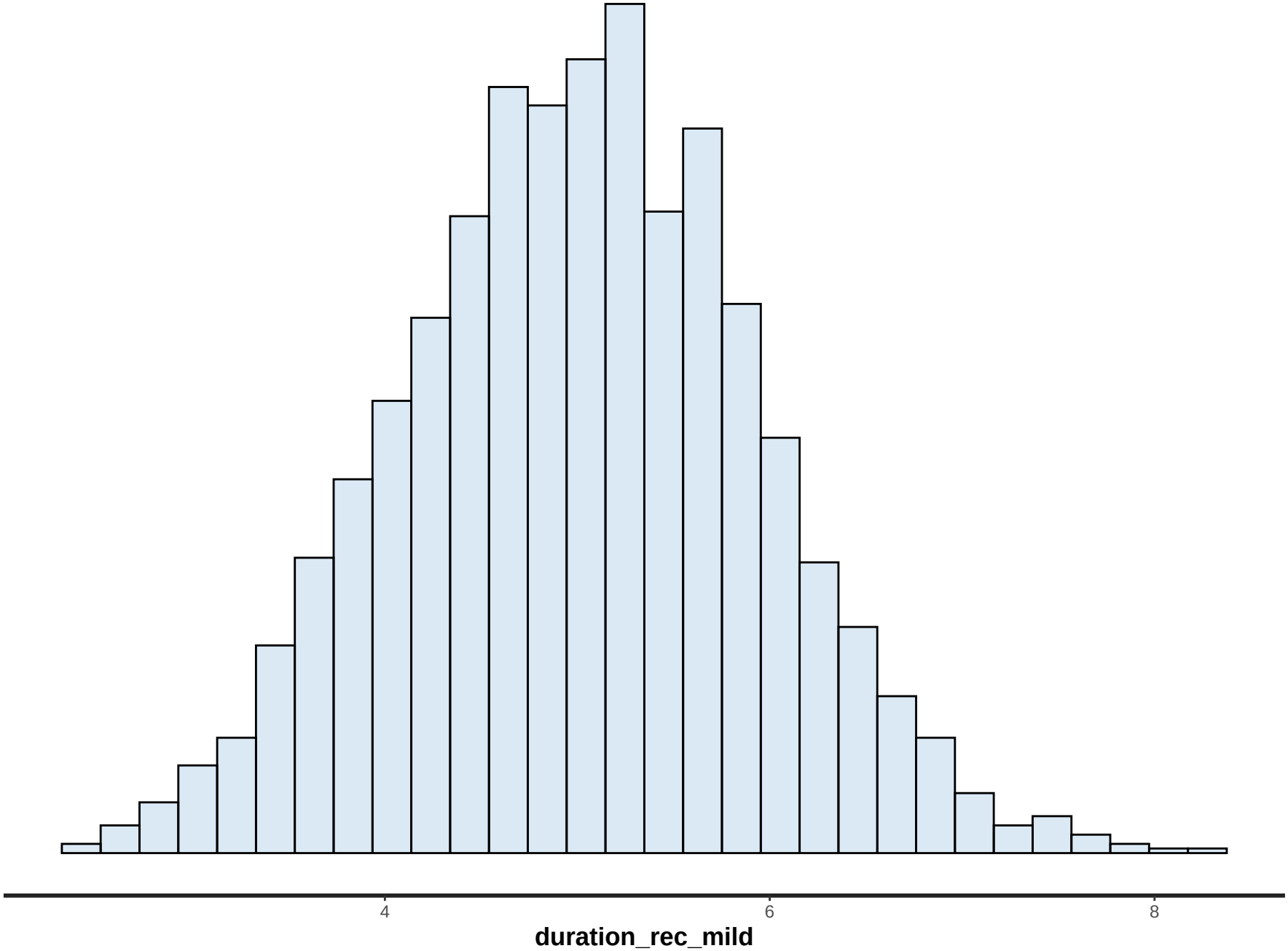
Rt as of 2020−11−29

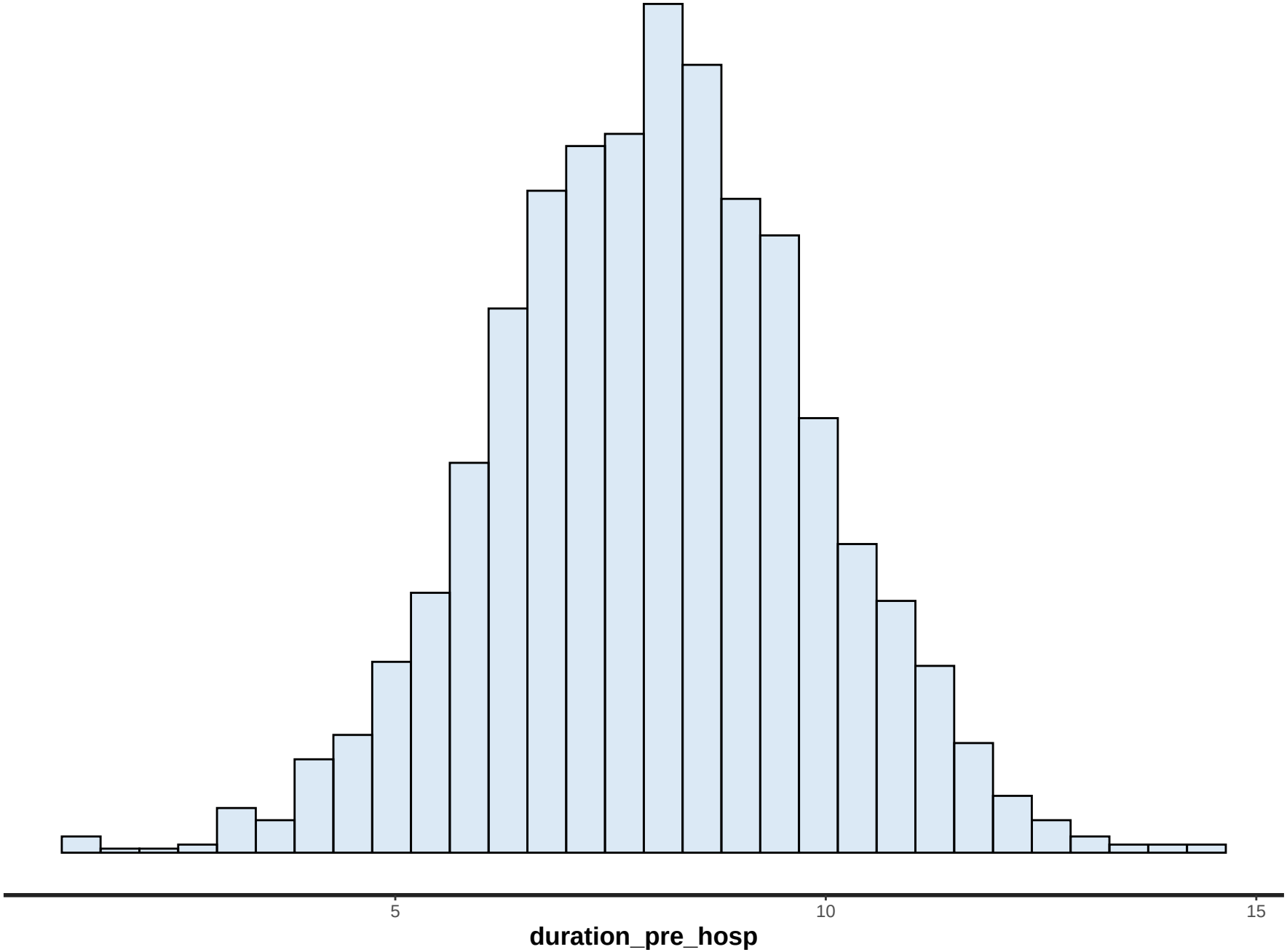
5%	10%	25%	50%	75%	90%	95%
1.27	1.31	1.38	1.46	1.55	1.64	1.70

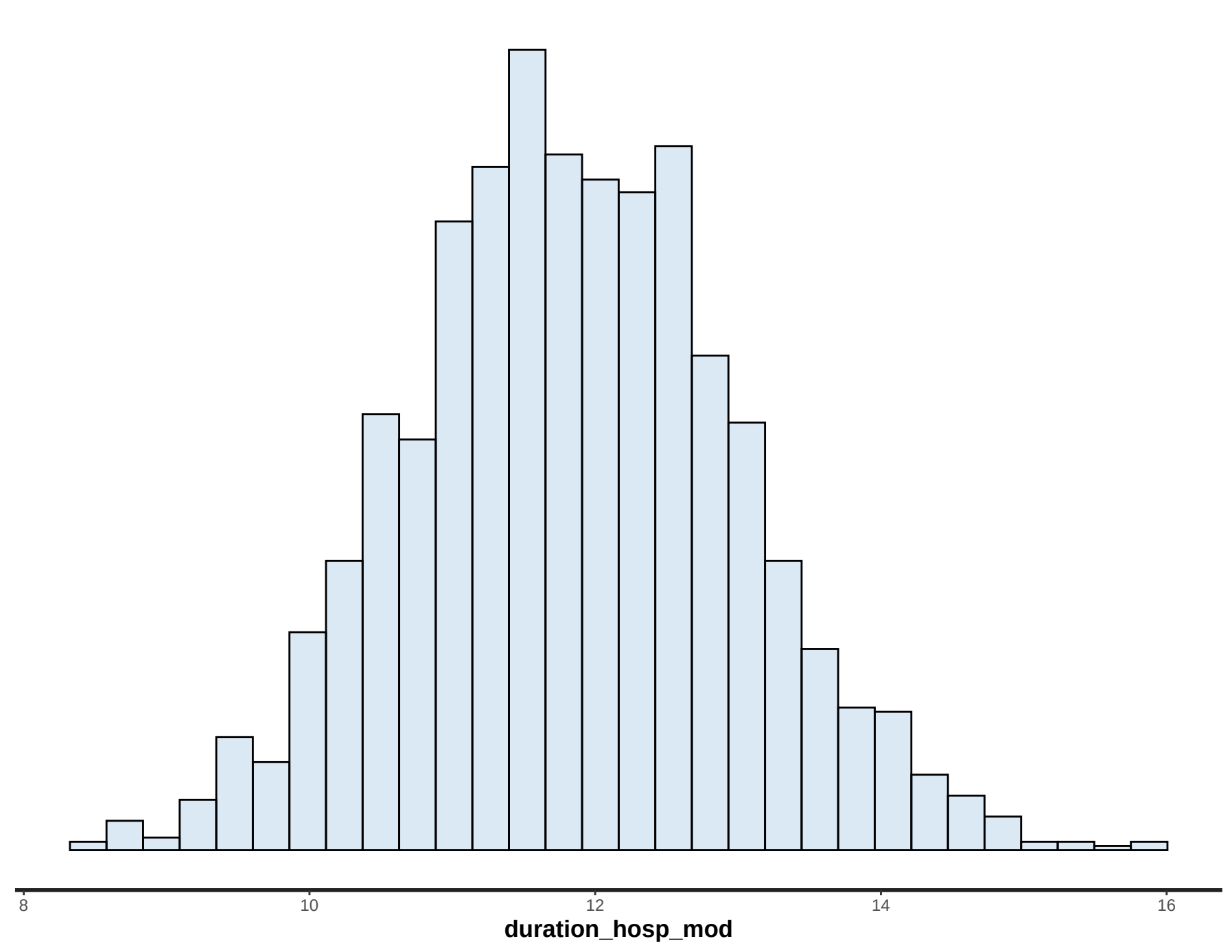


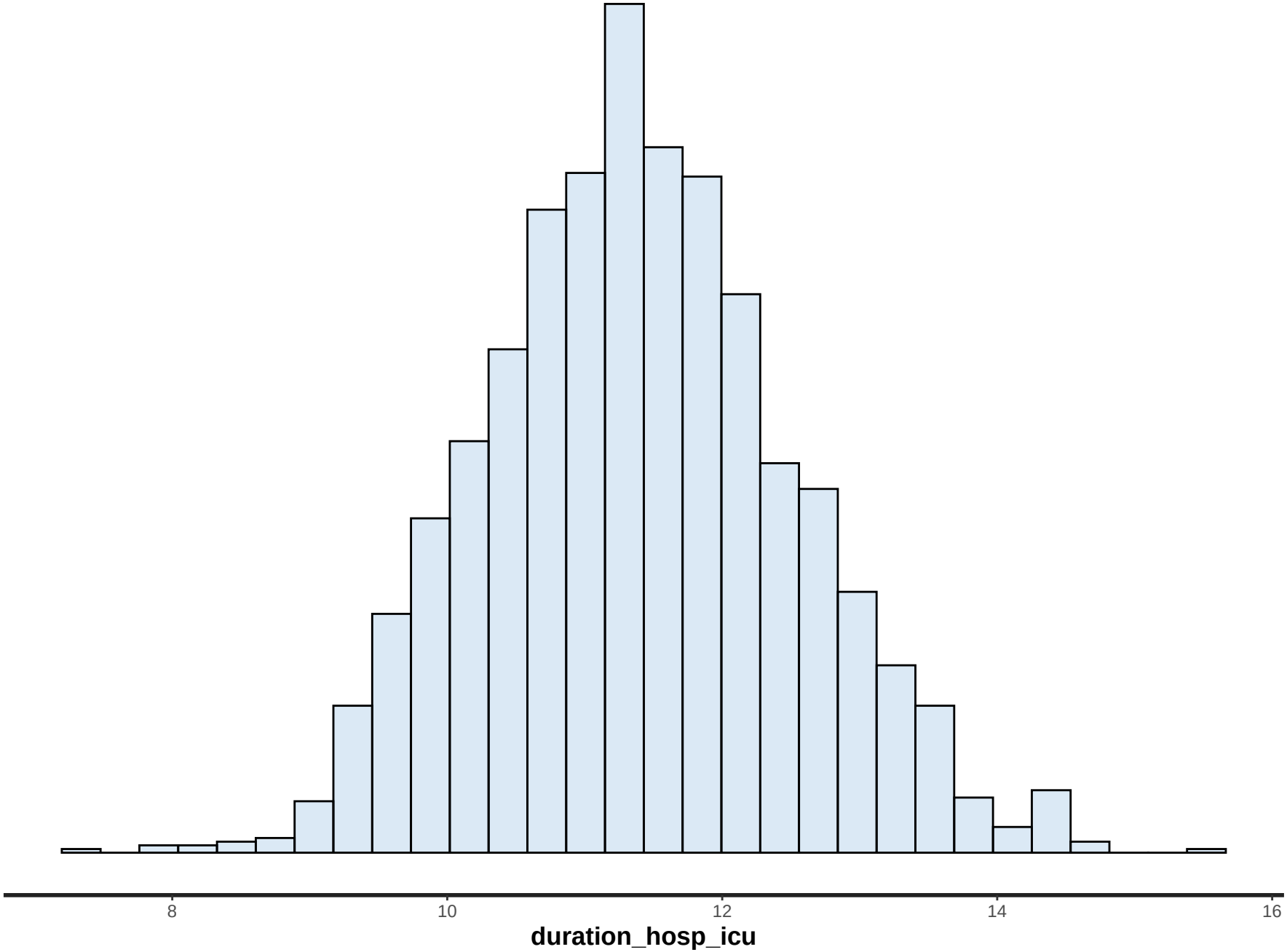

3
4
5
r0

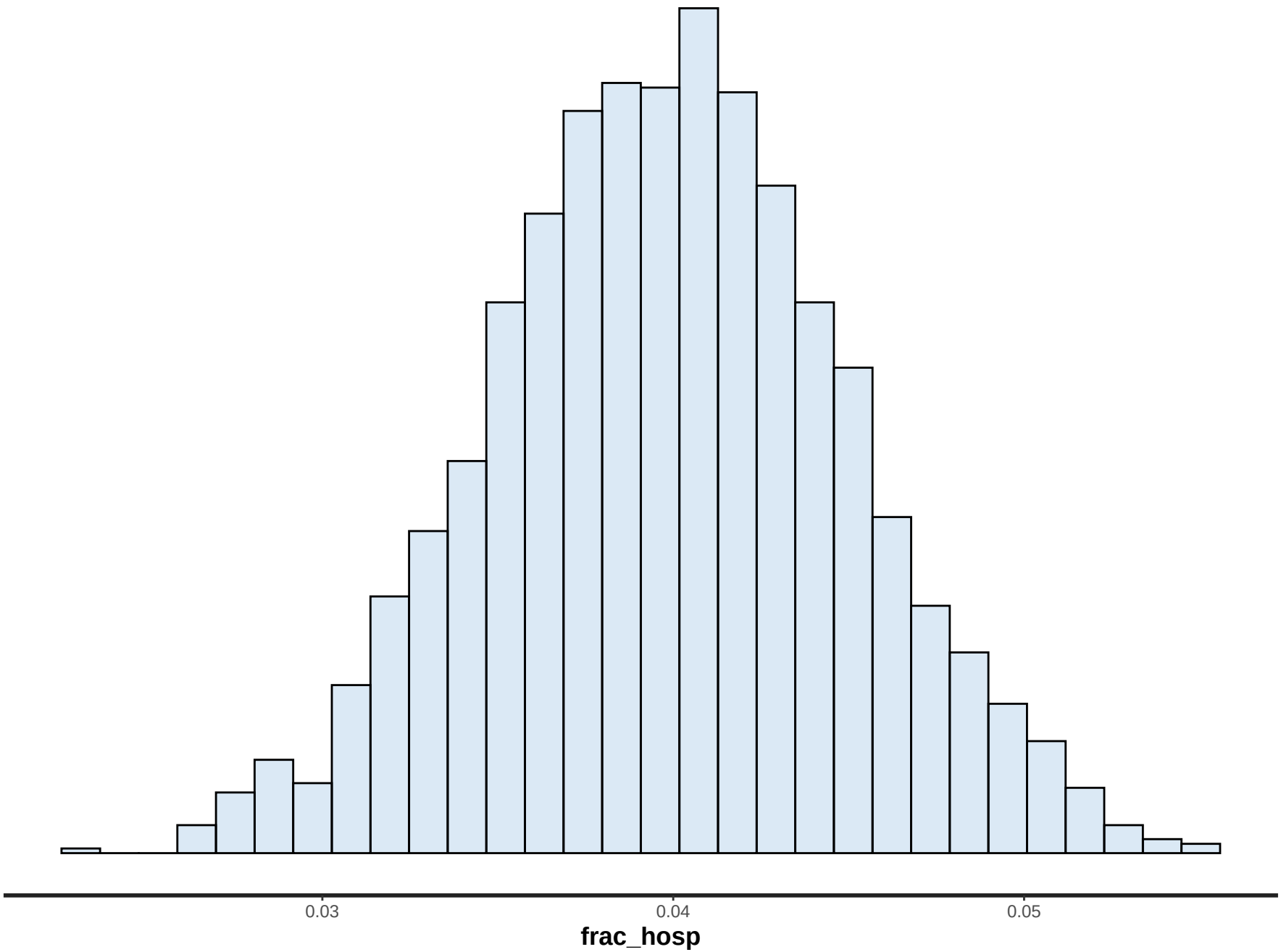

2
4
6
duration_latent

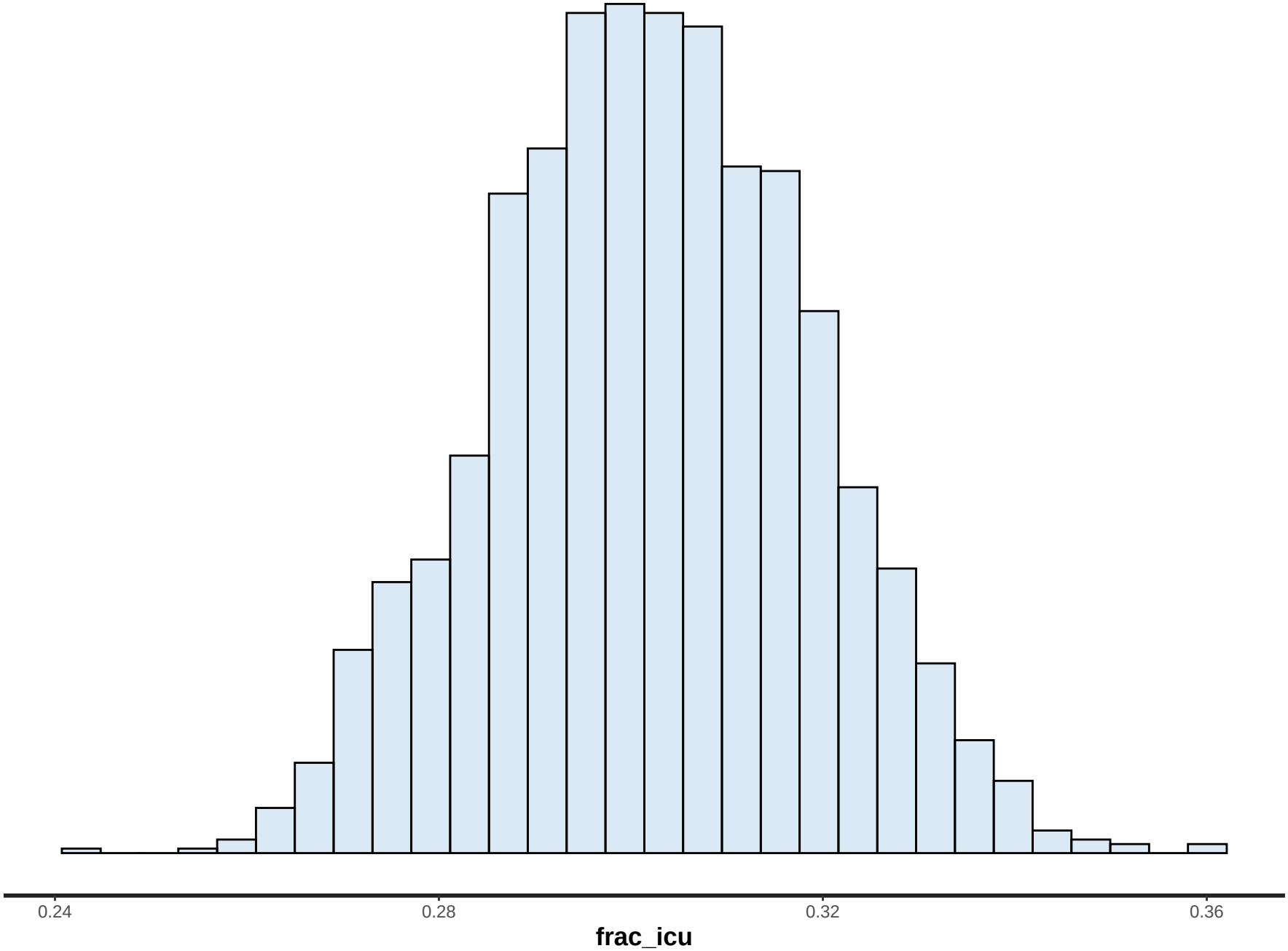

4
6
8
duration_rec_mild

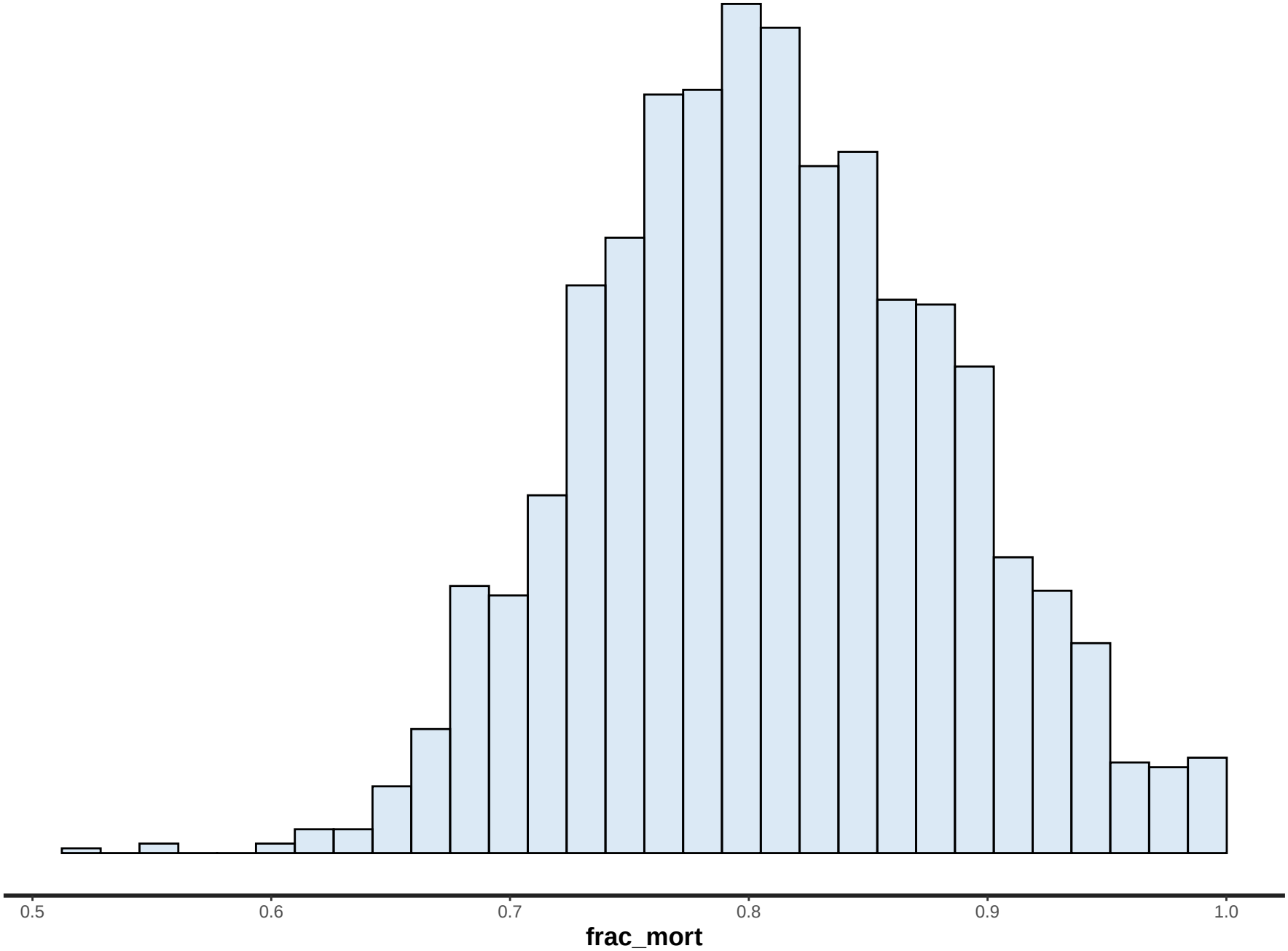

5
10
15
duration_pre_hosp

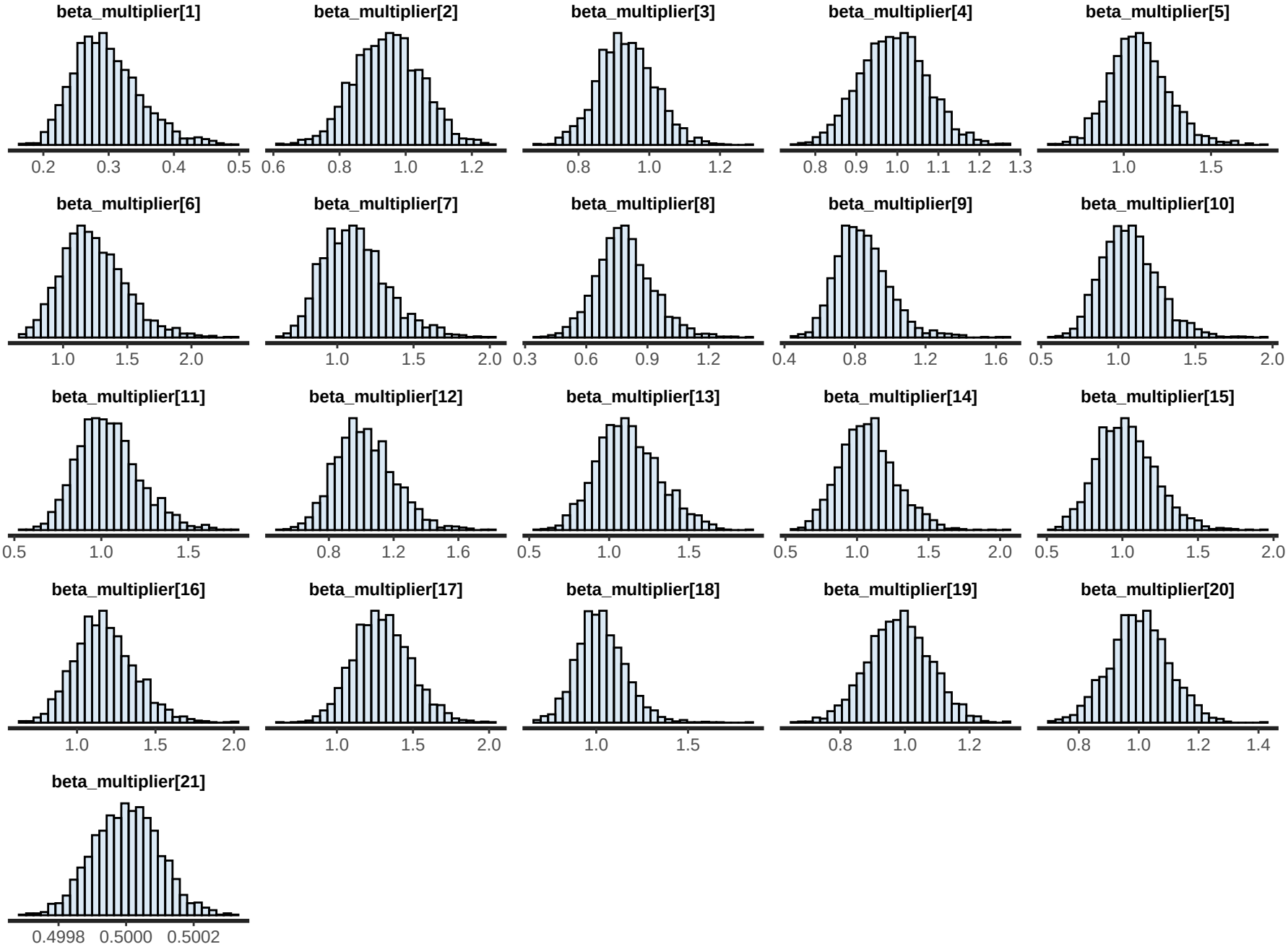

8
10
12
14
16
duration_hosp_mod

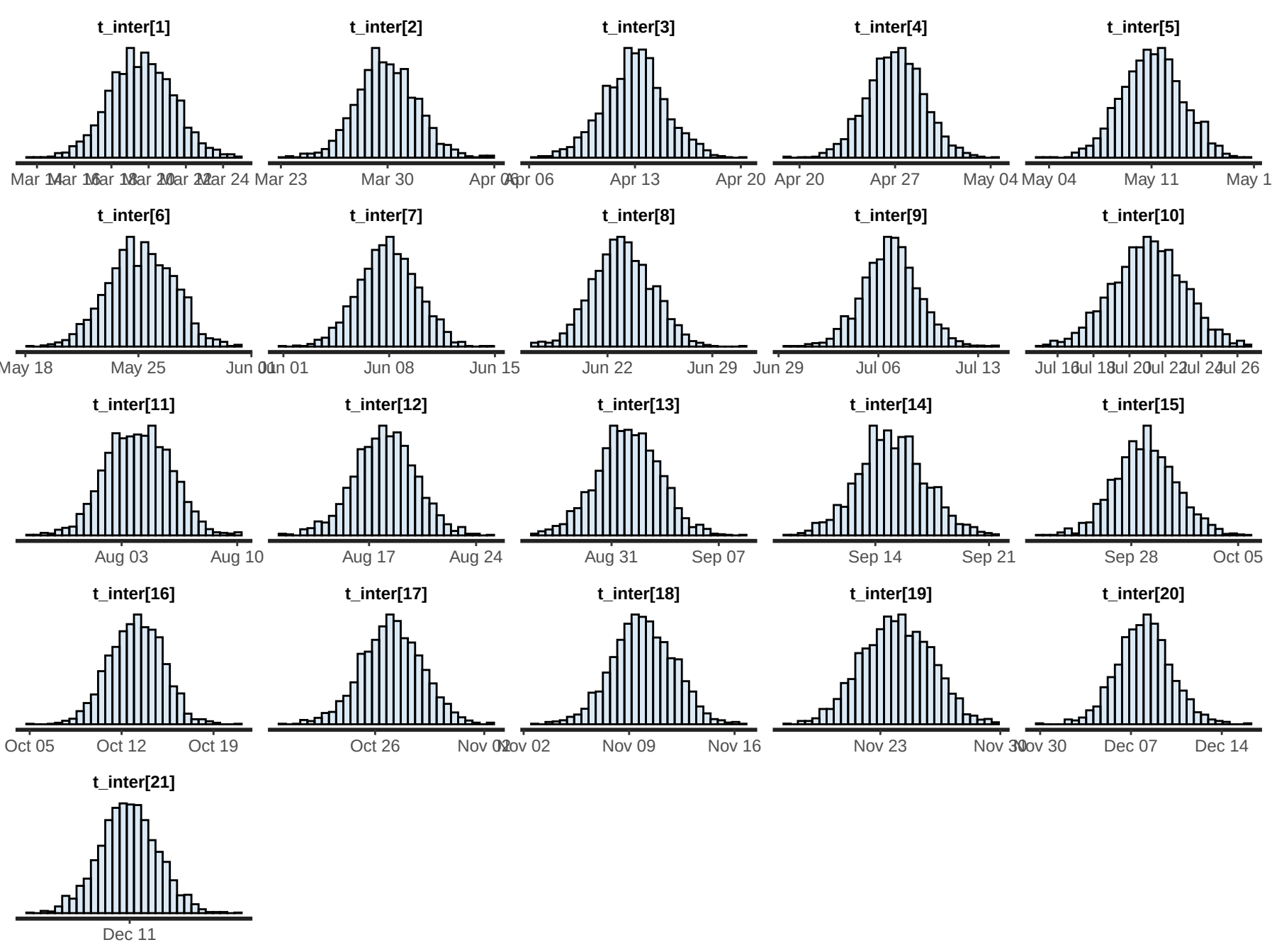

8
10
12
14
16
duration_hosp_icu

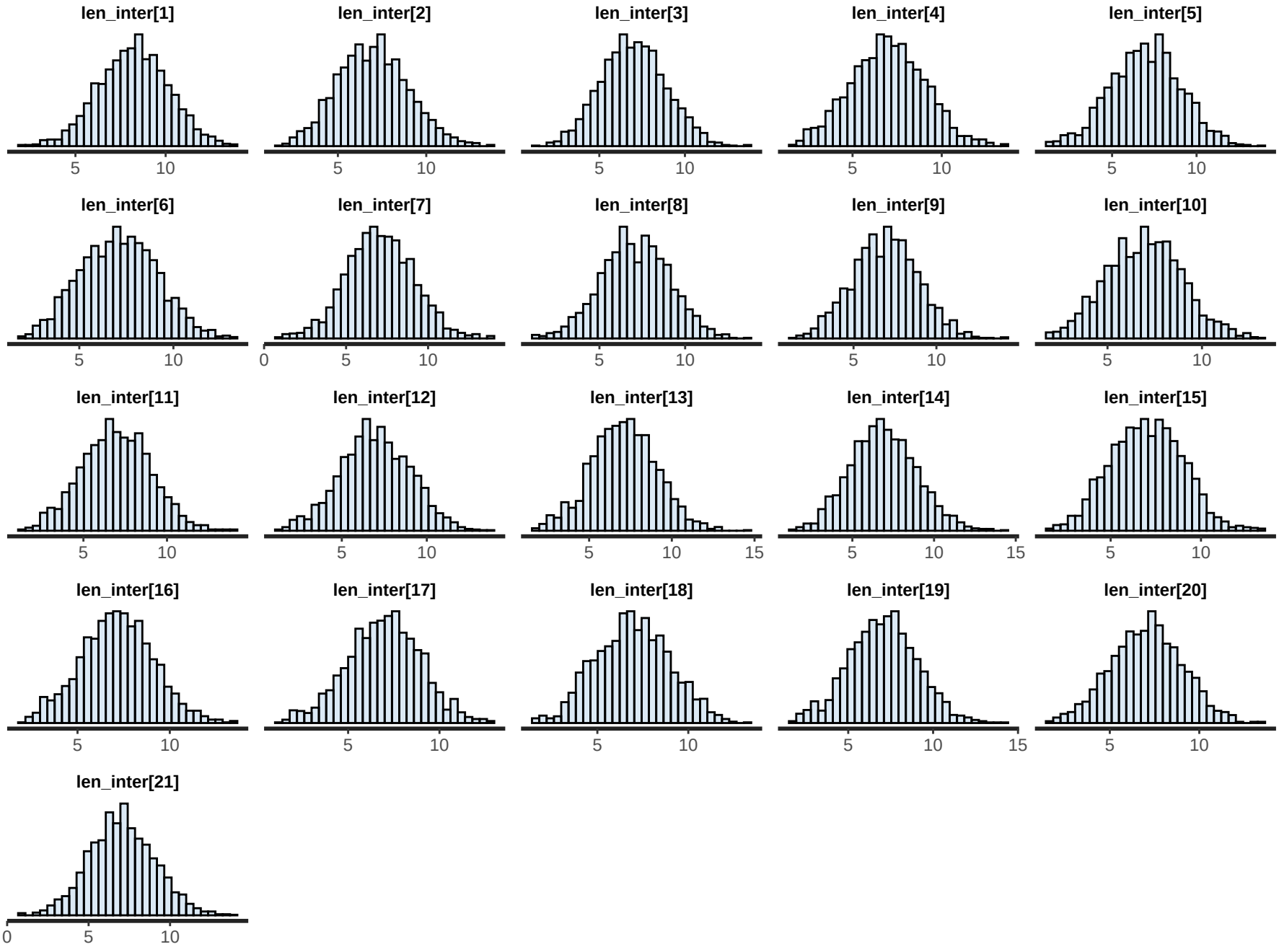

0.03
0.04
0.05
frac_hosp

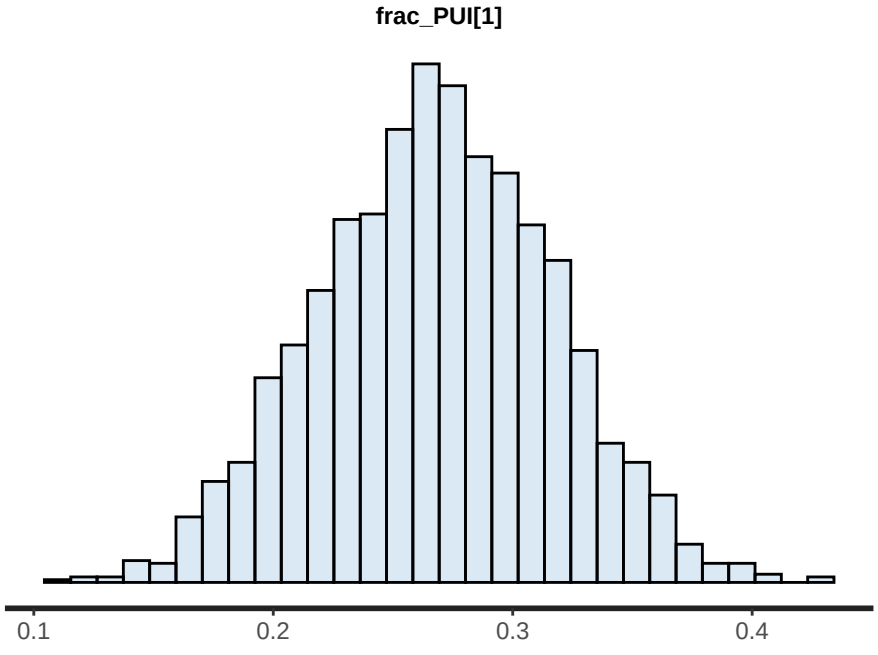

0.24
0.28
0.32
0.36
frac_icu

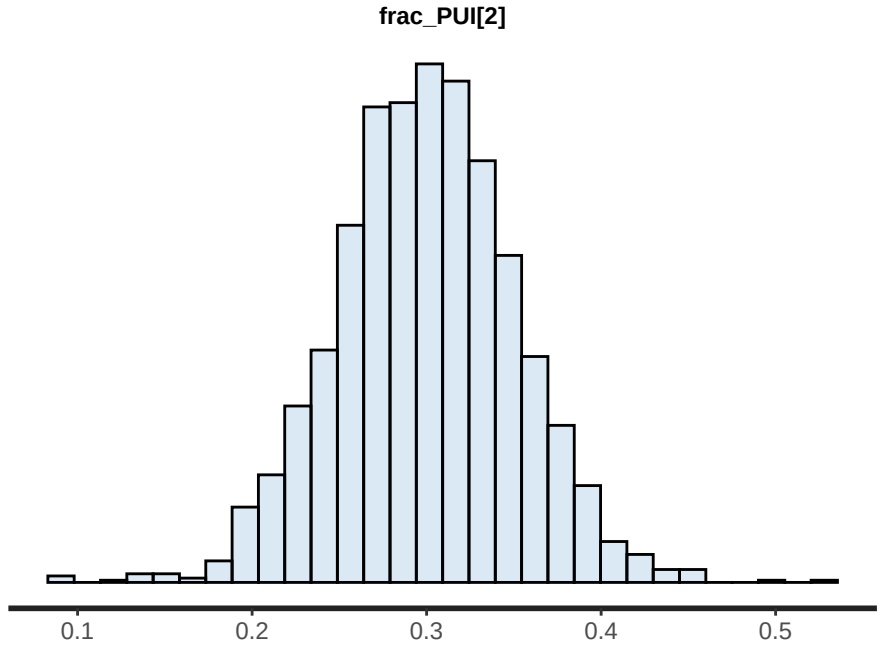

0.5
0.6
0.7
0.8
0.9
1.0
frac_mort

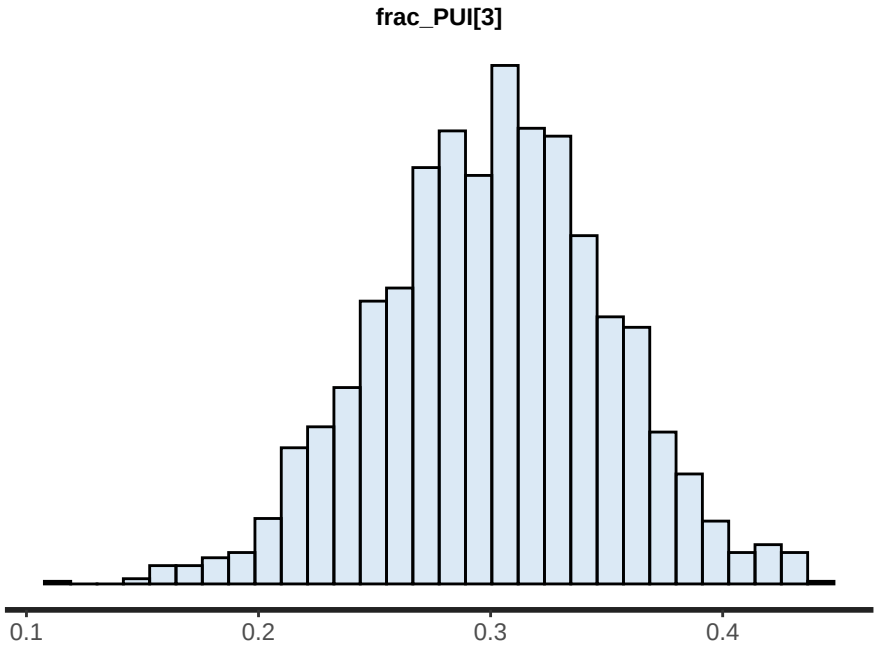

beta_multiplier[1]
0.2 0.3 0.4 0.5
beta_multiplier[2]
0.6 0.8 1.0 1.2
beta_multiplier[3]
0.8 1.0 1.2
beta_multiplier[4]
0.8 0.9 1.0 1.1 1.2 1.3
beta_multiplier[5]
1.0 1.5
beta_multiplier[6]
1.0 1.5 2.0
beta_multiplier[7]
1.0 1.5 2.0
beta_multiplier[8]
0.3 0.6 0.9 1.2
beta_multiplier[9]
0.4 0.8 1.2 1.6
beta_multiplier[10]
0.5 1.0 1.5 2.0
beta_multiplier[11]
0.5 1.0 1.5
beta_multiplier[12]
0.8 1.2 1.6
beta_multiplier[13]
0.5 1.0 1.5
beta_multiplier[14]
0.5 1.0 1.5 2.0
beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
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 1.4
beta_multiplier[21]
0.4998 0.5000 0.5002

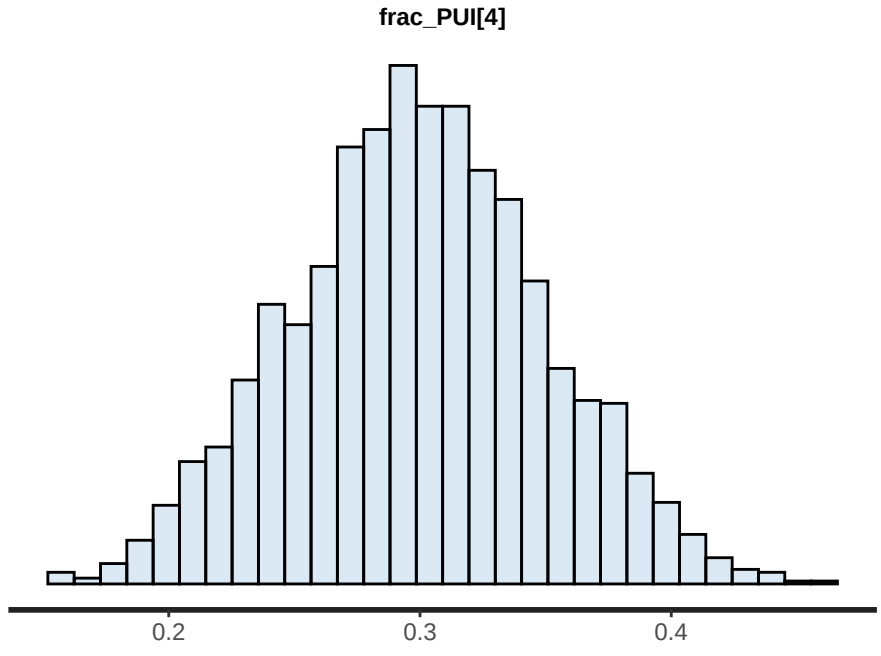

t_inter[1]
Mar 14
Mar 16
Mar 18
Mar 20
Mar 22
Mar 24
t_inter[2]
Mar 23
Mar 30
Apr 06
t_inter[3]
Apr 06
Apr 13
Apr 20
t_inter[4]
Apr 20
Apr 27
May 04
t_inter[5]
May 04
May 11
May 1
t_inter[6]
May 18
May 25
Jun 01
t_inter[7]
Jun 01
Jun 08
Jun 15
t_inter[8]
Jun 22
Jun 29
t_inter[9]
Jun 29
Jul 06
Jul 13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


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]
len_inter[20]
len_inter[21]


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]
0.1
0.2
0.3
0.4


frac_PUI[4]
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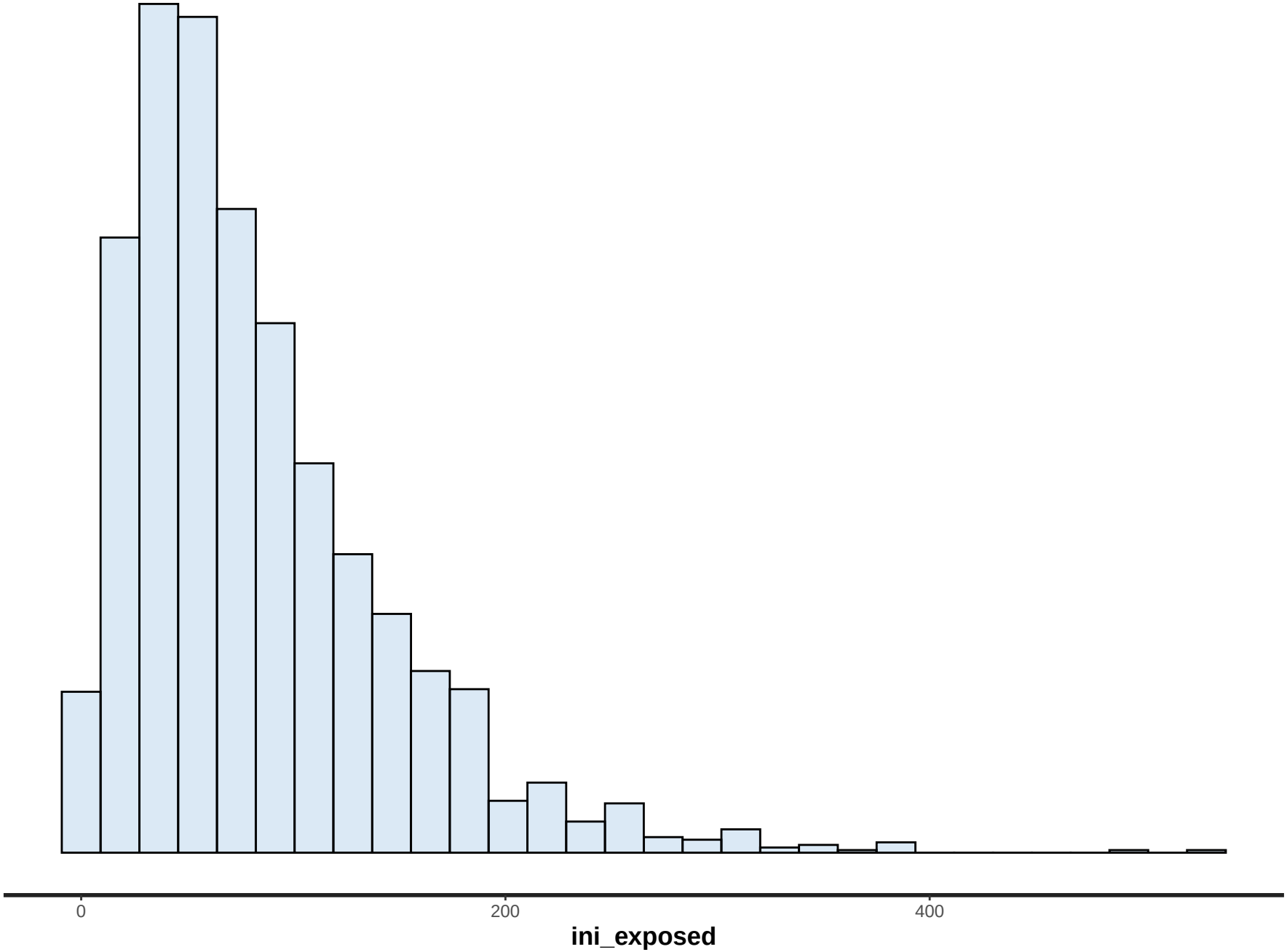
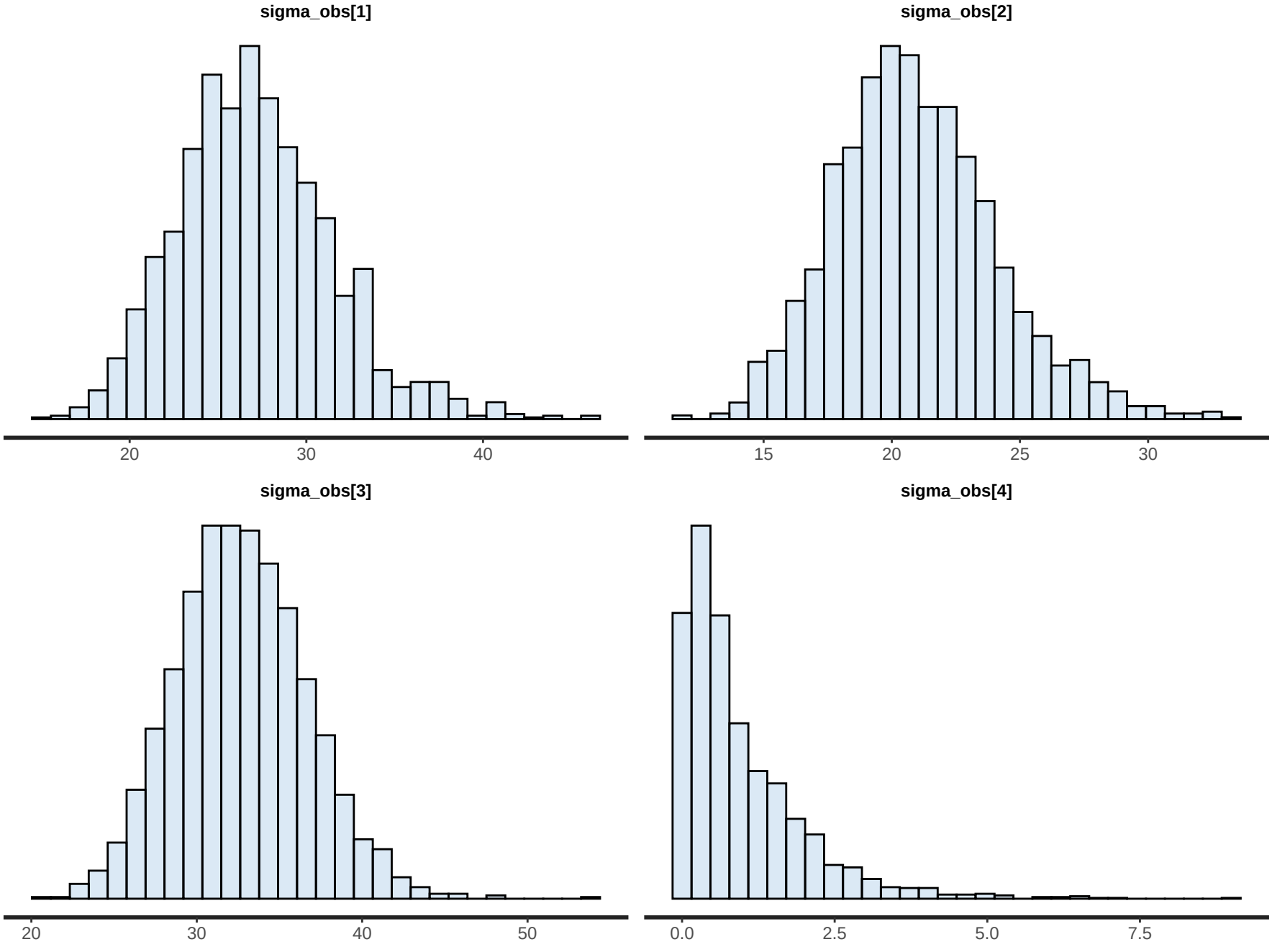
0.3
0.4


0
200
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]
0.0
2.5
5.0
7.5