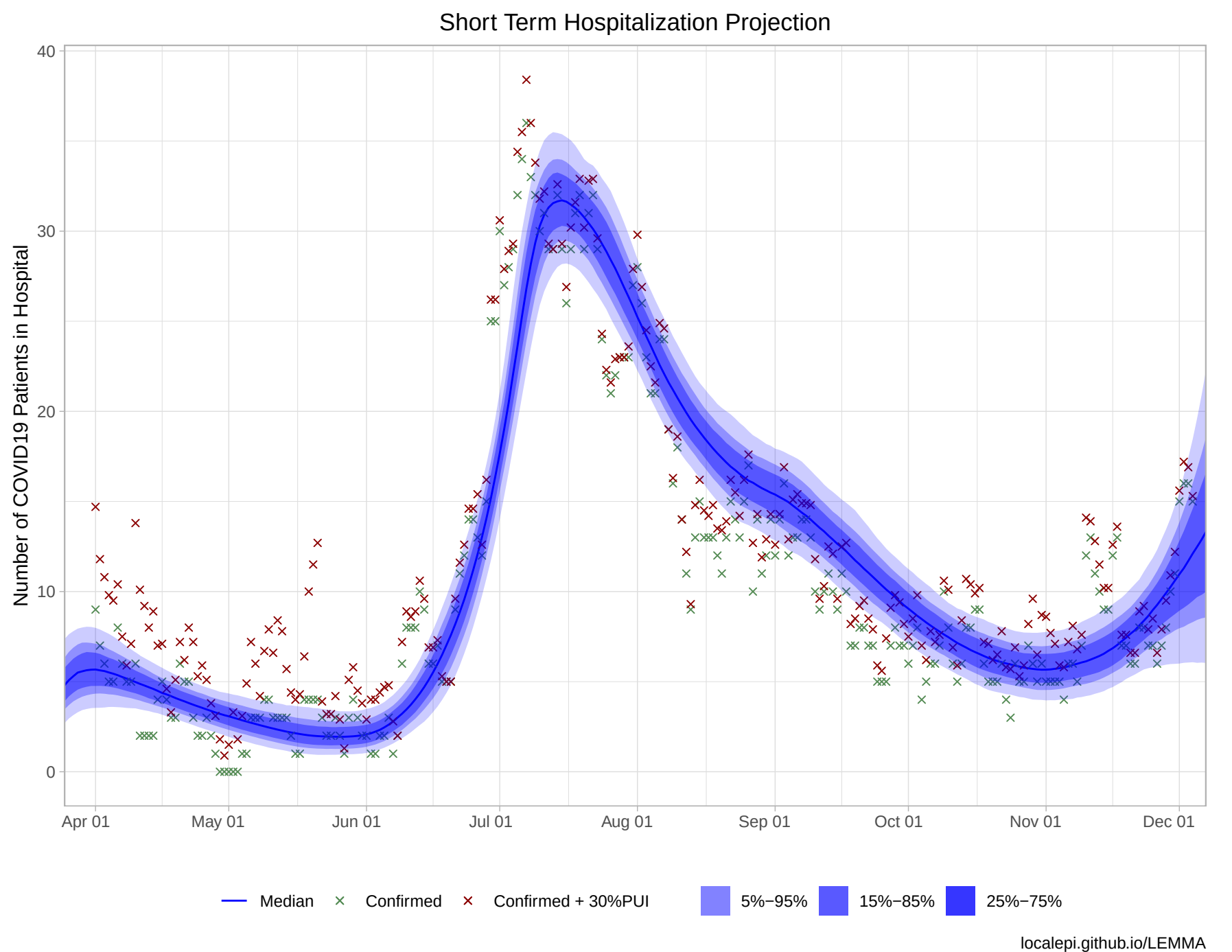
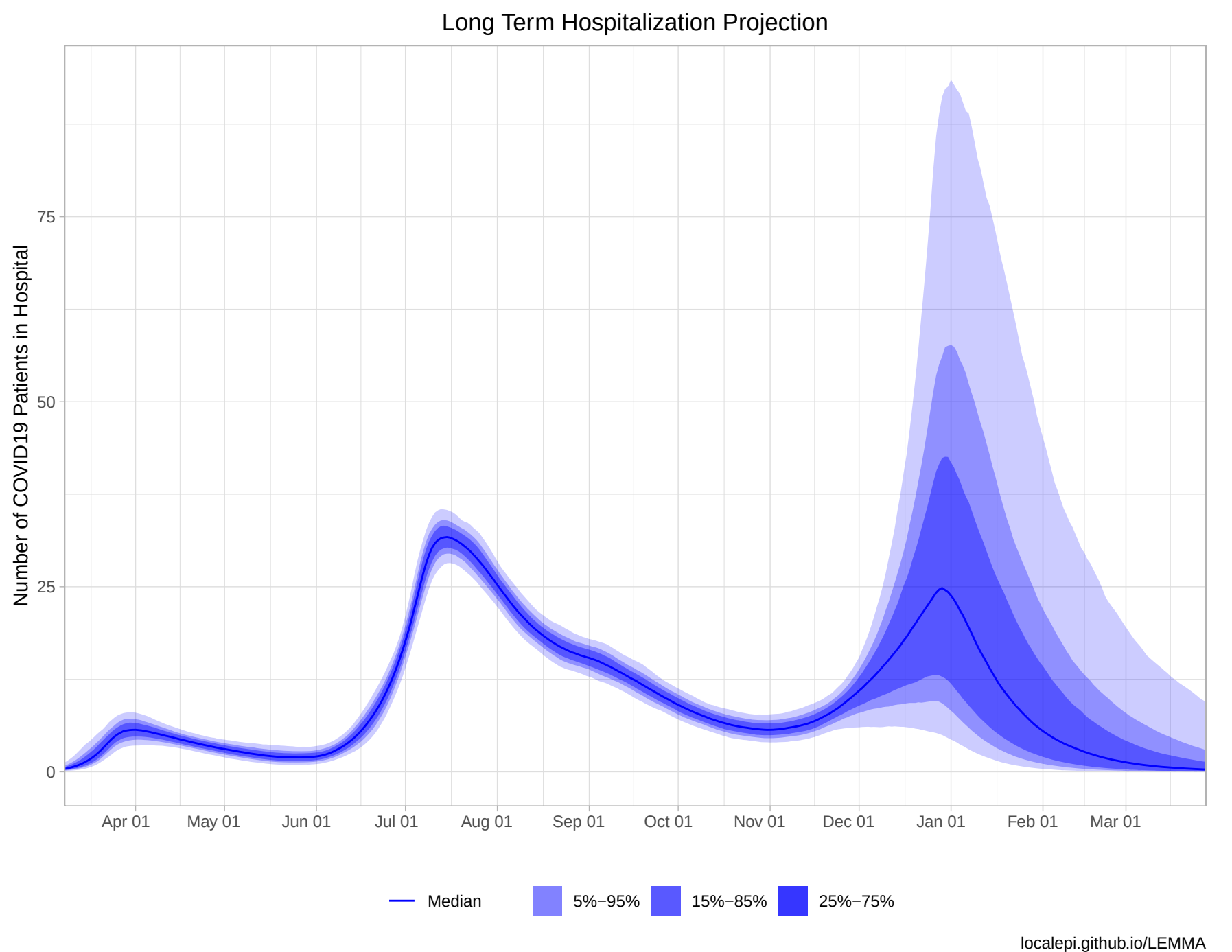
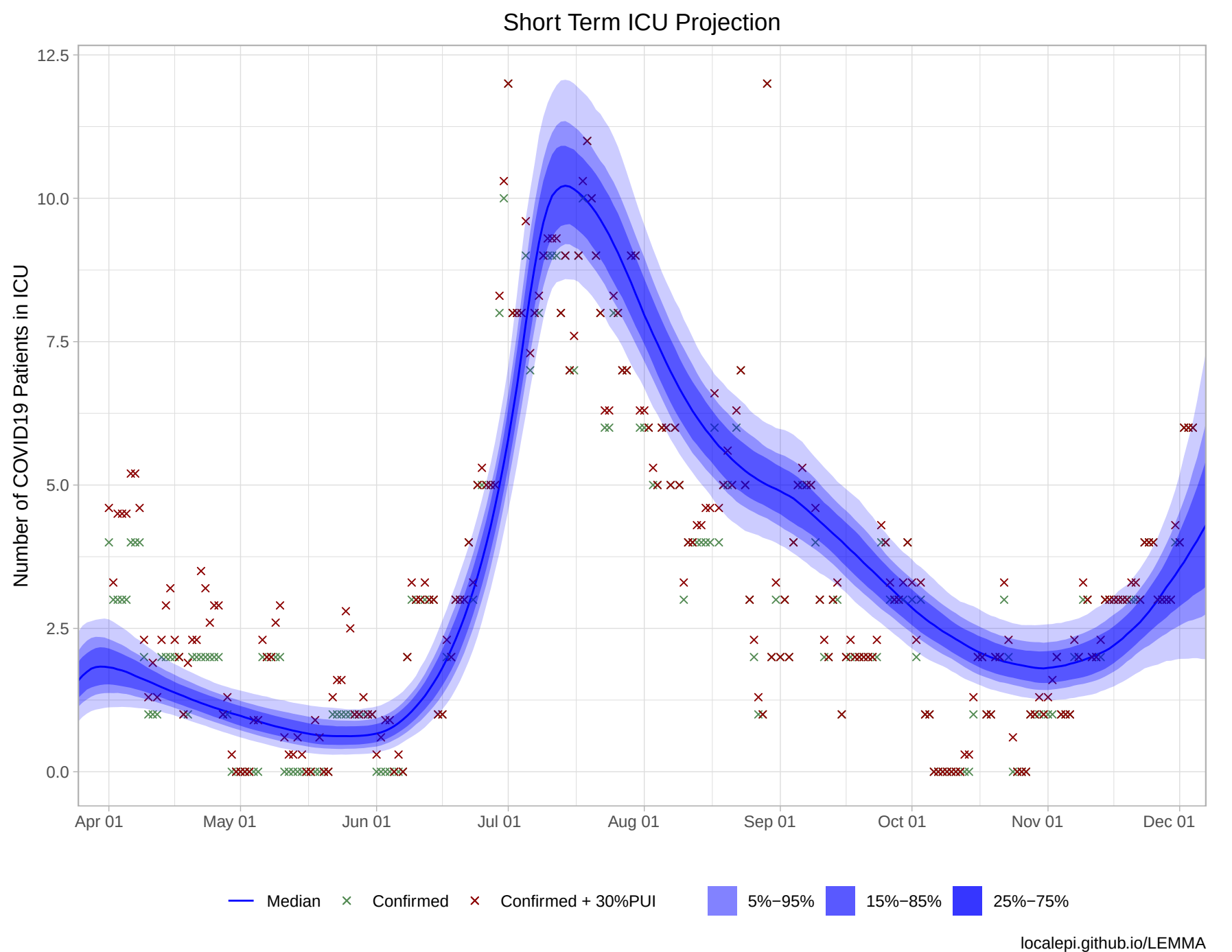
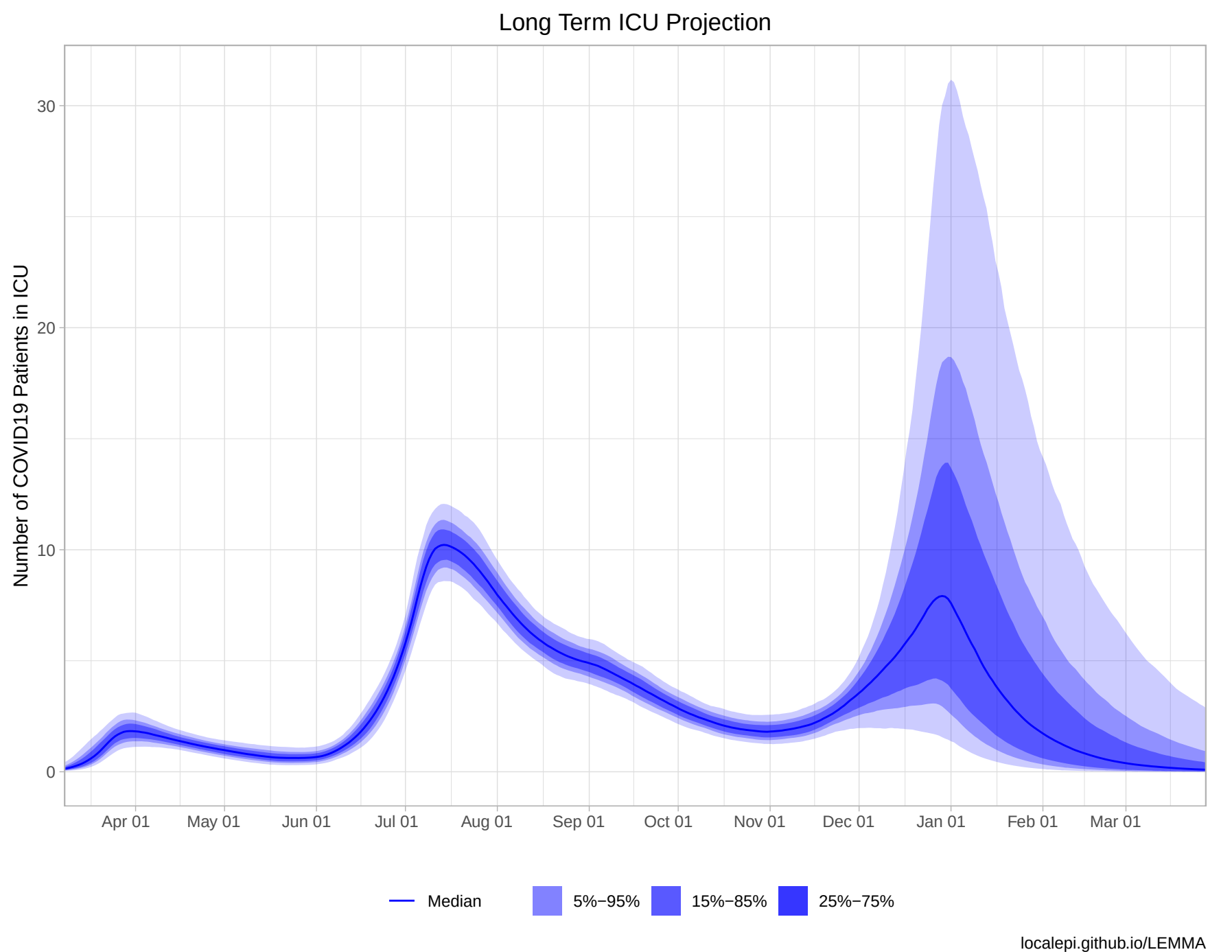
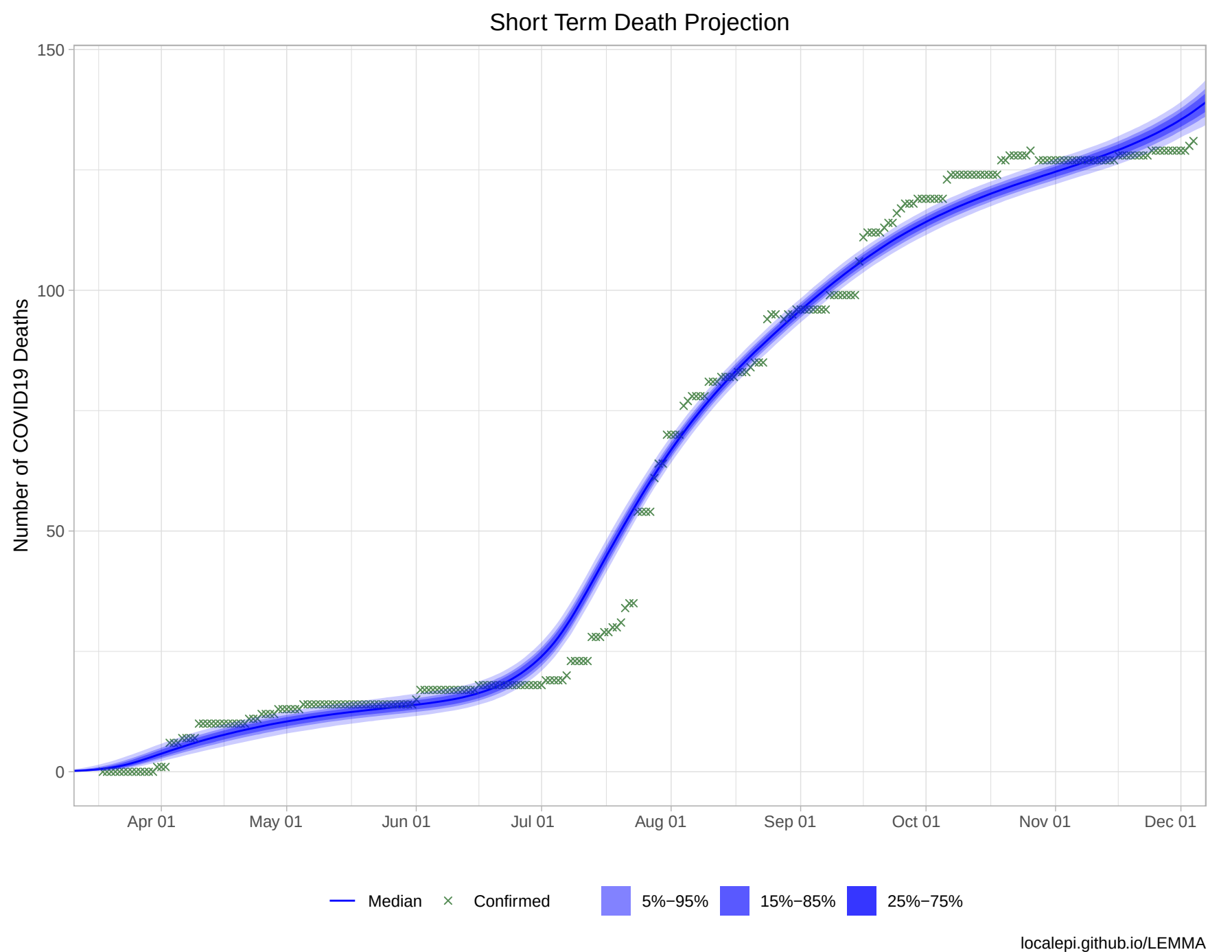
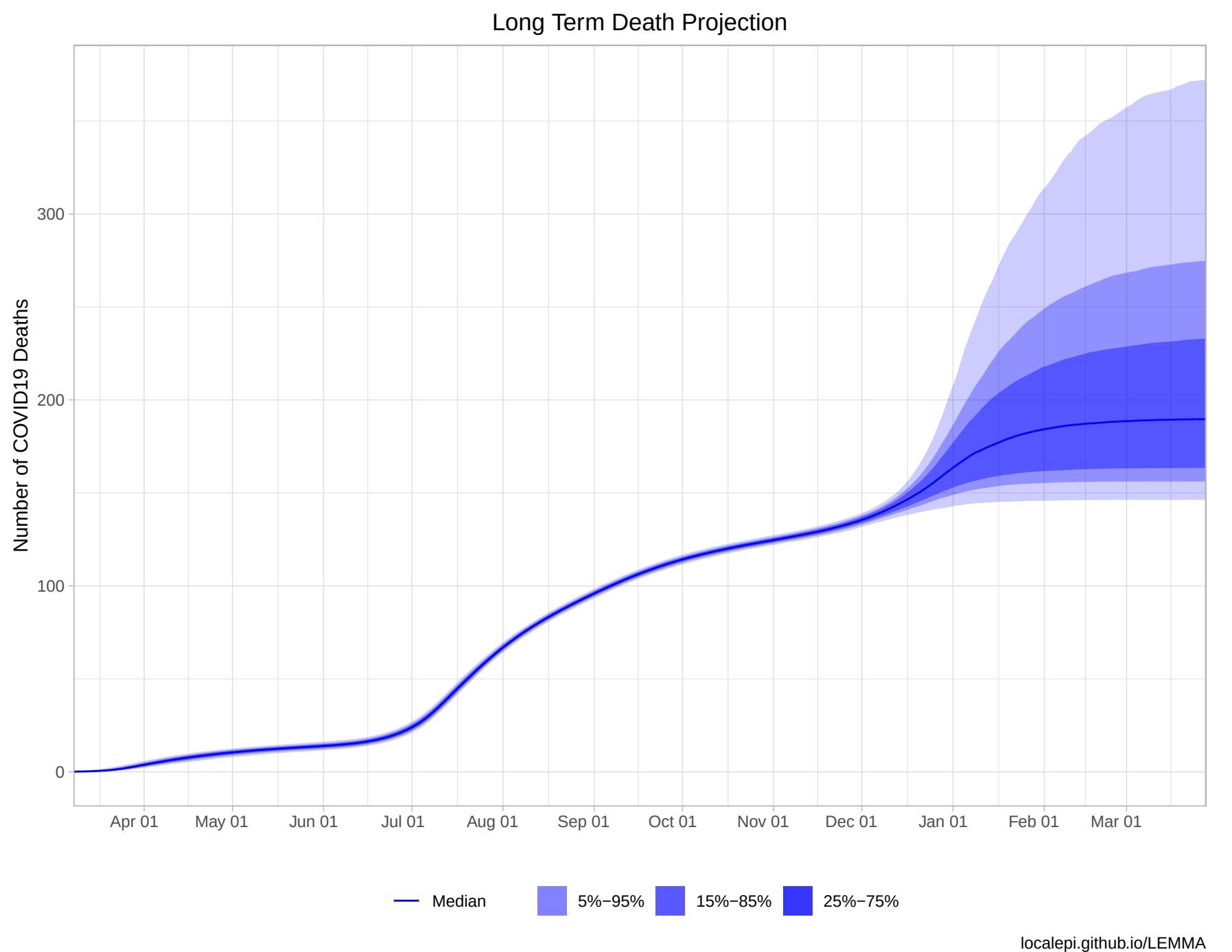

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
40
30
20
10
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

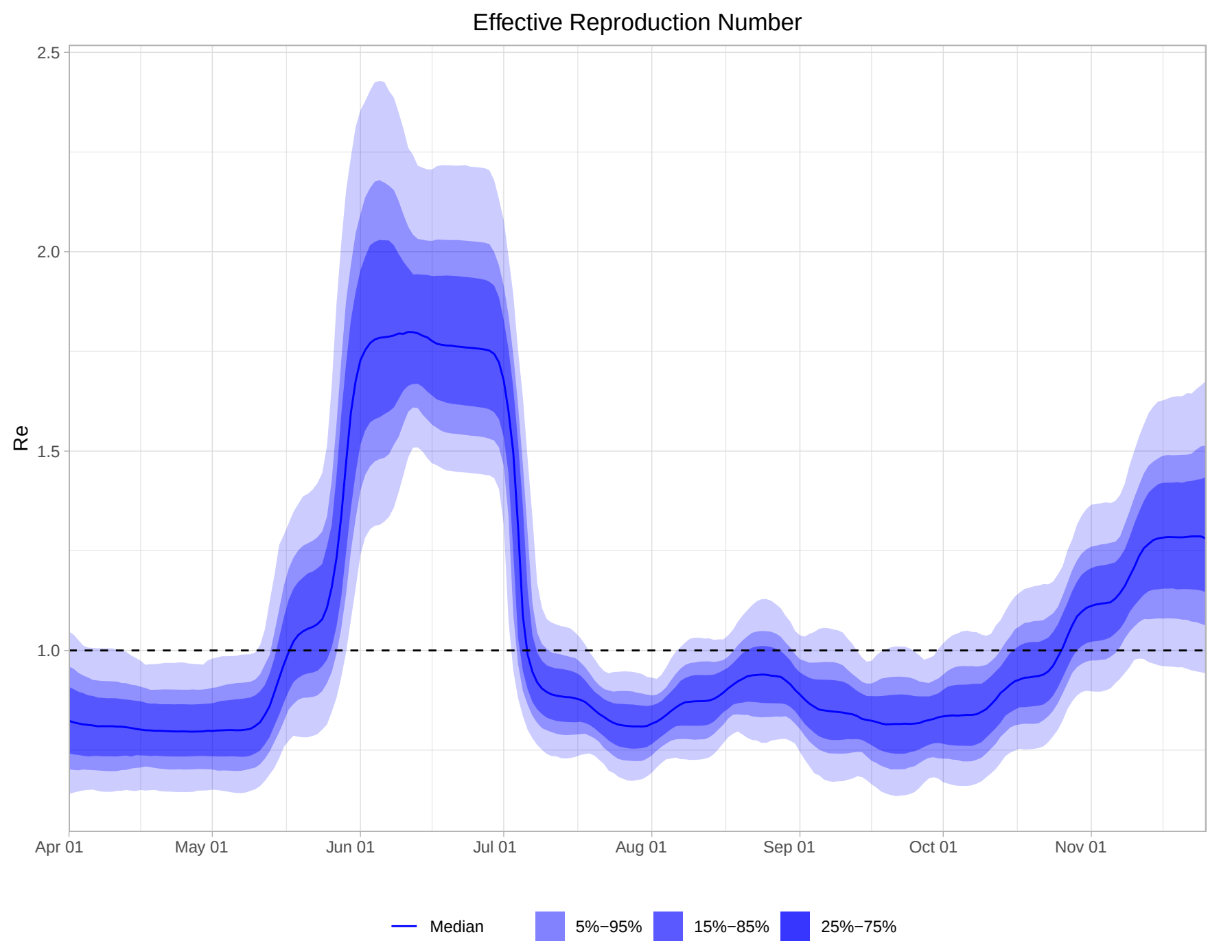

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
25
50
75
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
12.5
10.0
7.5
5.0
2.5
0.0
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
30
20
10
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

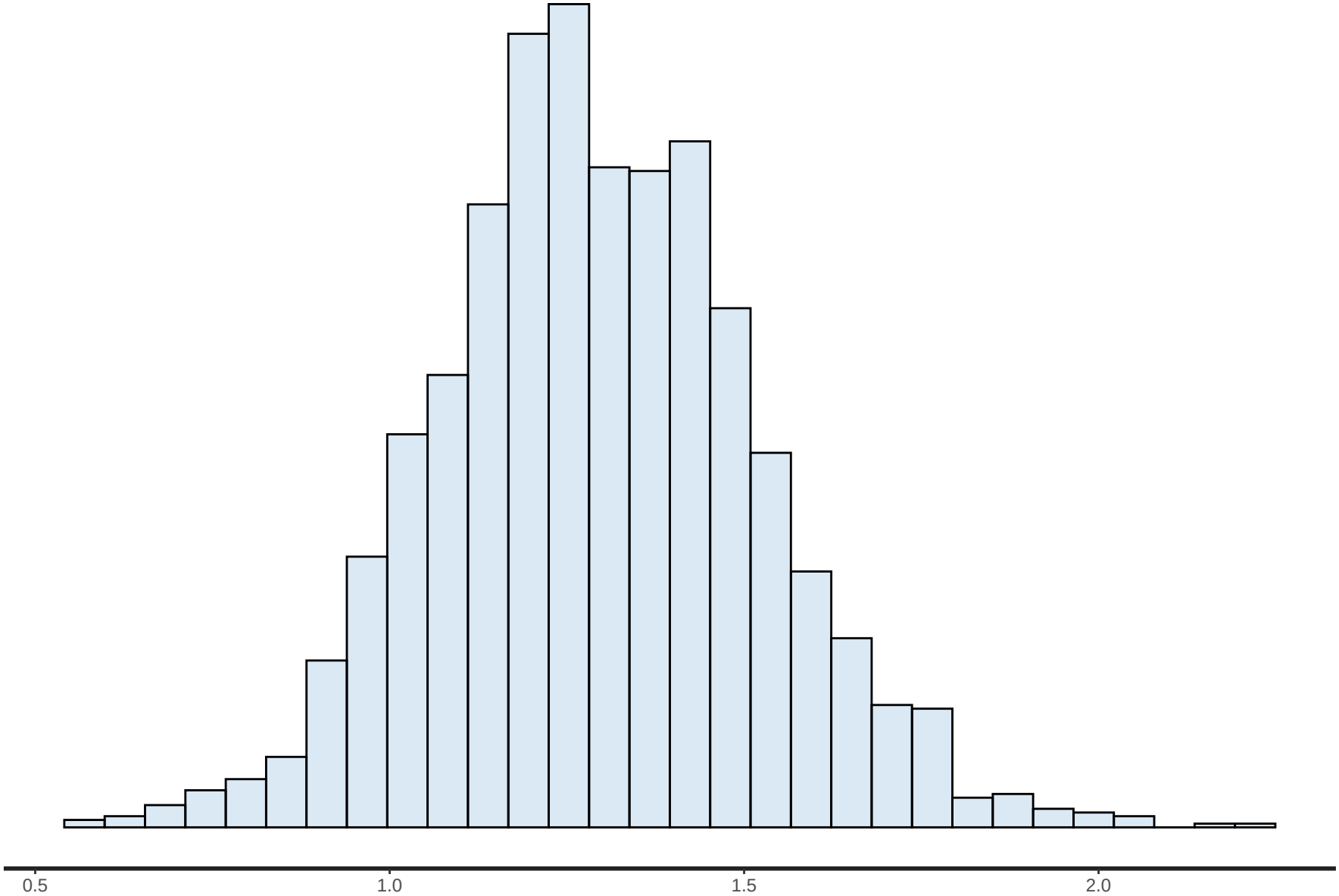

Short Term Death Projection
Number of COVID19 Deaths
150
100
50
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

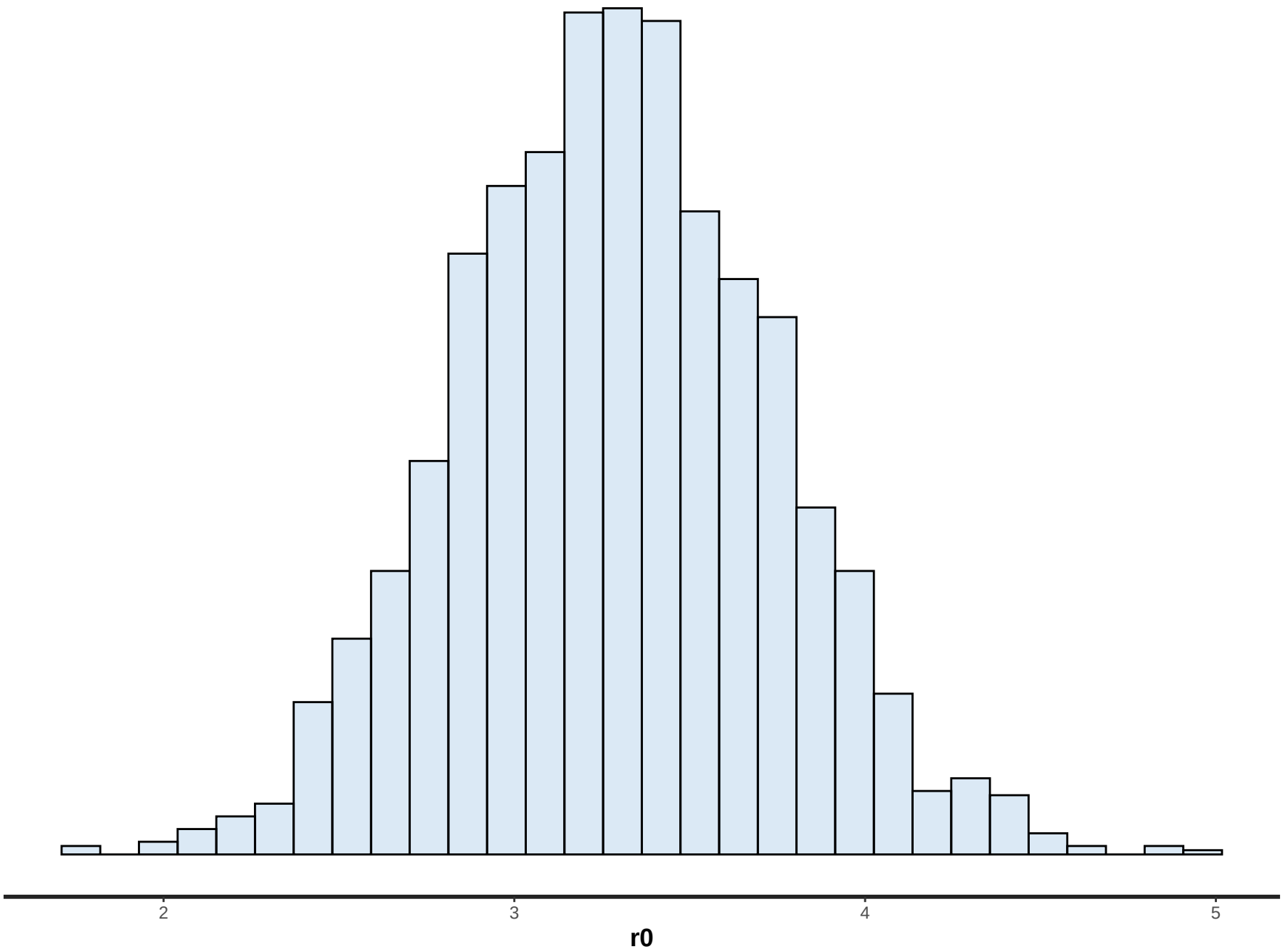

Long Term Death Projection
Number of COVID19 Deaths
300
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

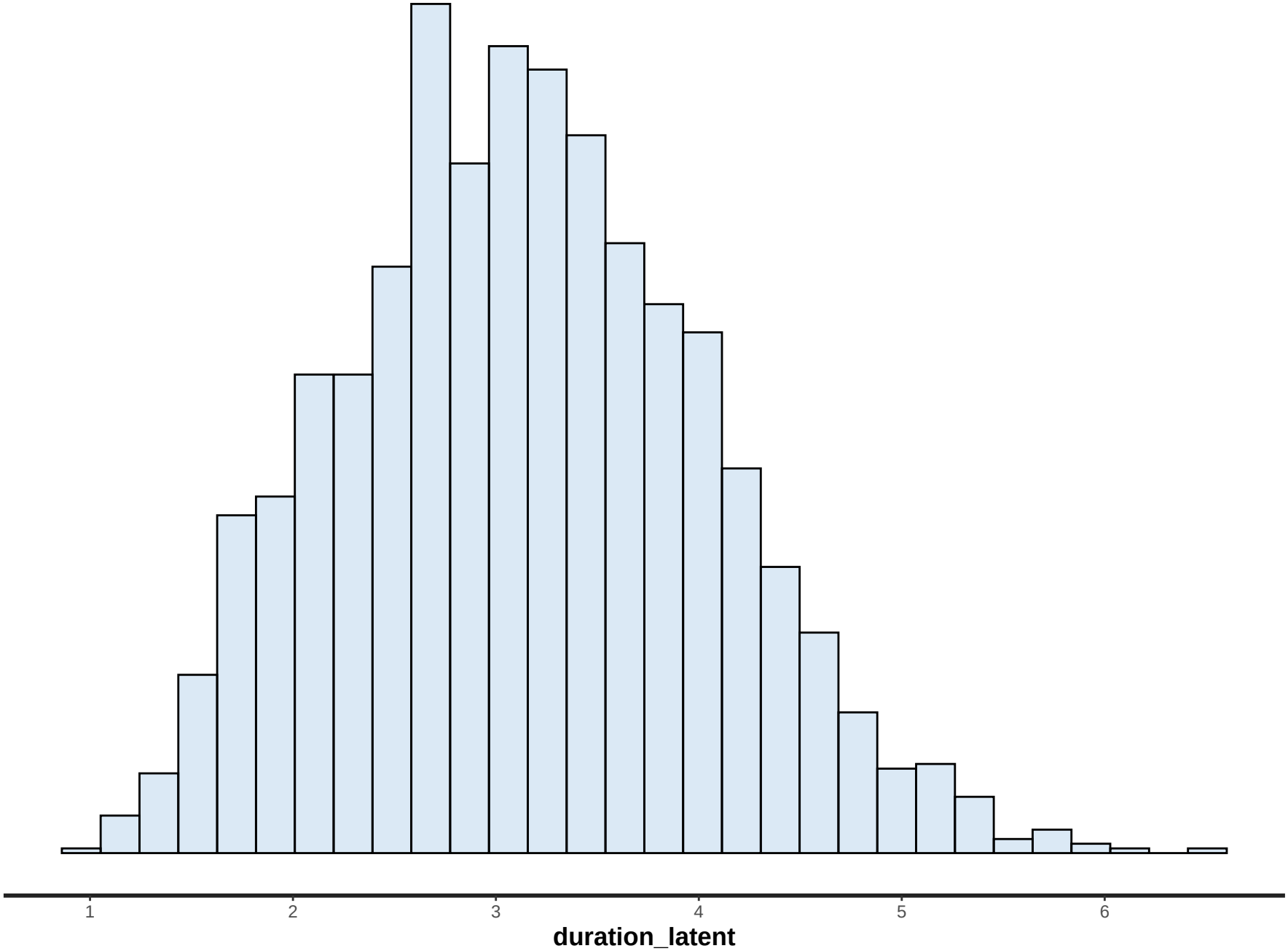

Effective Reproduction Number
Re
2.5
2.0
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

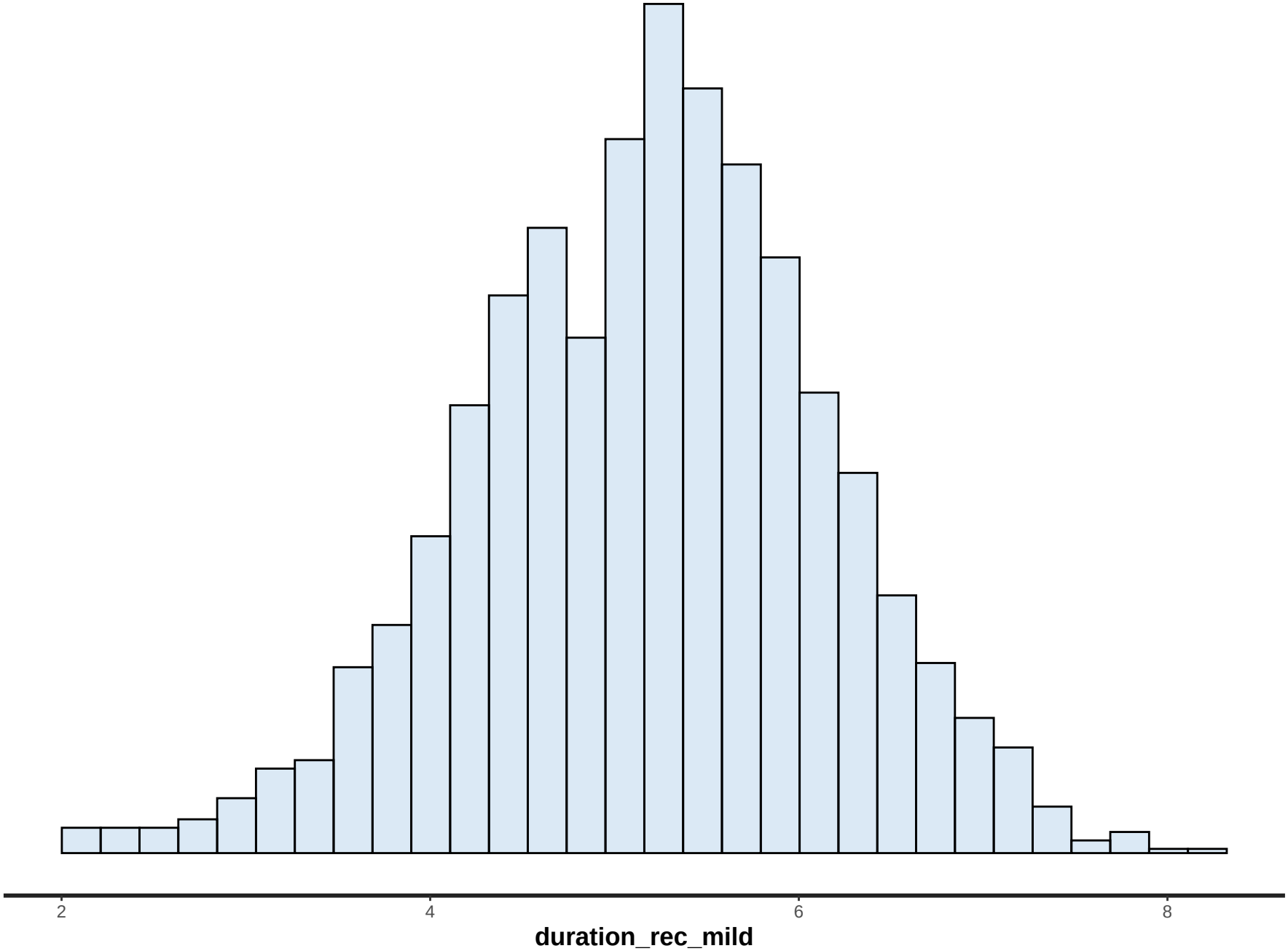
Rt as of 2020−11−25

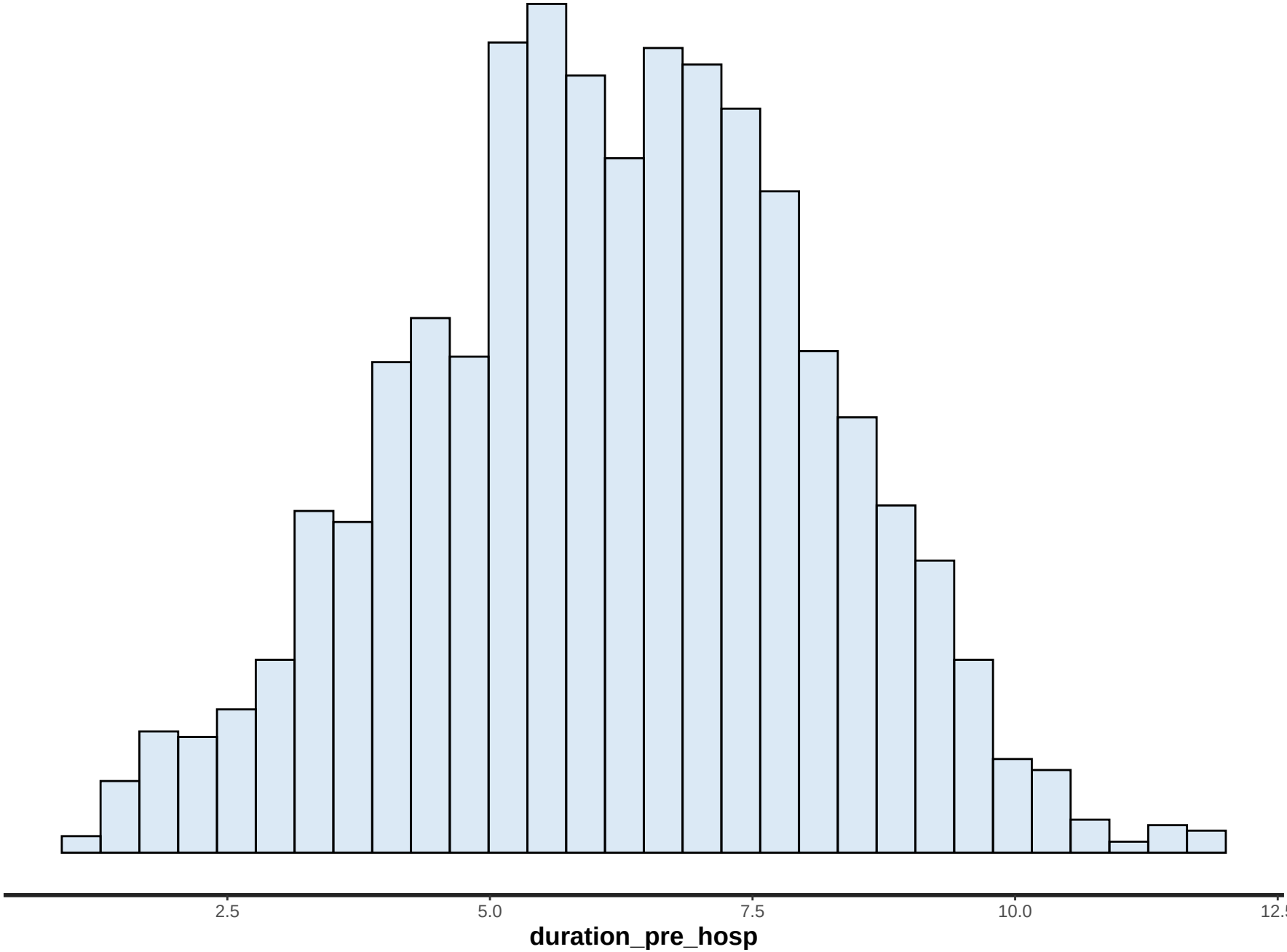
5%	10%	25%	50%	75%	90%	95%
0.94	1.02	1.15	1.28	1.44	1.58	1.68

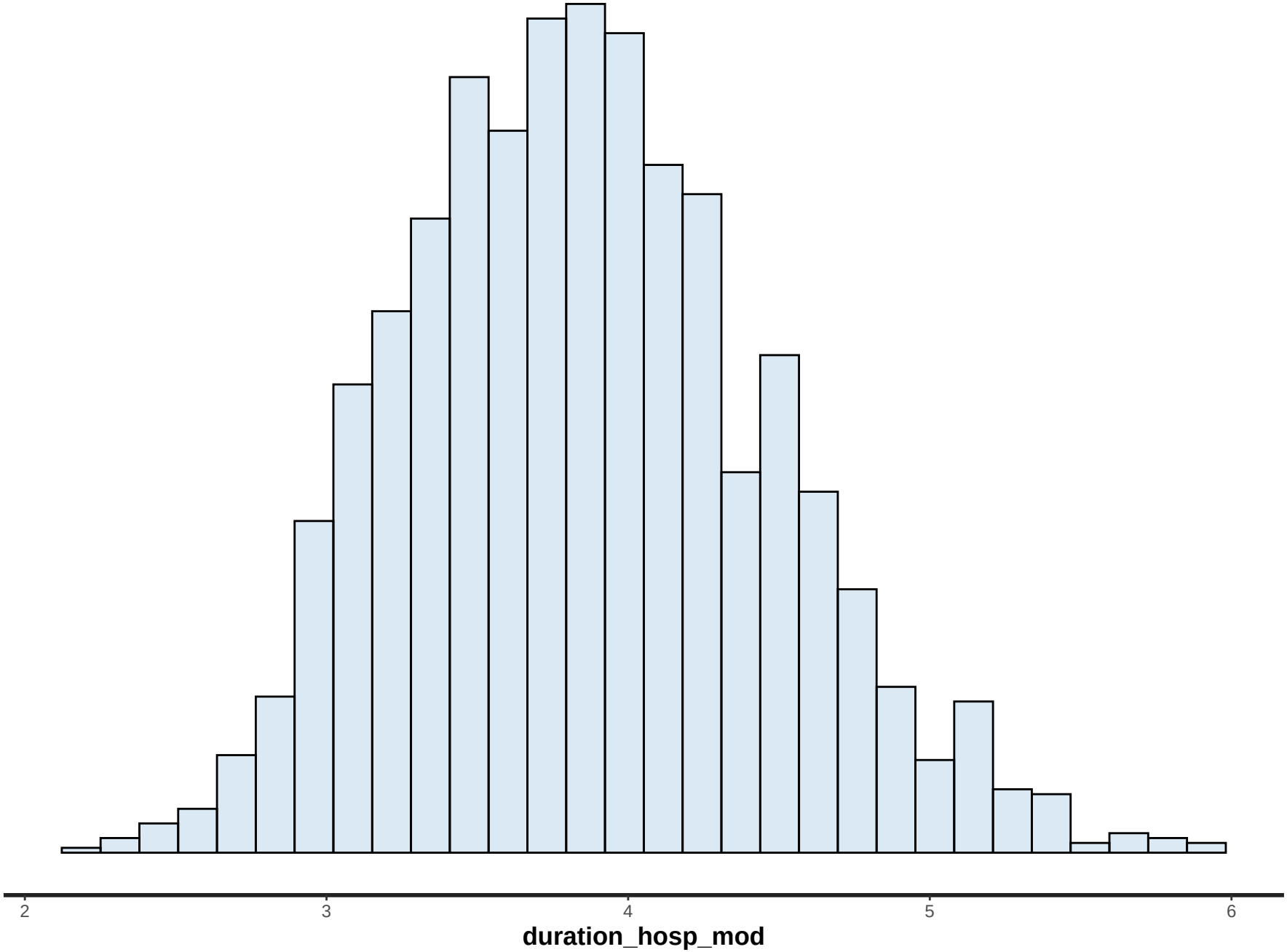


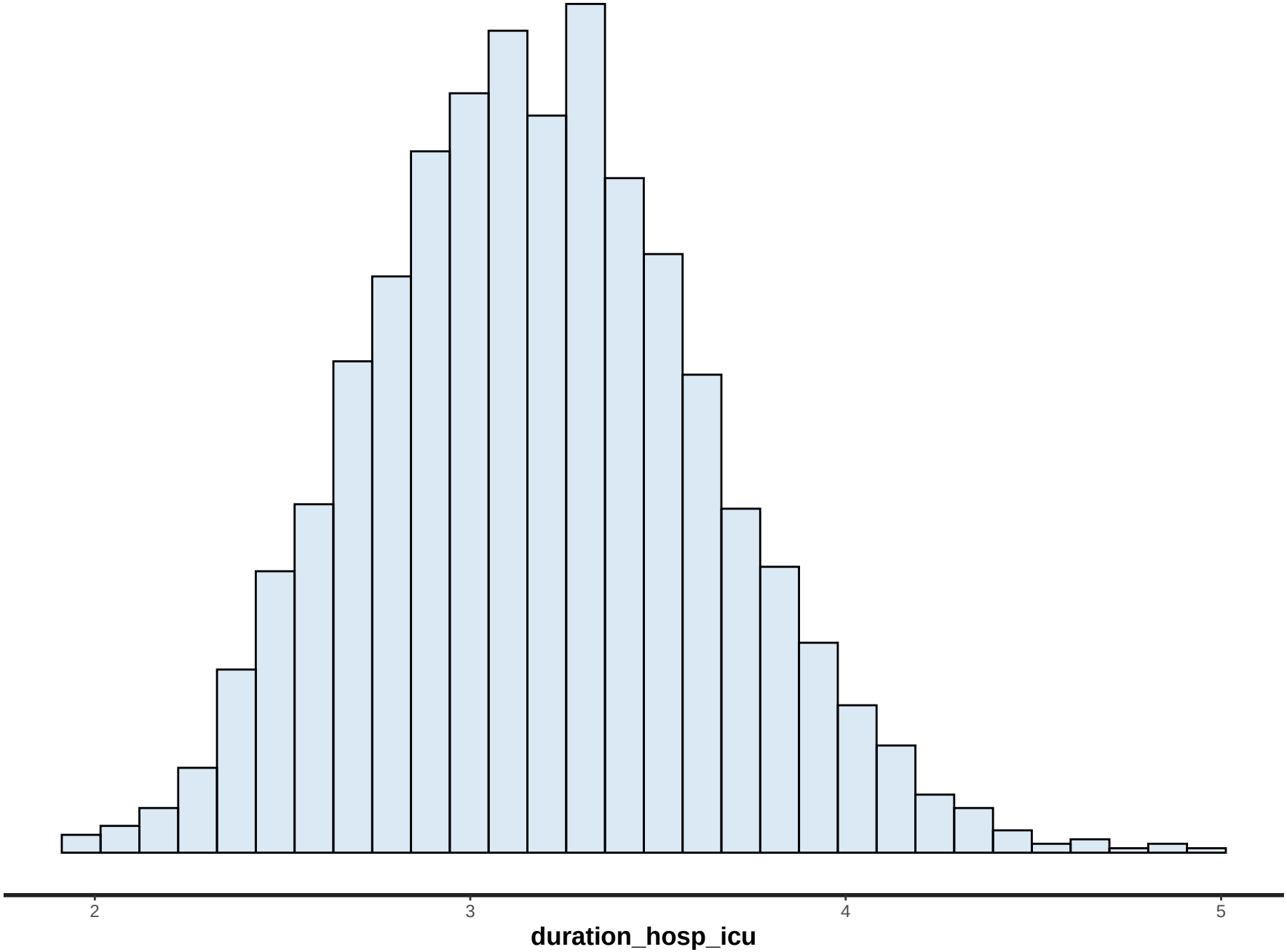

2
3
4
5
r0

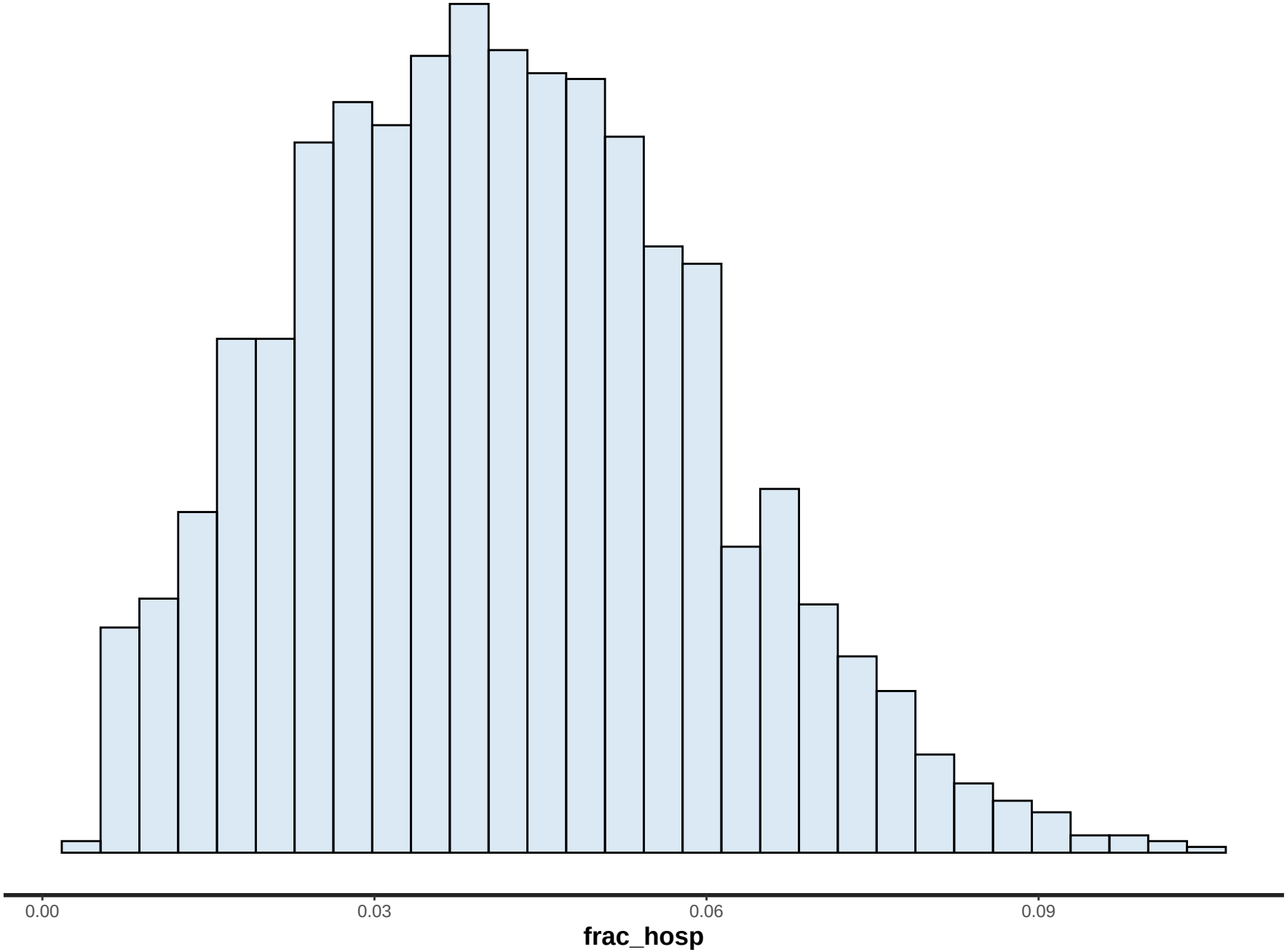

1
2
3
4
5
6
duration_latent

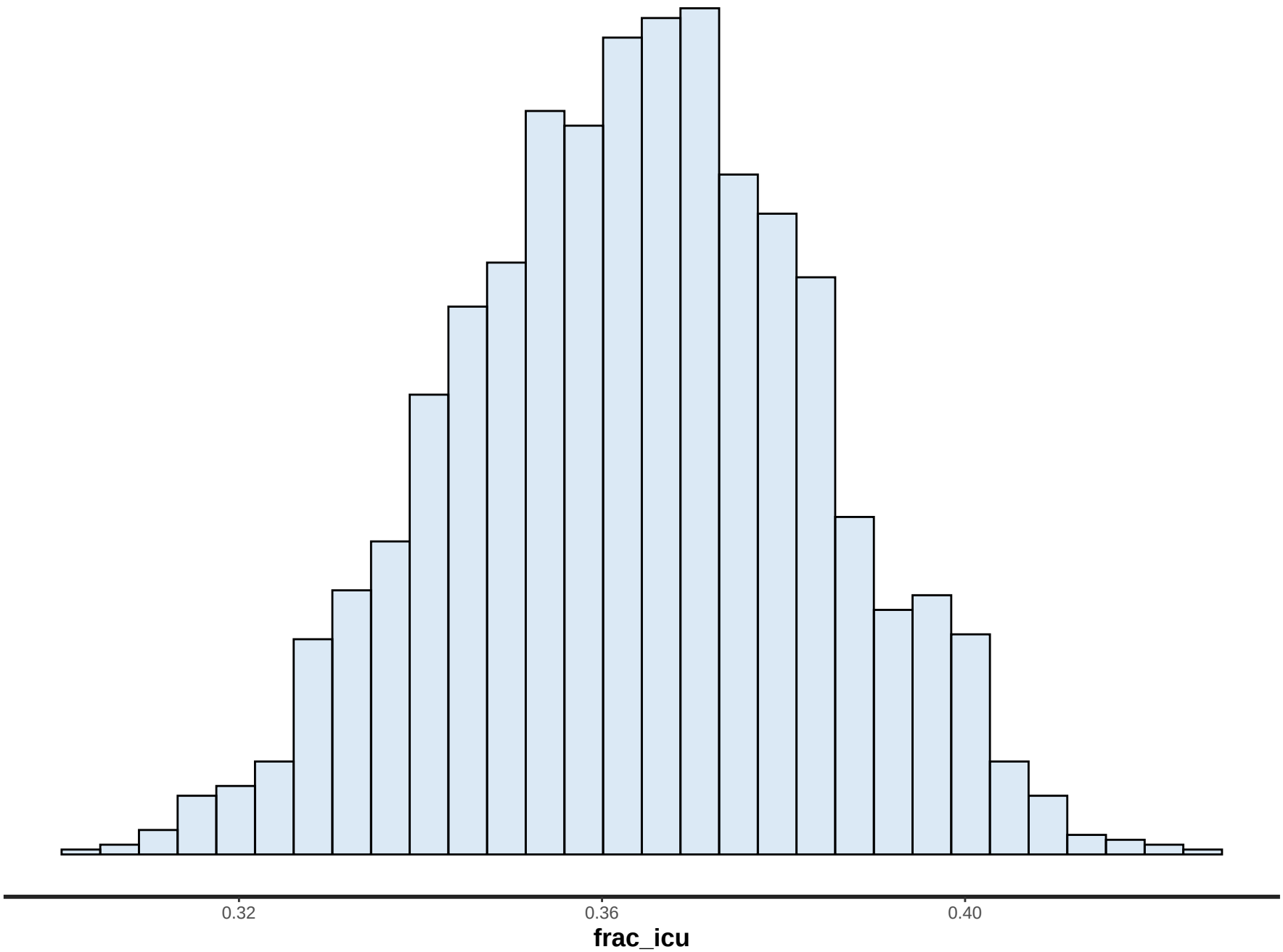

2
4
6
8
duration_rec_mild

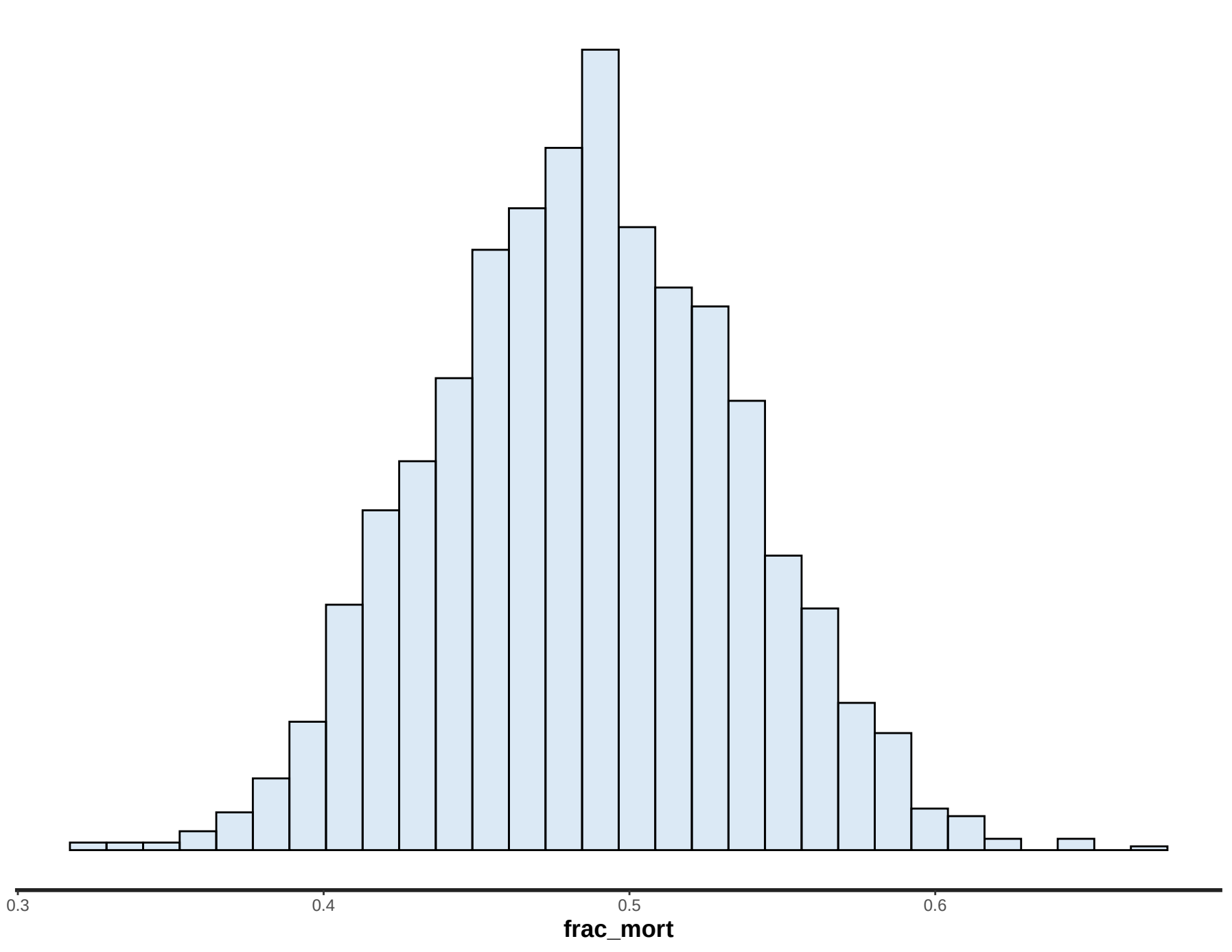

2.5
5.0
7.5
10.0
12.5
duration_pre_hosp

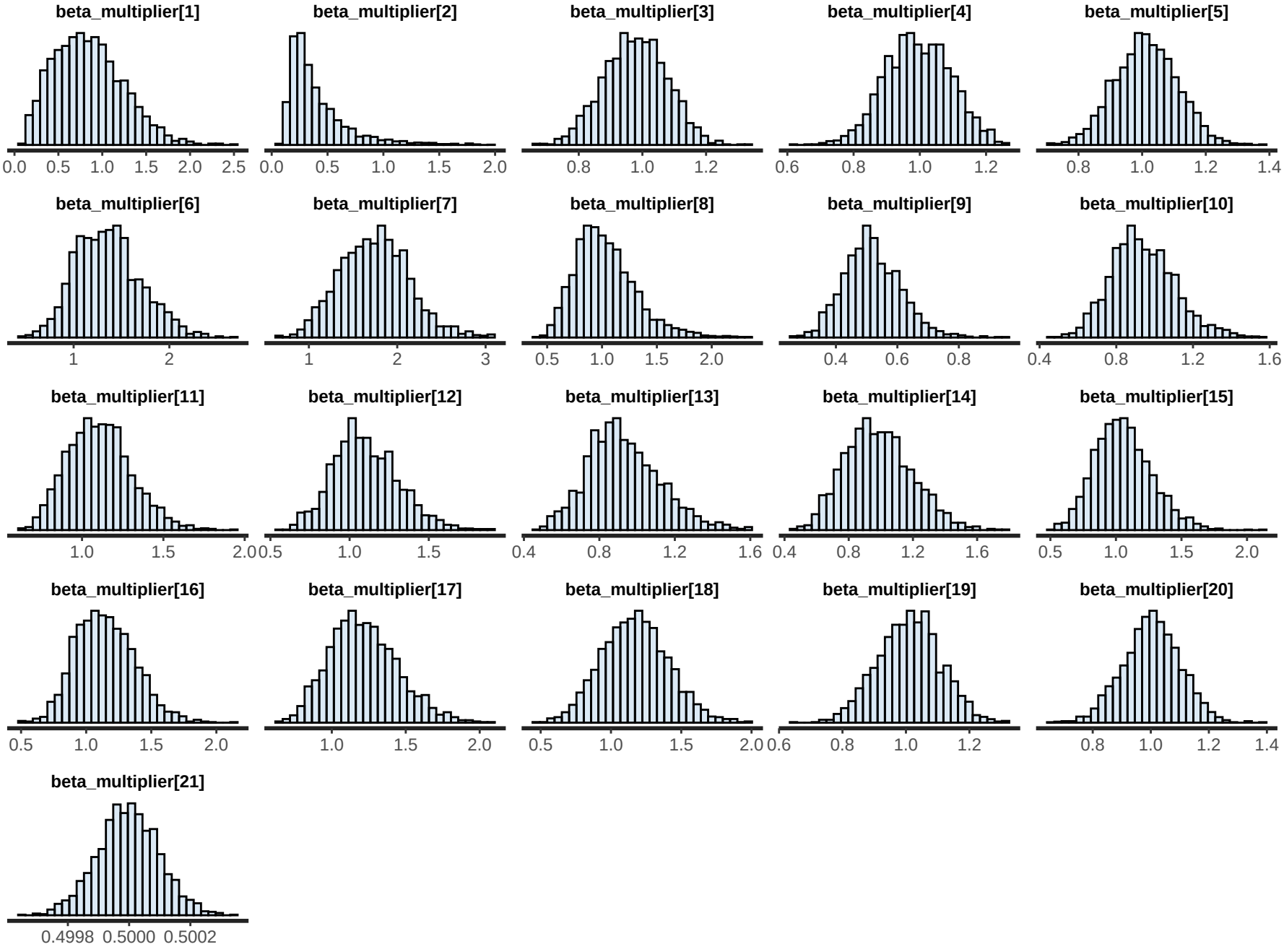

2
3
4
5
6
duration_hosp_mod

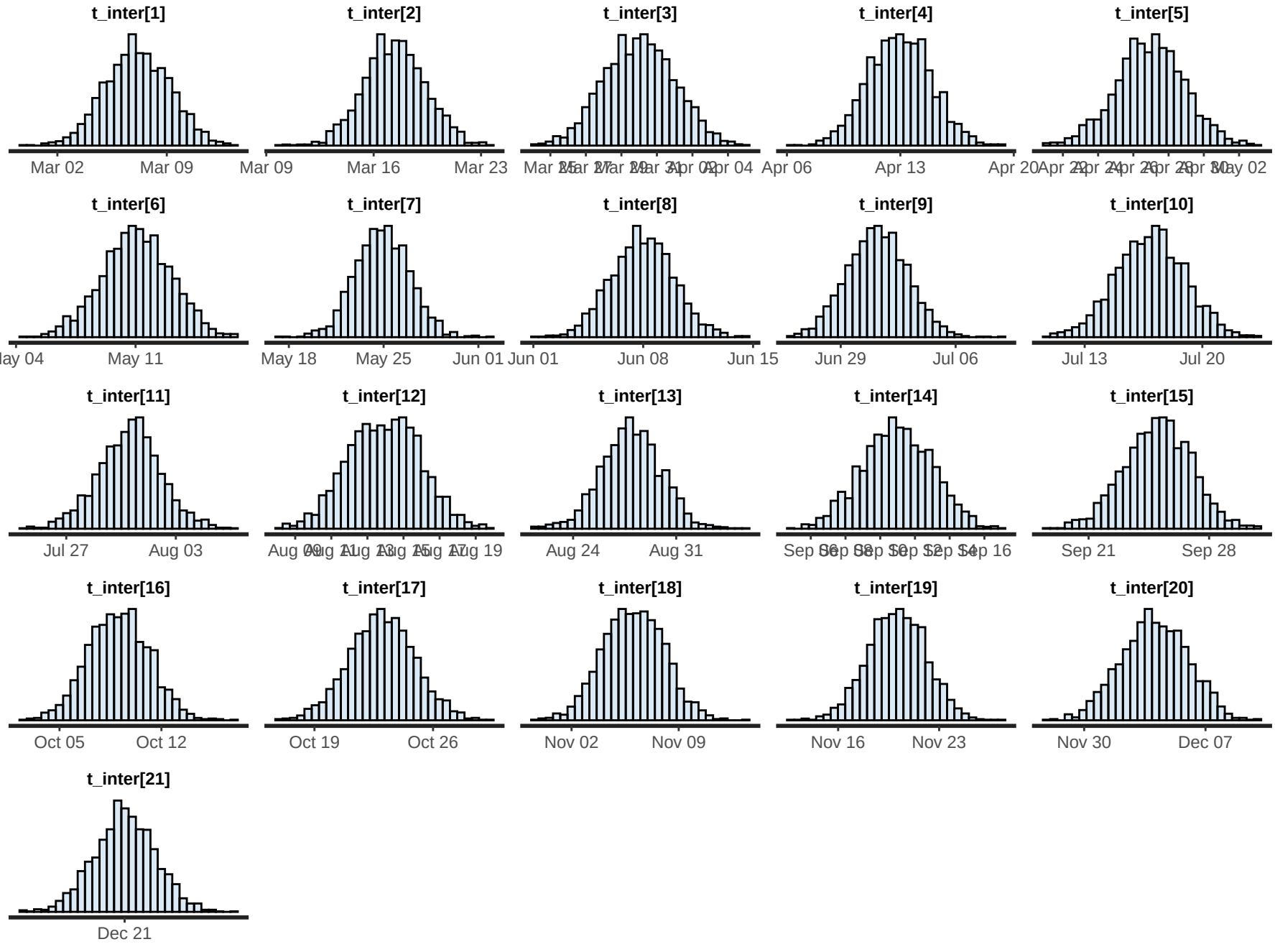

2
3
4
5
duration_hosp_icu

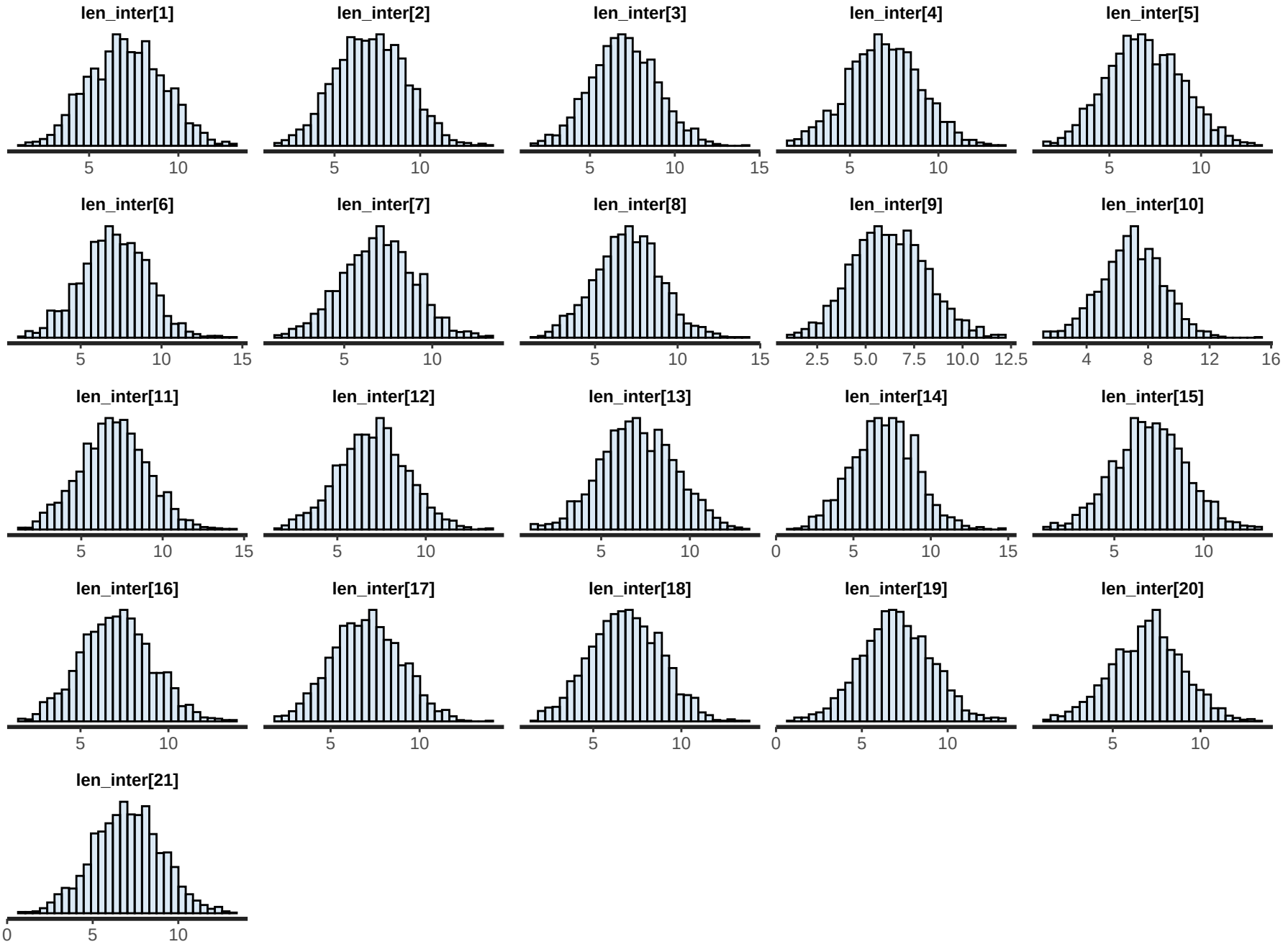

0.00
0.03
0.06
0.09
frac_hosp

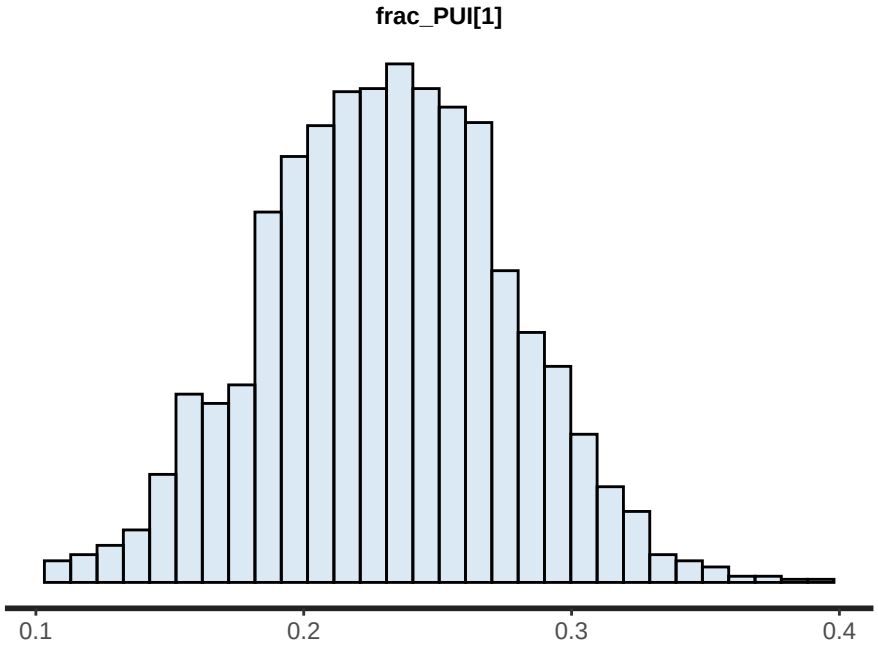

0.32
0.36
0.40
frac_icu


0.3
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 0.5 1.0 1.5 2.0
beta_multiplier[3]
0.8 1.0 1.2
beta_multiplier[4]
0.6 0.8 1.0 1.2
beta_multiplier[5]
0.8 1.0 1.2 1.4
beta_multiplier[6]
1 2
beta_multiplier[7]
1 2 3
beta_multiplier[8]
0.5 1.0 1.5 2.0
beta_multiplier[9]
0.4 0.6 0.8
beta_multiplier[10]
0.4 0.8 1.2 1.6
beta_multiplier[11]
1.0 1.5 2.0
beta_multiplier[12]
0.5 1.0 1.5
beta_multiplier[13]
0.4 0.8 1.2 1.6
beta_multiplier[14]
0.4 0.8 1.2 1.6
beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
0.5 1.0 1.5 2.0
beta_multiplier[17]
1.0 1.5 2.0
beta_multiplier[18]
0.5 1.0 1.5 2.0
beta_multiplier[19]
0.6 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 02
Mar 09
t_inter[2]
Mar 09
Mar 16
Mar 23
t_inter[3]
Mar 25
Mar 27
Mar 29
Mar 31
Apr 02
Apr 04
t_inter[4]
Apr 06
Apr 13
Apr 20
t_inter[5]
Apr 22
Apr 24
Apr 26
Apr 28
Apr 30
May 02
t_inter[6]
May 04
May 11
t_inter[7]
May 18
May 25
Jun 01
t_inter[8]
Jun 01
Jun 08
Jun 15
t_inter[9]
Jun 29
Jul 06
t_inter[10]
Jul 13
Jul 20
t_inter[11]
Jul 27
Aug 03
t_inter[12]
Aug 09
Aug 11
Aug 13
Aug 15
Aug 17
Aug 19
t_inter[13]
Aug 24
Aug 31
t_inter[14]
Sep 06
Sep 08
Sep 10
Sep 12
Sep 14
Sep 16
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
t_inter[20]
Nov 30
Dec 07
t_inter[21]
Dec 21


len_inter[1]
5
10
len_inter[2]
5
10
len_inter[3]
5
10
15
len_inter[4]
5
10
len_inter[5]
5
10
len_inter[6]
5
10
15
len_inter[7]
5
10
len_inter[8]
5
10
15
len_inter[9]
2.5
5.0
7.5
10.0
12.5
len_inter[10]
4
8
12
16
len_inter[11]
5
10
15
len_inter[12]
5
10
len_inter[13]
5
10
len_inter[14]
0
5
10
15
len_inter[15]
5
10
len_inter[16]
5
10
len_inter[17]
5
10
len_inter[18]
5
10
len_inter[19]
0
5
10
len_inter[20]
5
10
len_inter[21]
0
5
10


frac_PUI[1]
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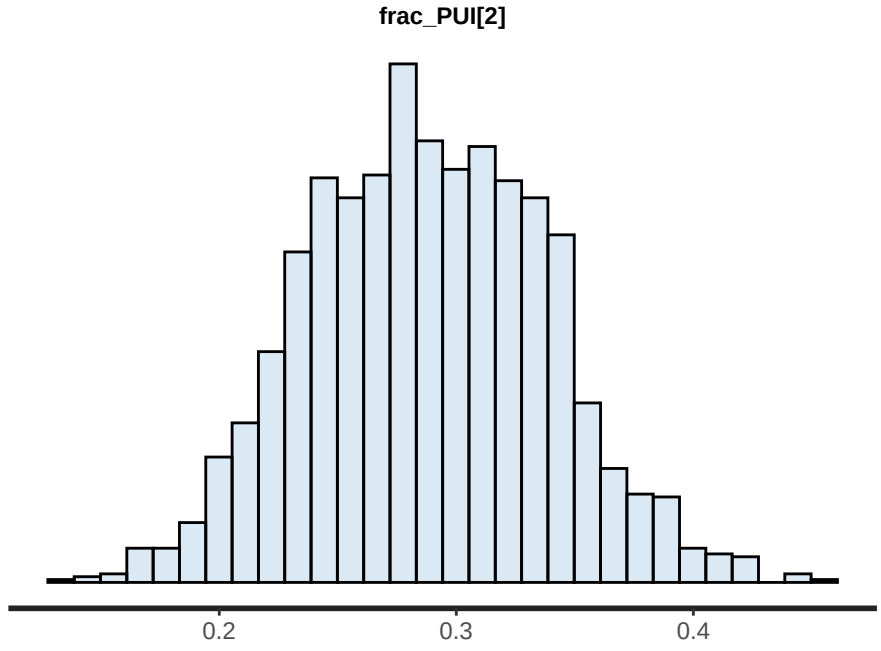
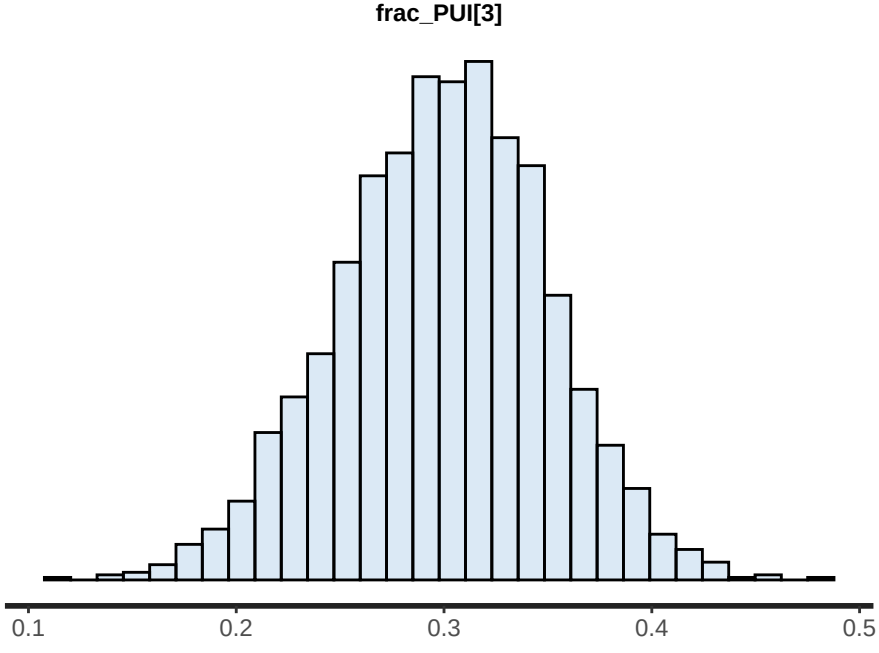
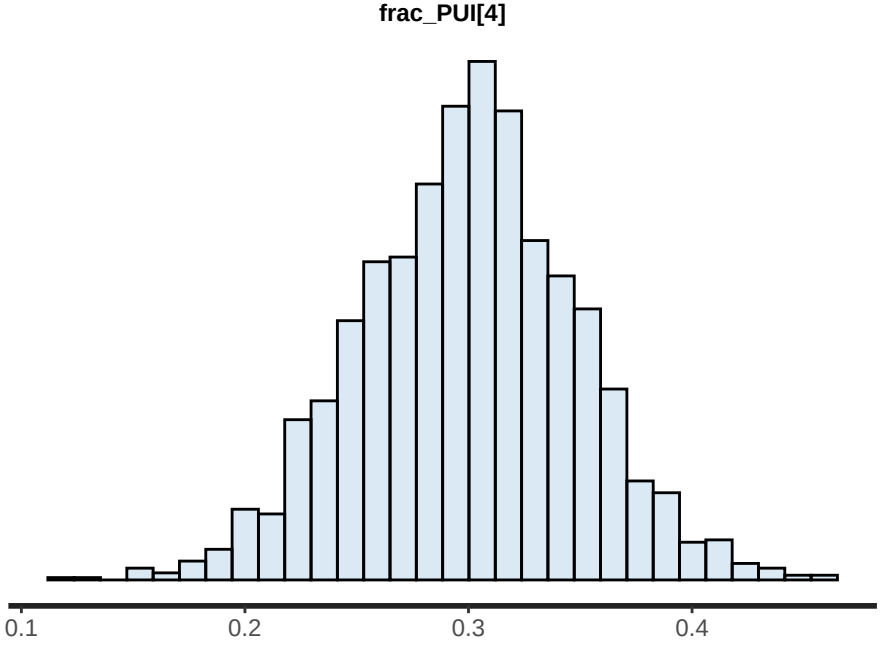
0.2
0.3
0.4


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]
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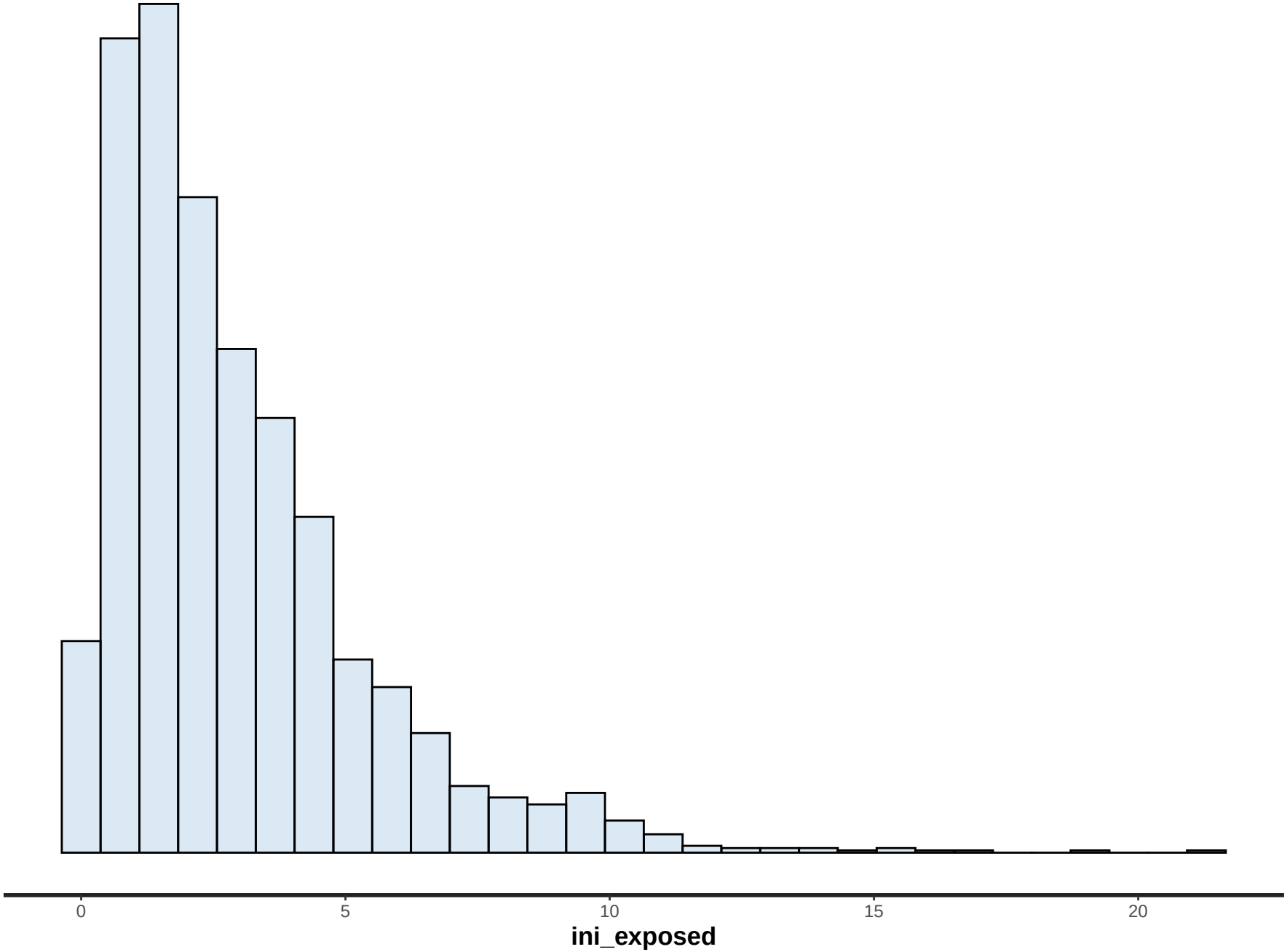
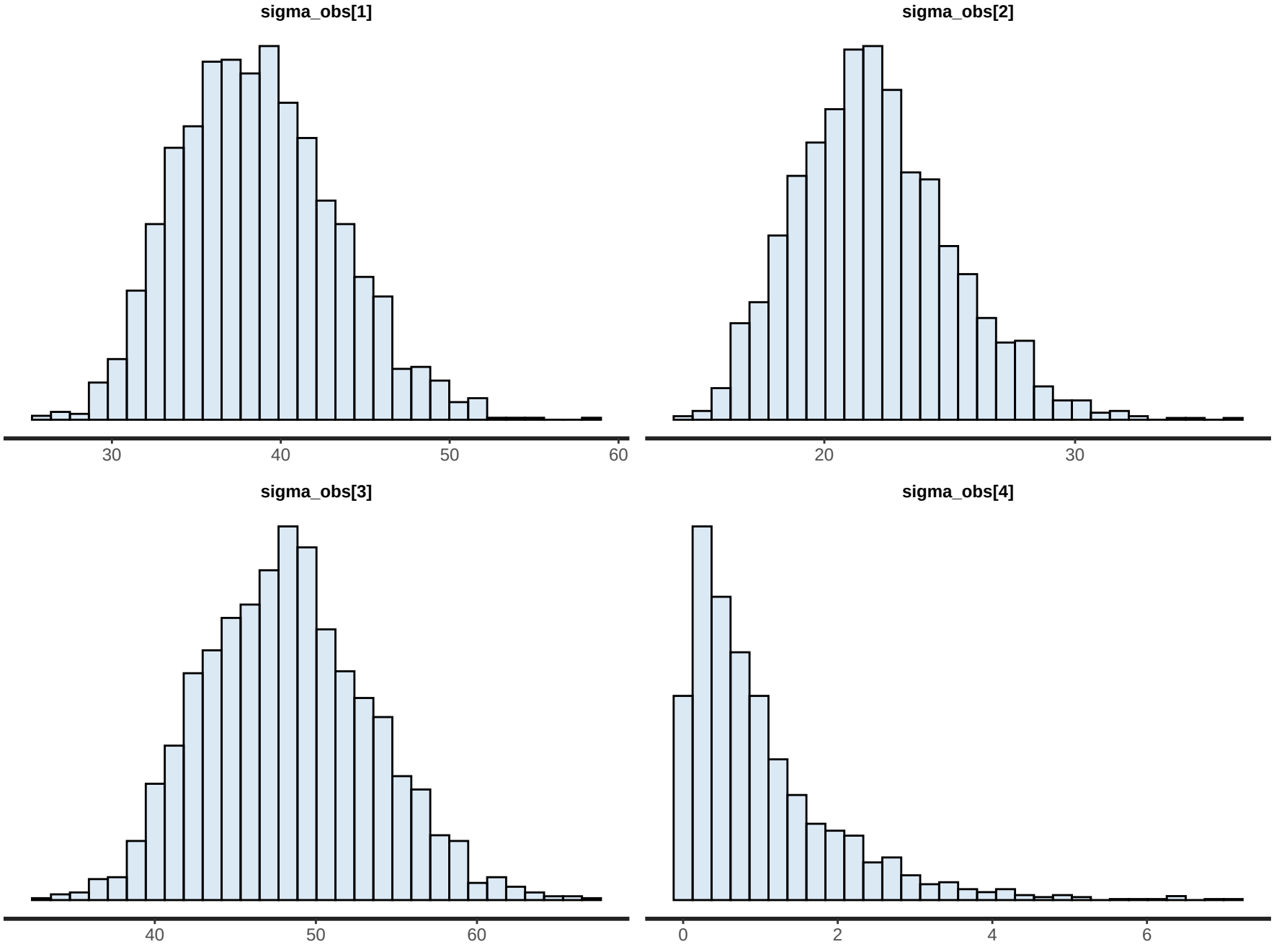
0.2
0.3
0.4


0
5
10
15
20
ini_exposed


sigma_obs[1]
30
40
50
60
sigma_obs[2]
20
30
sigma_obs[3]
40
50
60
sigma_obs[4]
0
2
4
6