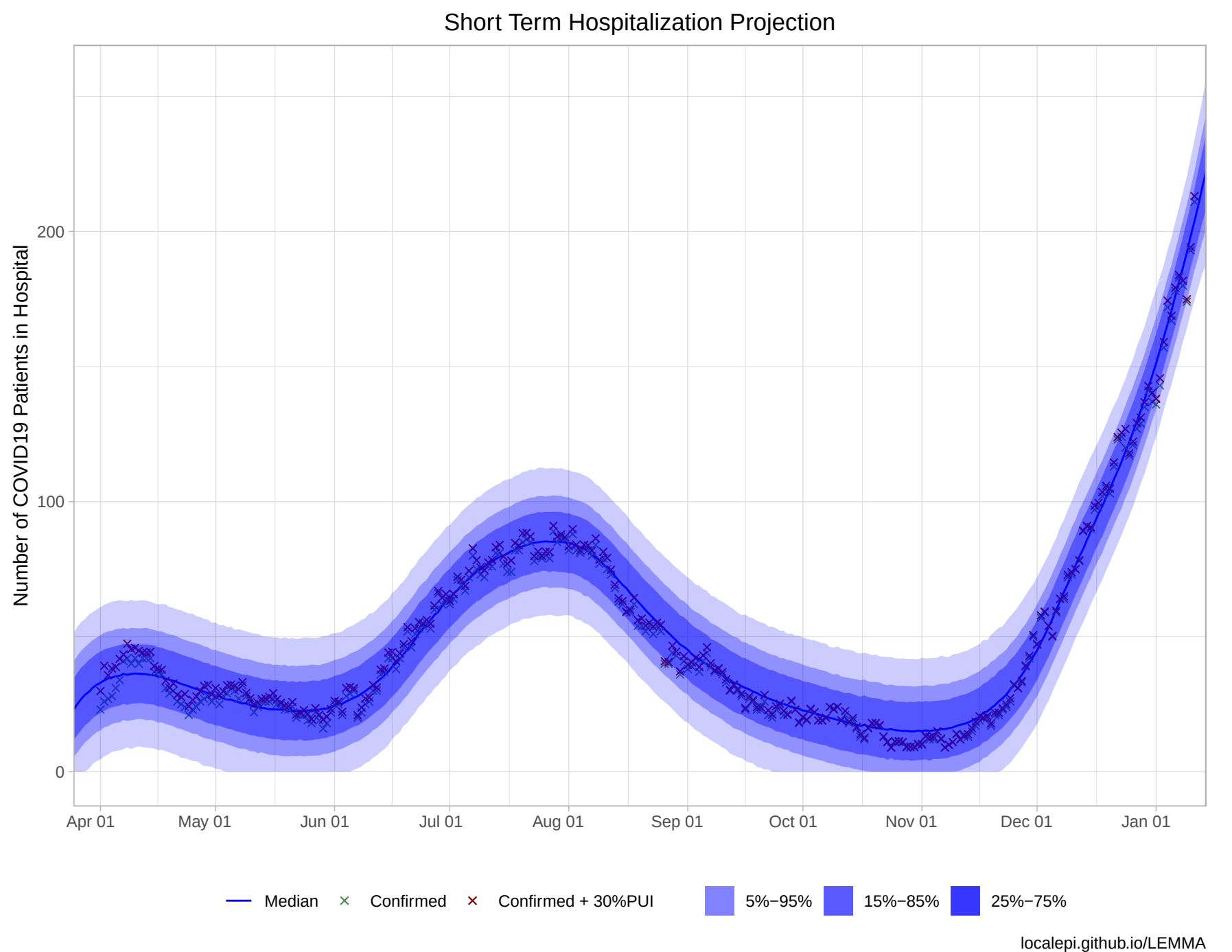
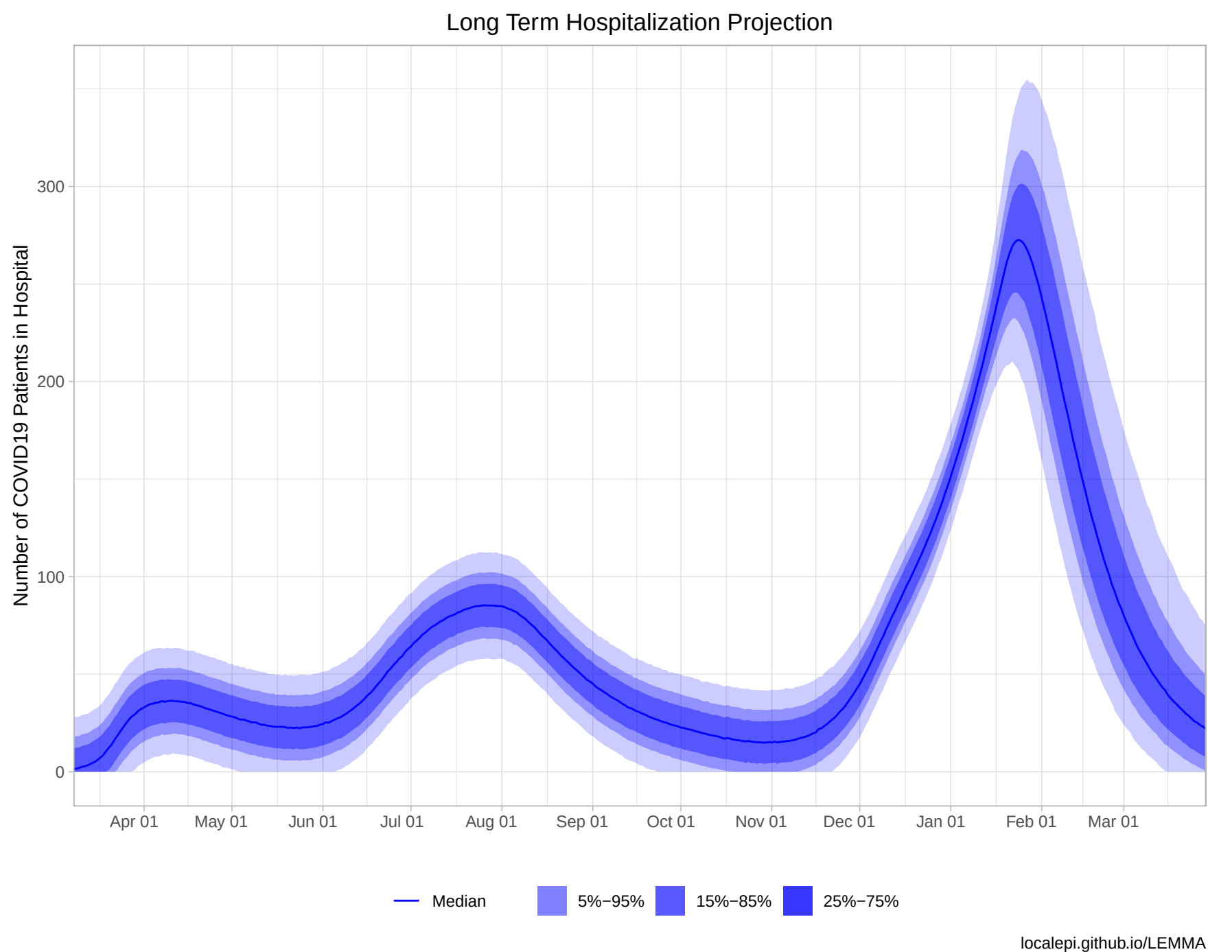
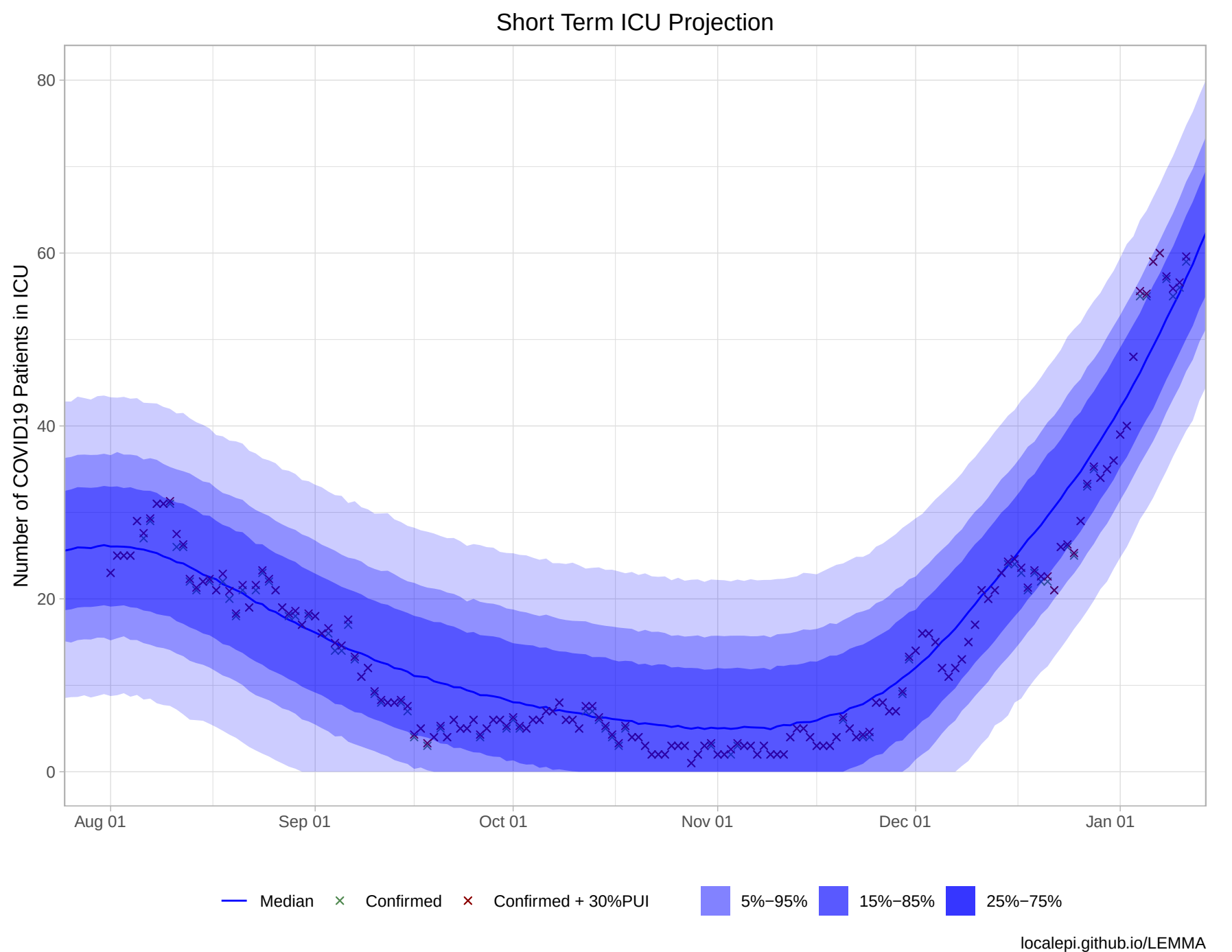
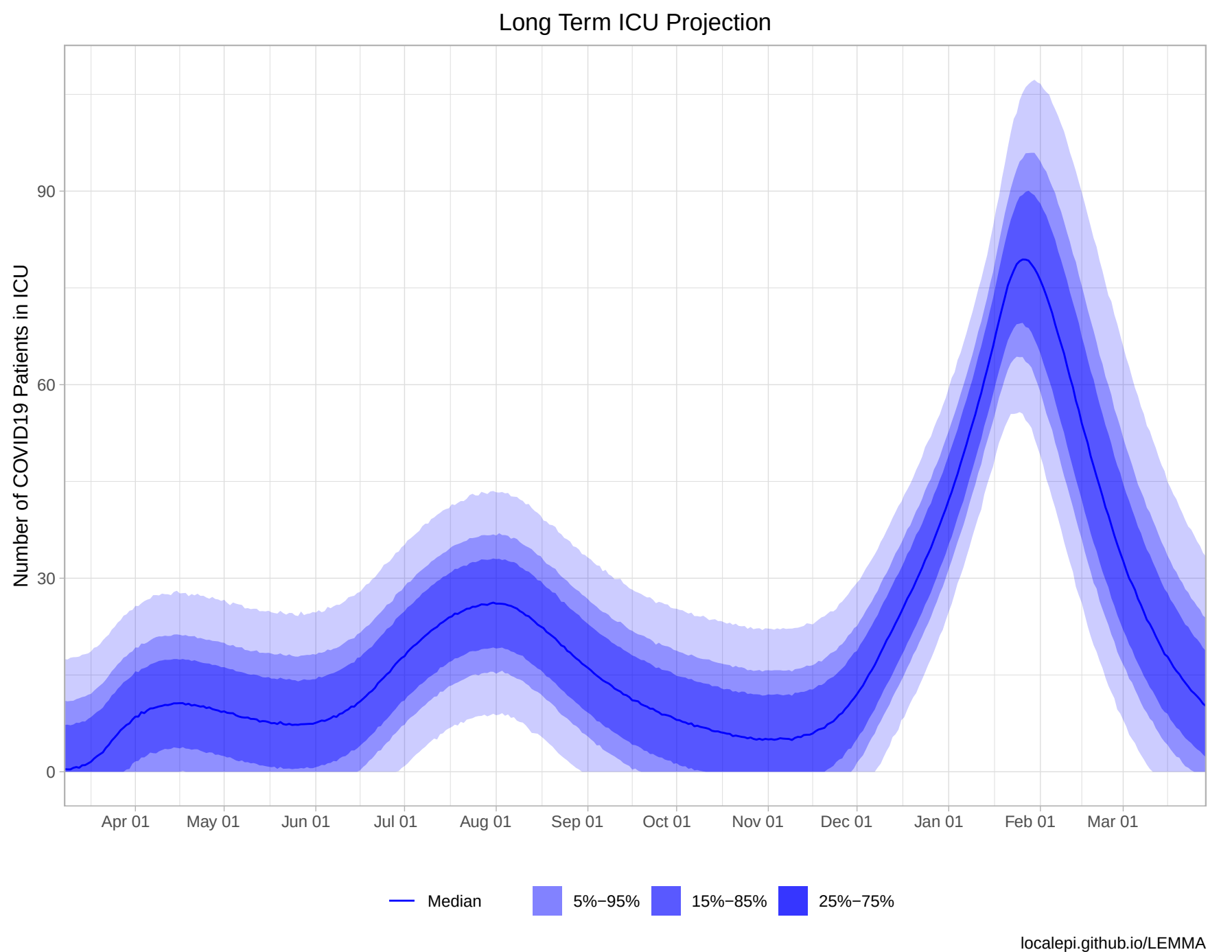
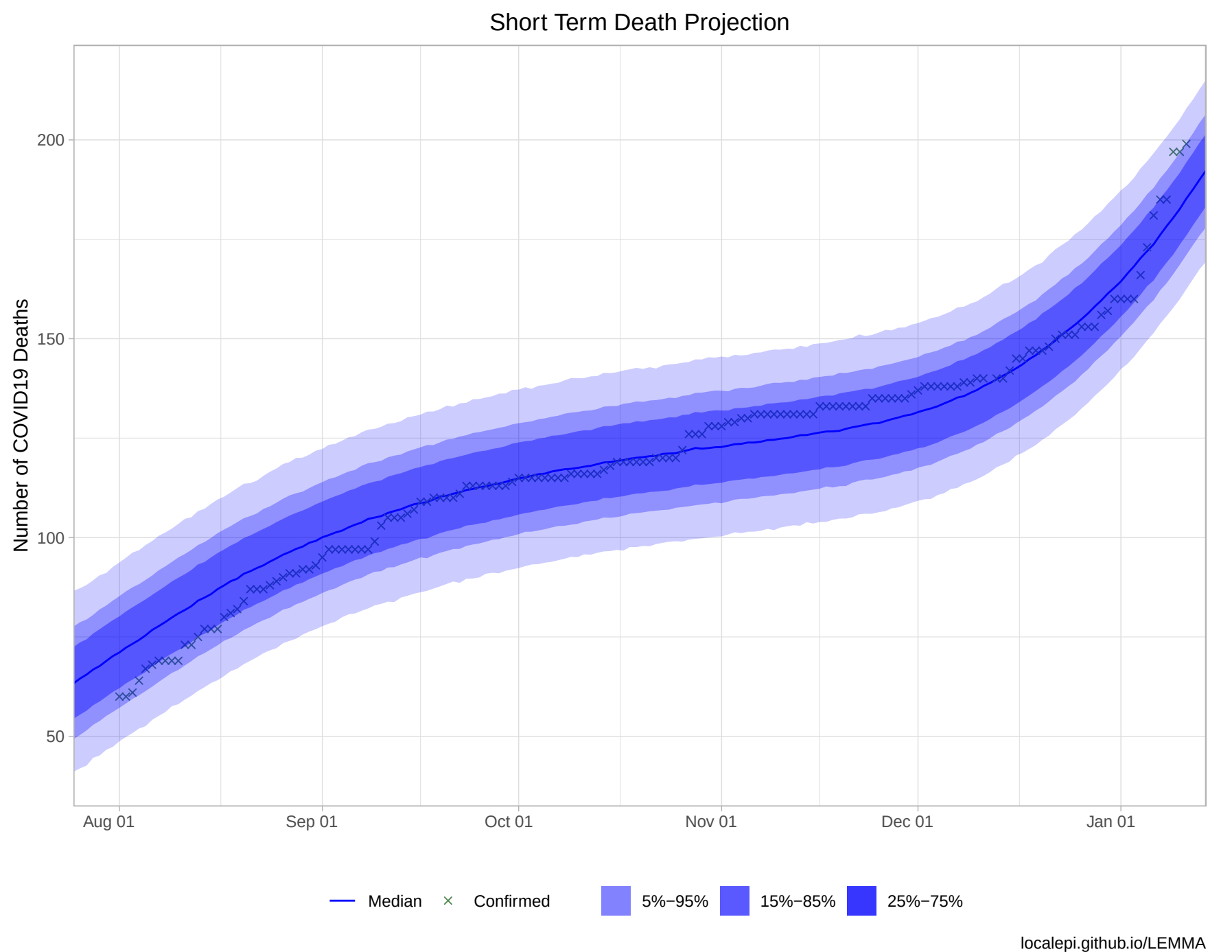
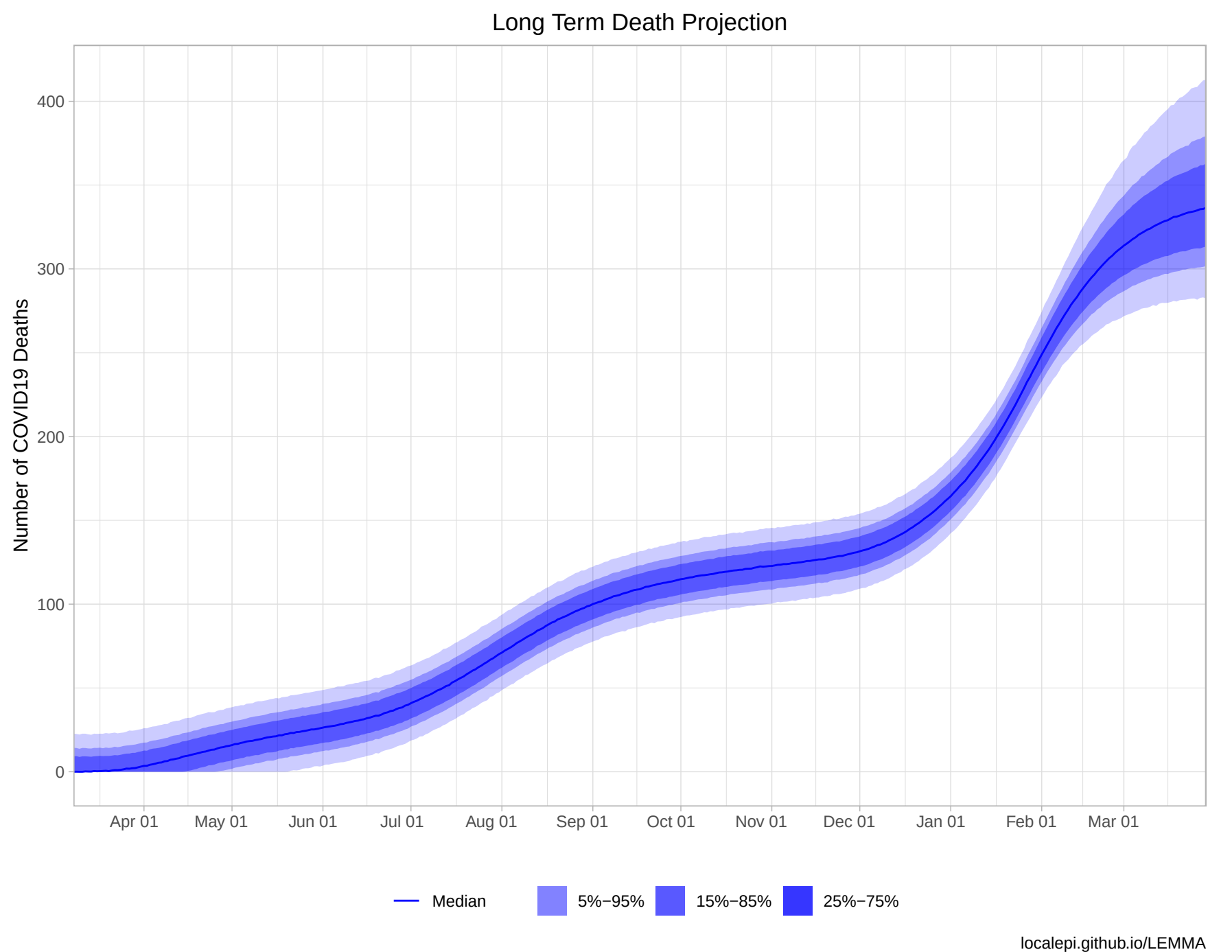

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

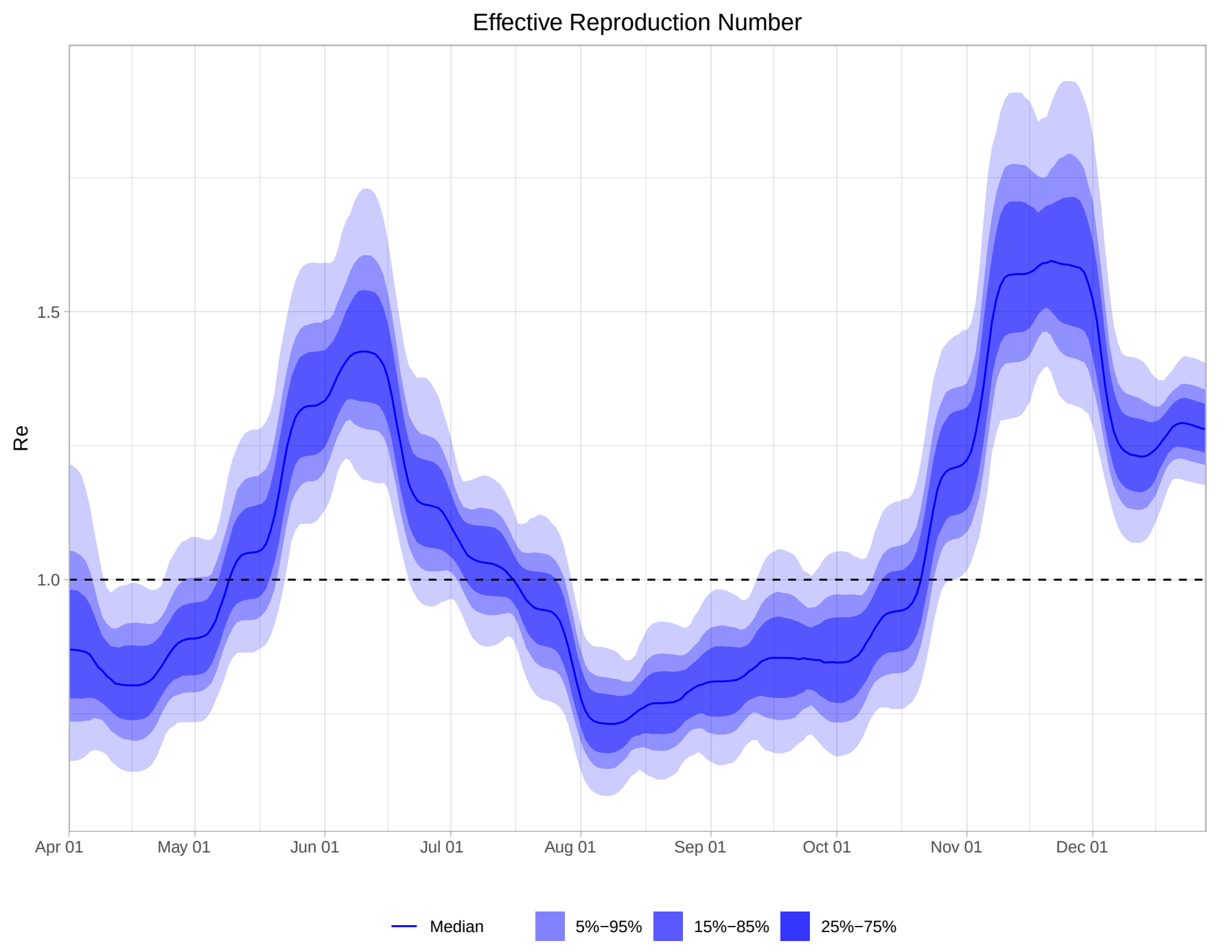

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
100
200
300
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
80
60
40
20
0
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 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
0
30
60
90
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

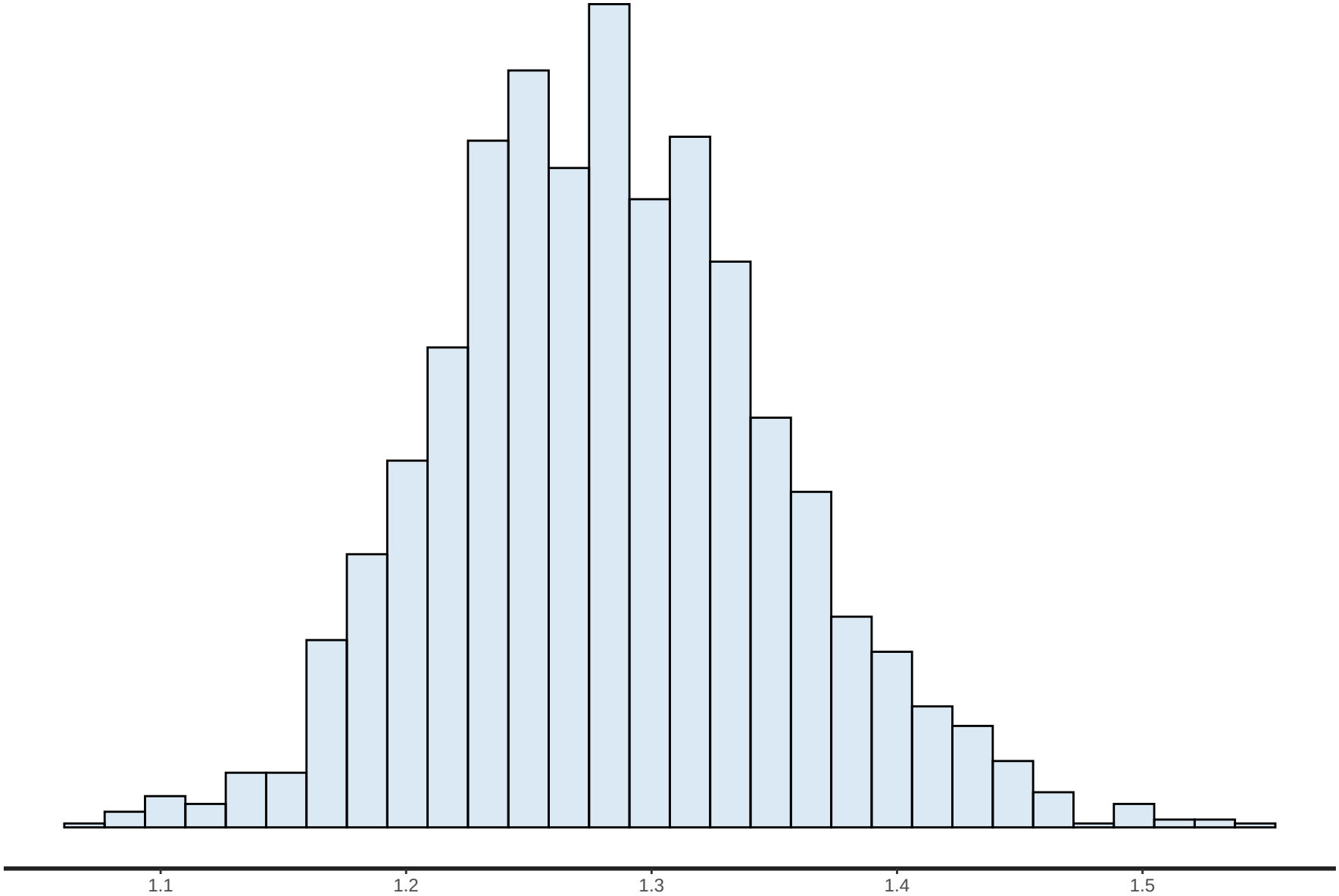

Short Term Death Projection
Number of COVID19 Deaths
200
150
100
50
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

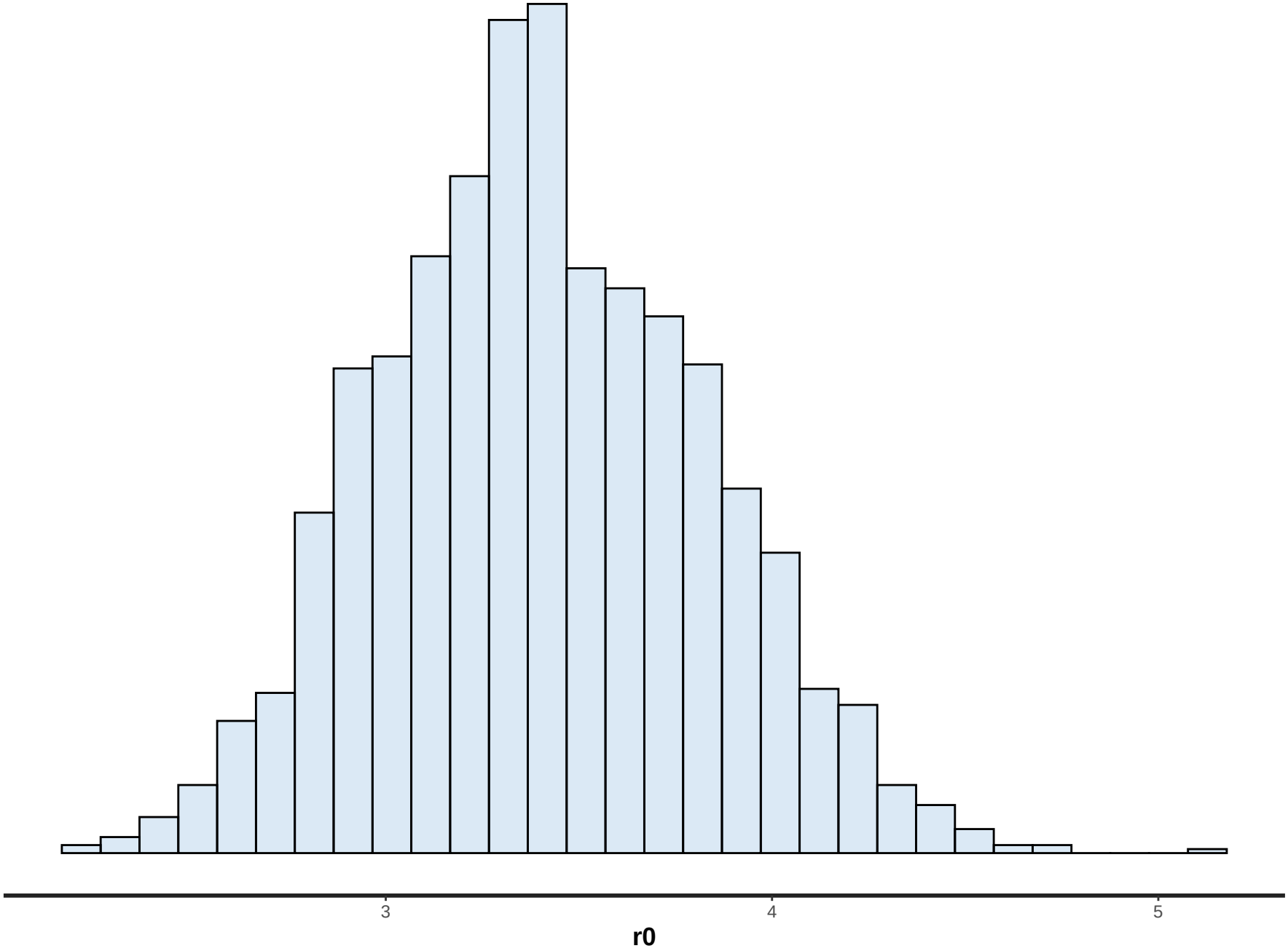

Long Term Death Projection
Number of COVID19 Deaths
400
300
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

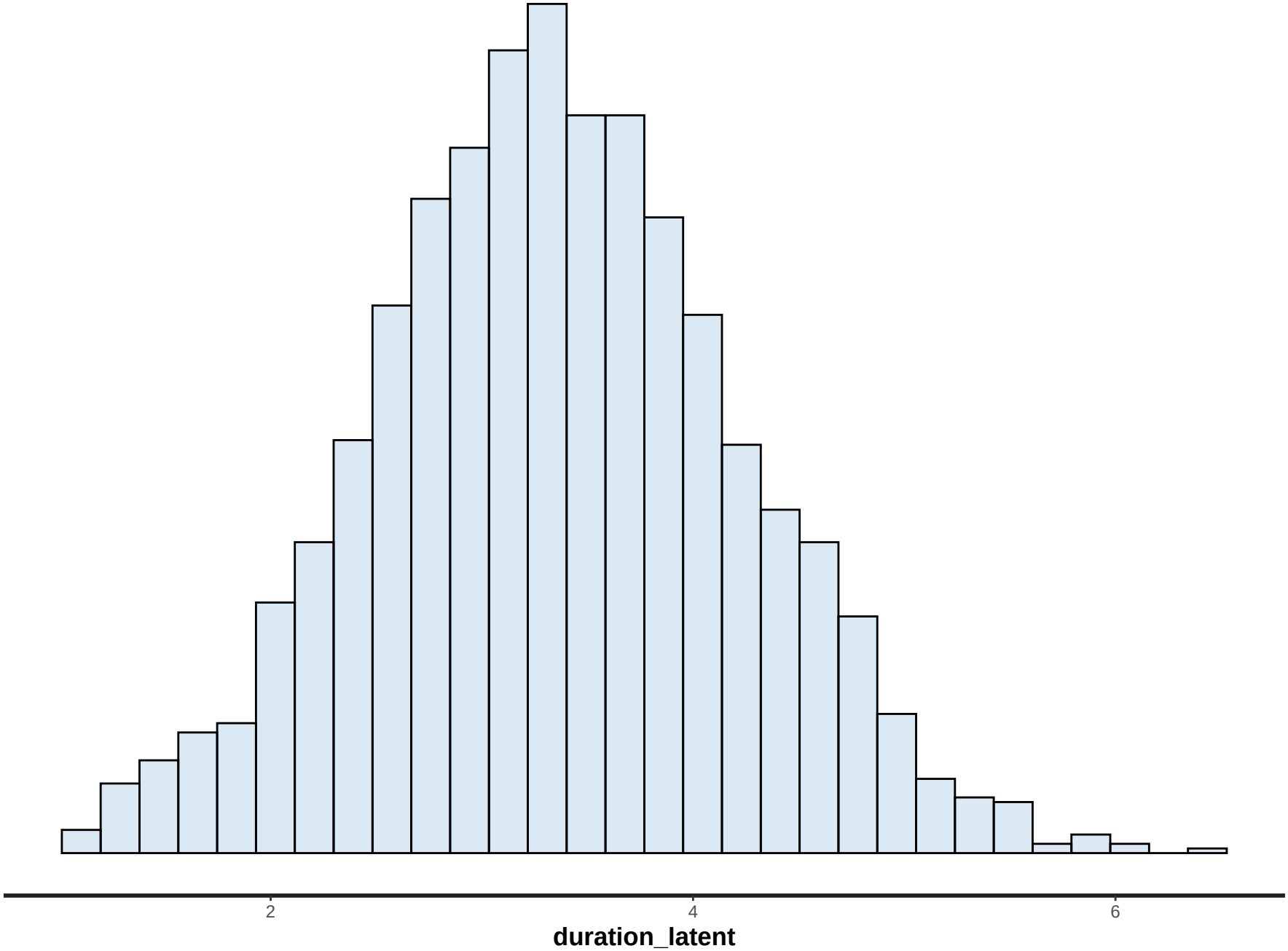

Effective Reproduction Number
Re
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

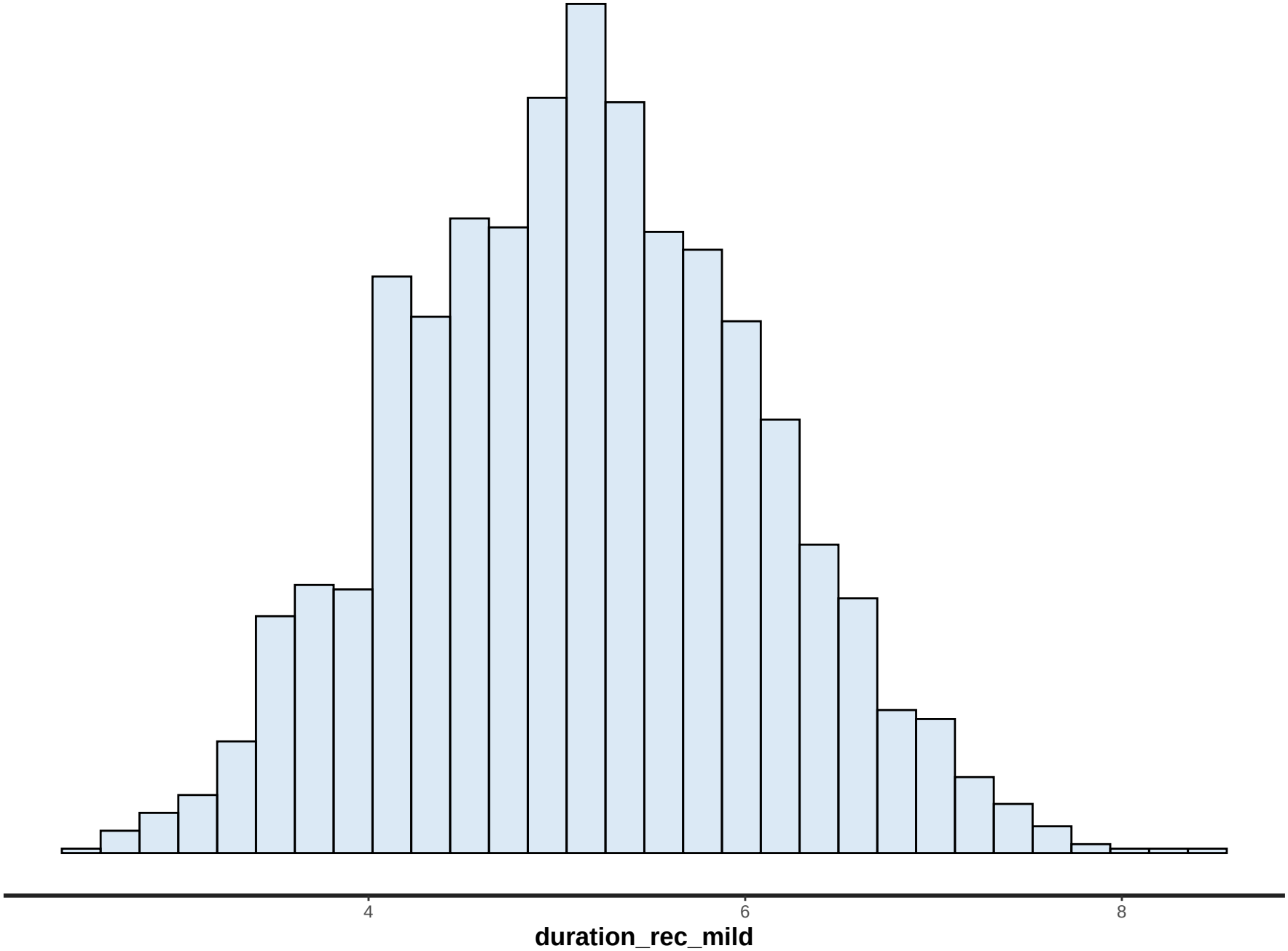
Rt as of 2020−12−28

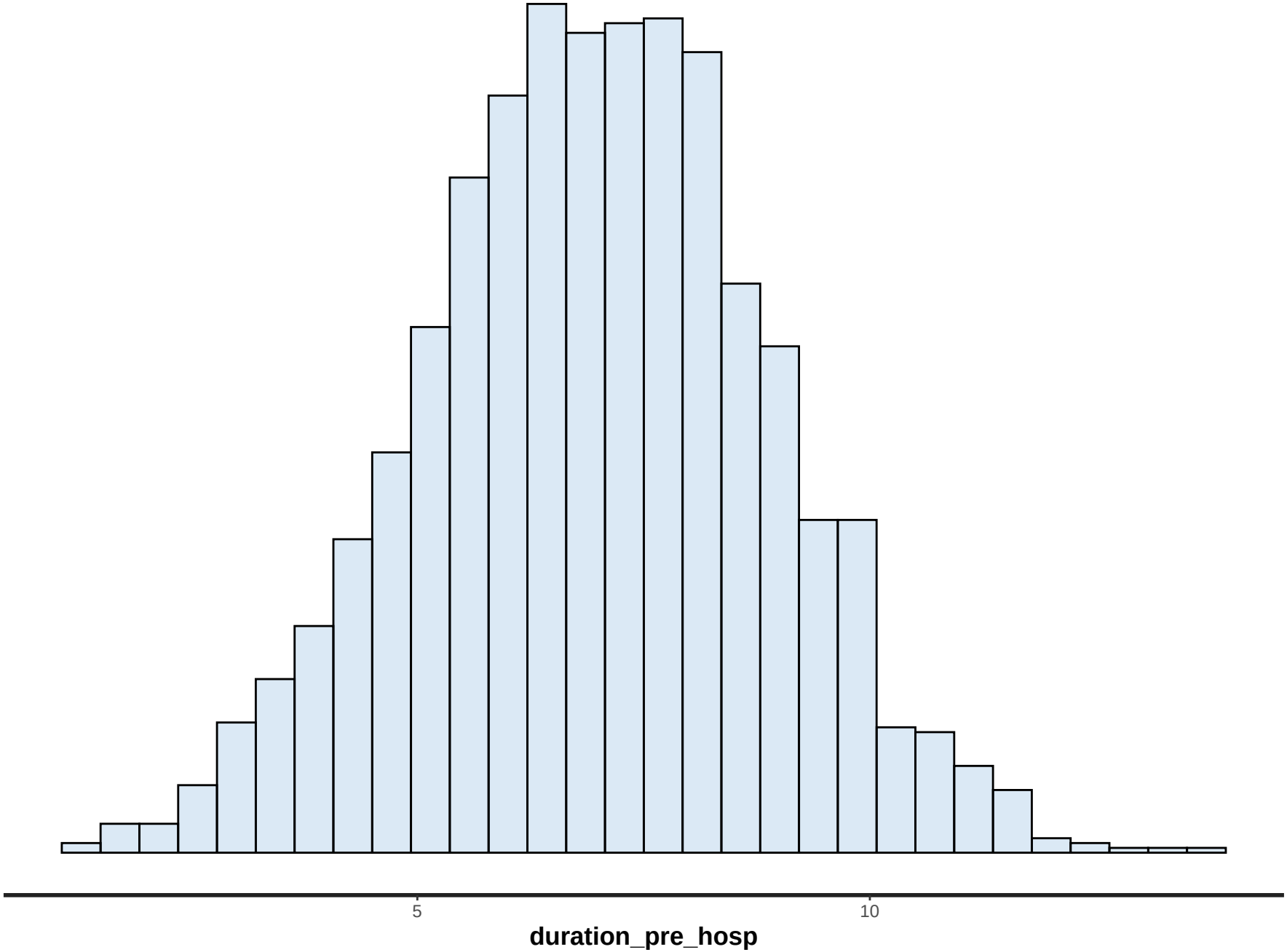
5%	10%	25%	50%	75%	90%	95%
1.18	1.20	1.24	1.28	1.33	1.37	1.40

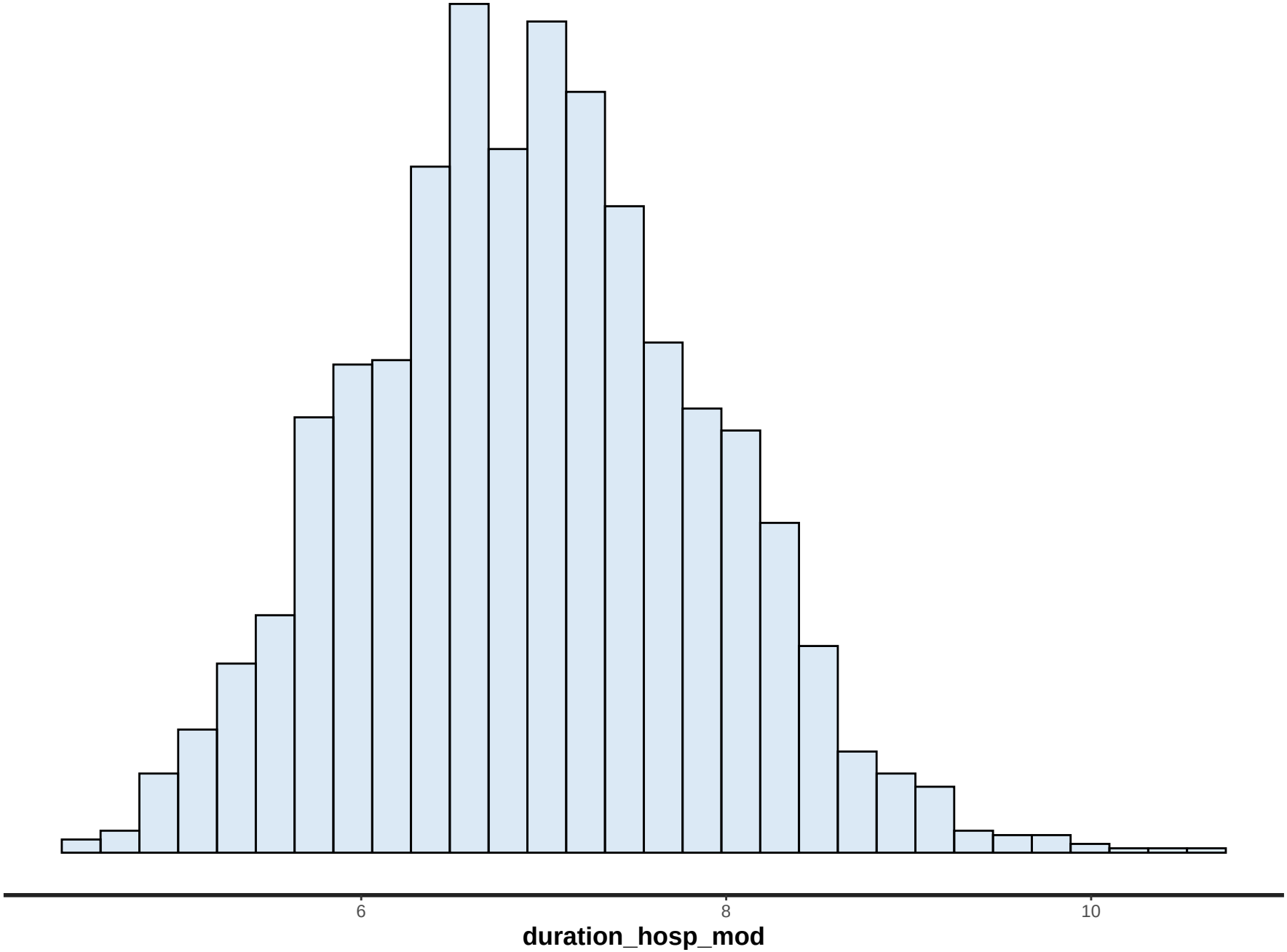


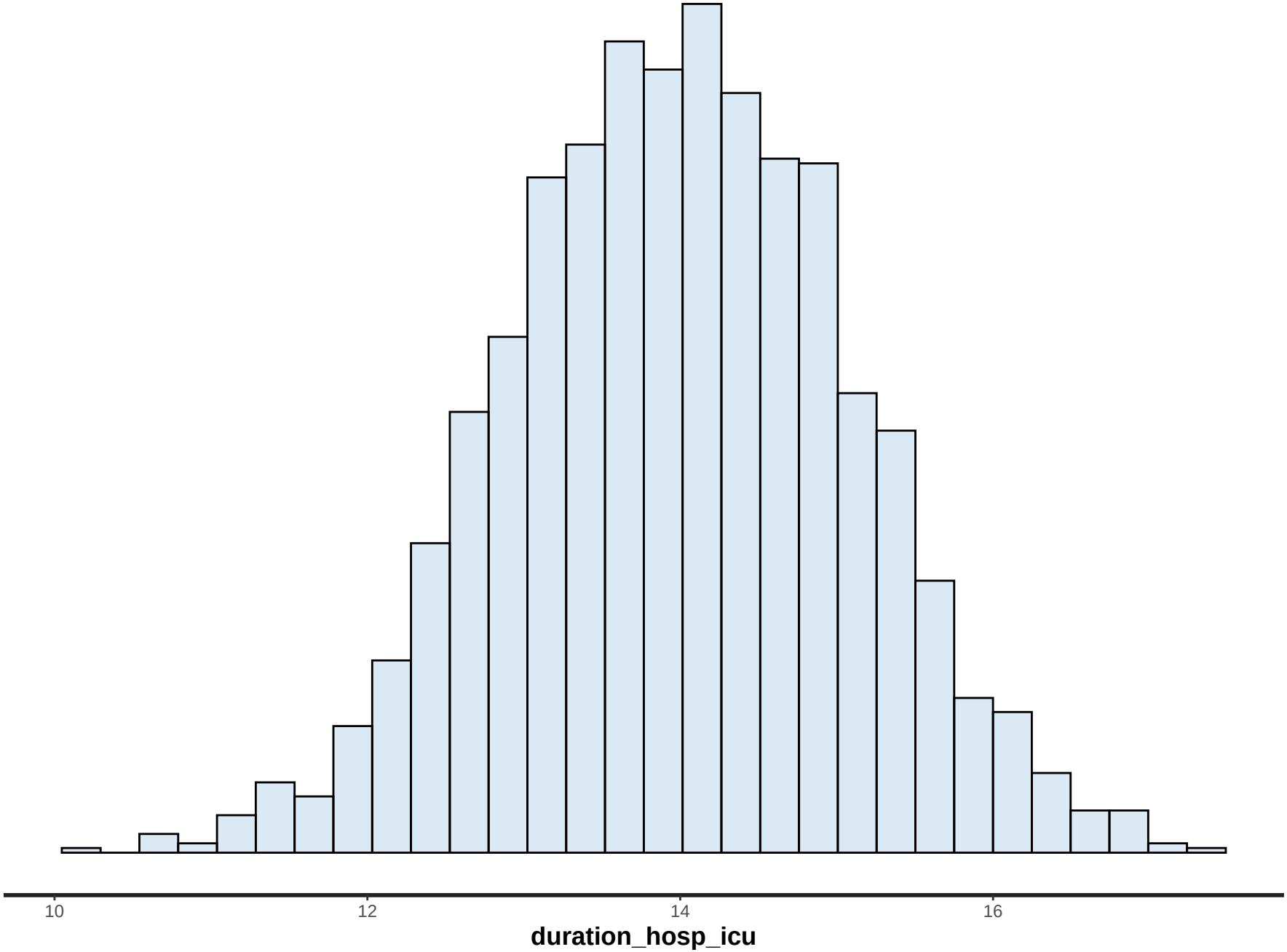

3
4
5
r0

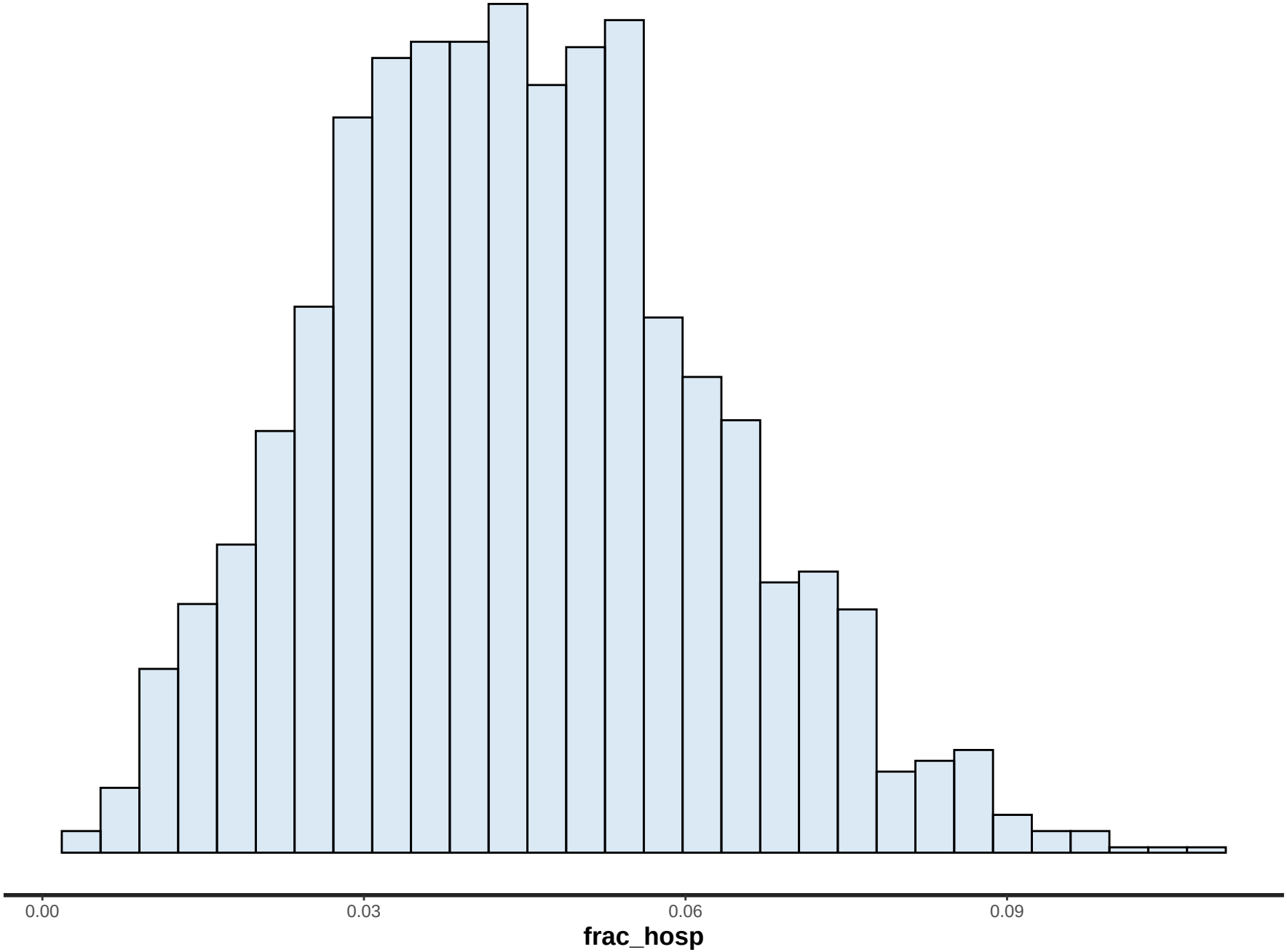

2
4
6
duration_latent

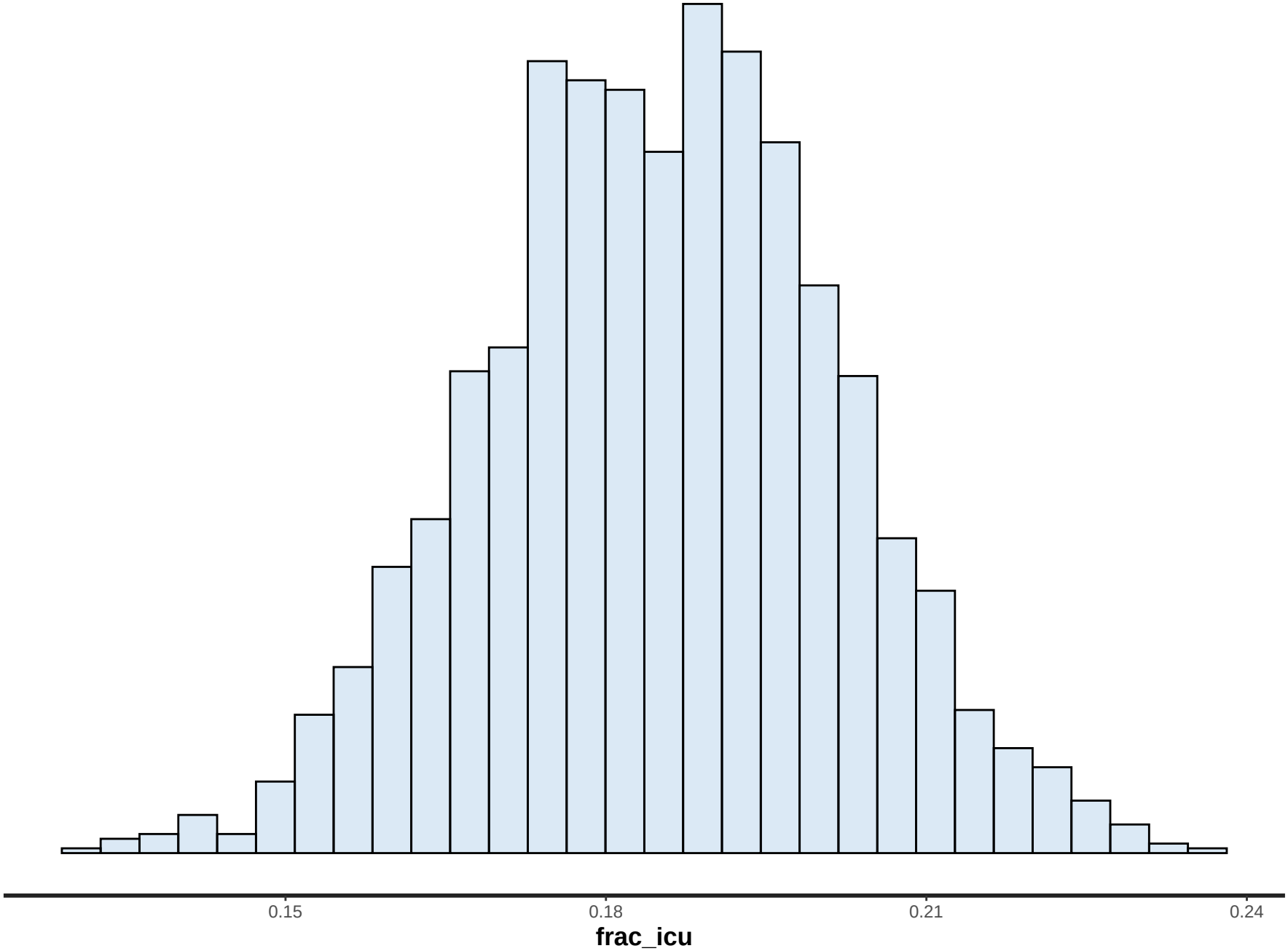

4
6
8
duration_rec_mild

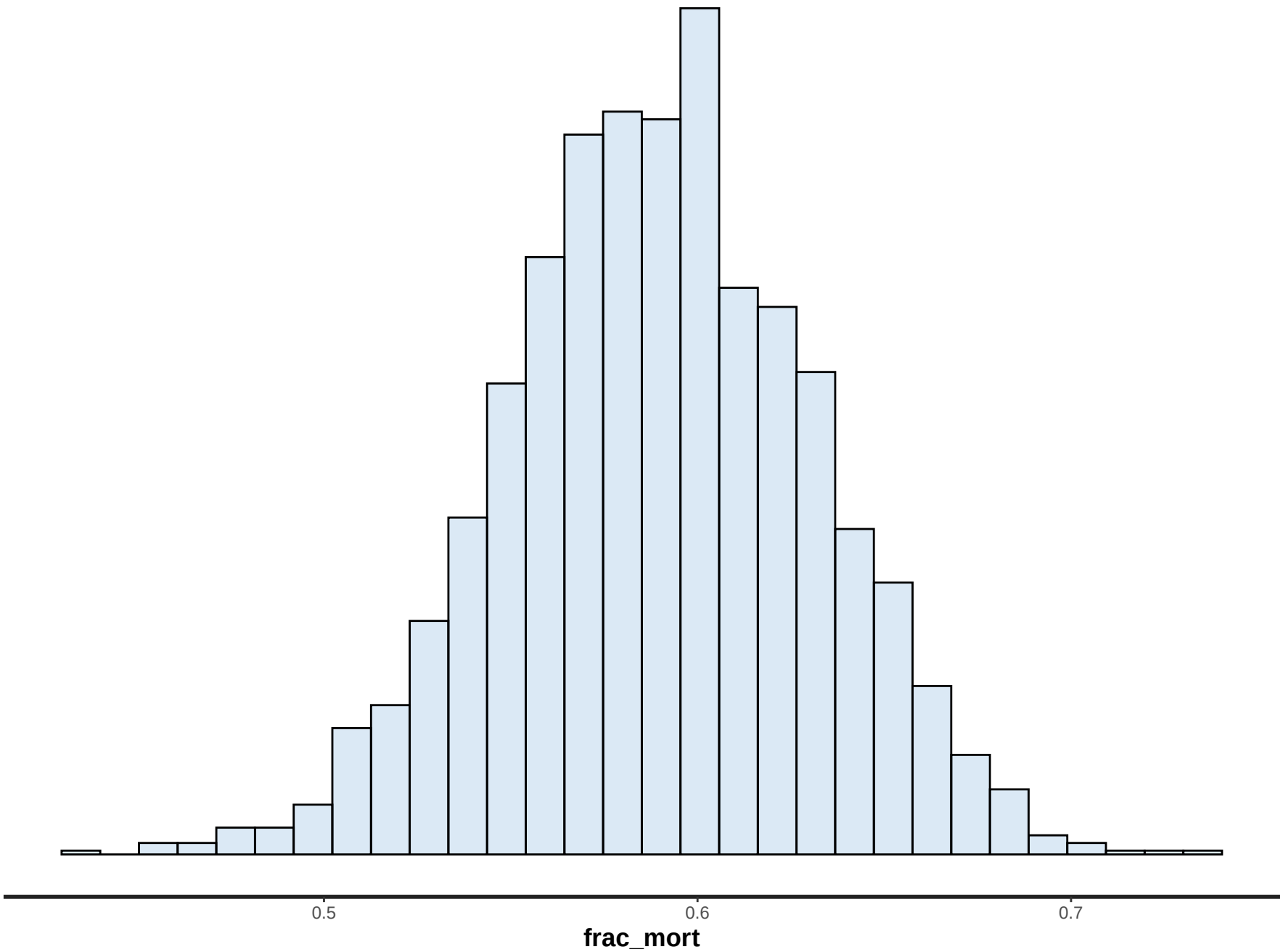

5
10
duration_pre_hosp

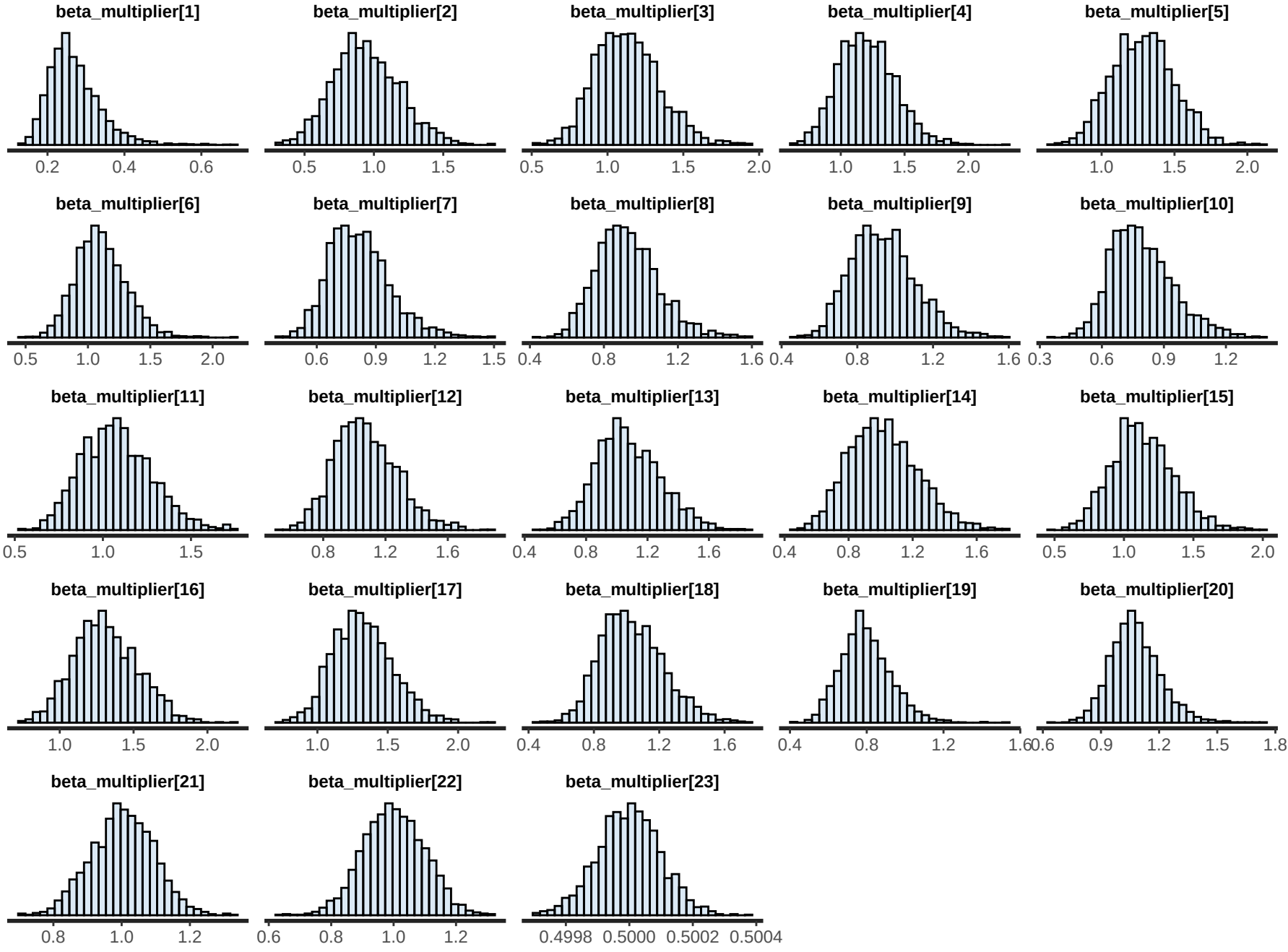

6
8
10
duration_hosp_mod

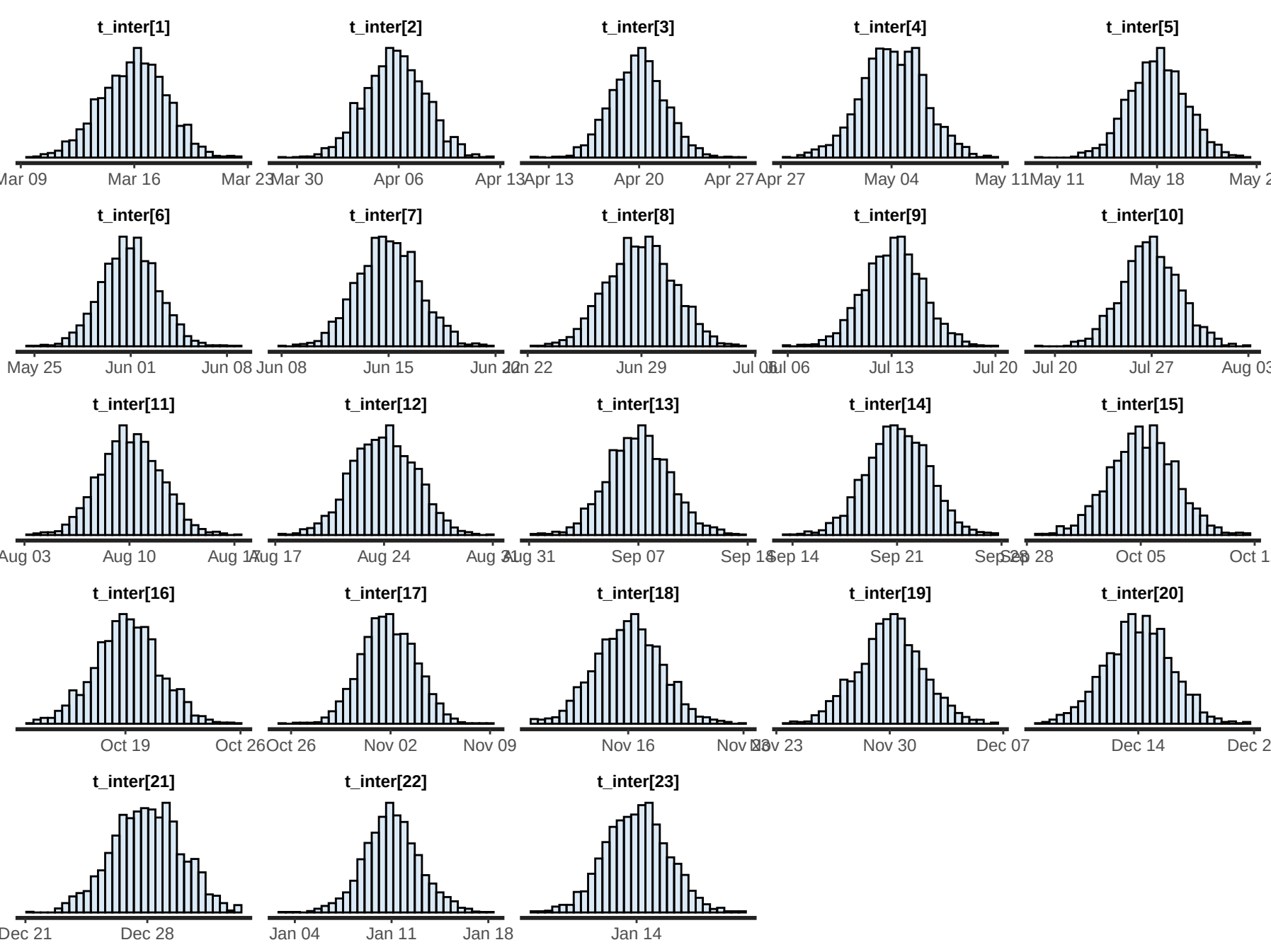

10
12
14
16
duration_hosp_icu


0.00
0.03
0.06
0.09
frac_hosp


0.15
0.18
0.21
0.24
frac_icu


0.5
0.6
0.7
frac_mort


beta_multiplier[1]
0.2 0.4 0.6
beta_multiplier[2]
0.5 1.0 1.5
beta_multiplier[3]
0.5 1.0 1.5 2.0
beta_multiplier[4]
1.0 1.5 2.0
beta_multiplier[5]
1.0 1.5 2.0
beta_multiplier[6]
0.5 1.0 1.5 2.0
beta_multiplier[7]
0.6 0.9 1.2 1.5
beta_multiplier[8]
0.4 0.8 1.2 1.6
beta_multiplier[9]
0.4 0.8 1.2 1.6
beta_multiplier[10]
0.3 0.6 0.9 1.2
beta_multiplier[11]
0.5 1.0 1.5
beta_multiplier[12]
0.8 1.2 1.6
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]
1.0 1.5 2.0
beta_multiplier[17]
1.0 1.5 2.0
beta_multiplier[18]
0.4 0.8 1.2 1.6
beta_multiplier[19]
0.4 0.8 1.2 1.6
beta_multiplier[20]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[21]
0.8 1.0 1.2
beta_multiplier[22]
0.6 0.8 1.0 1.2
beta_multiplier[23]
0.4998 0.5000 0.5002 0.5004


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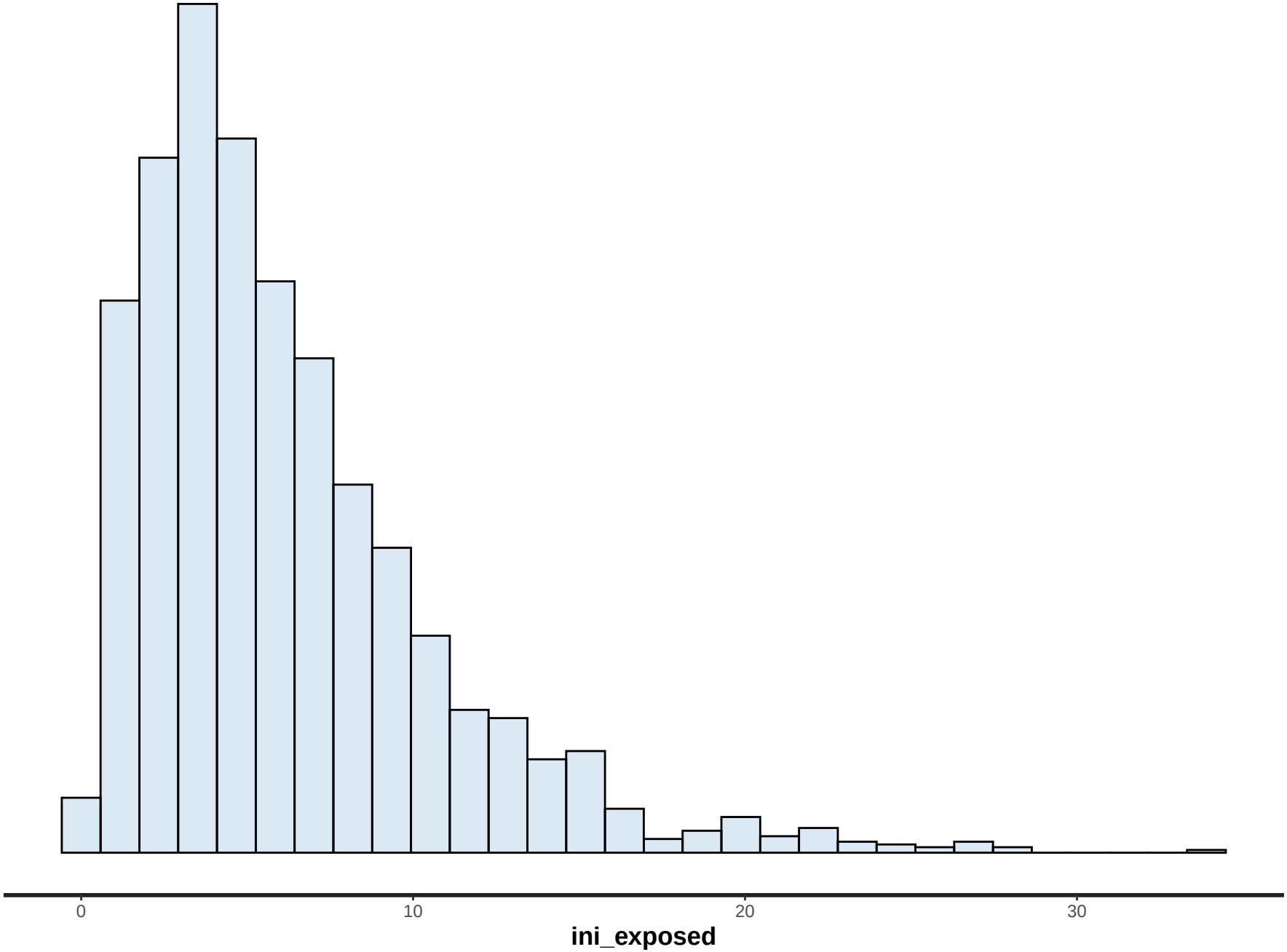
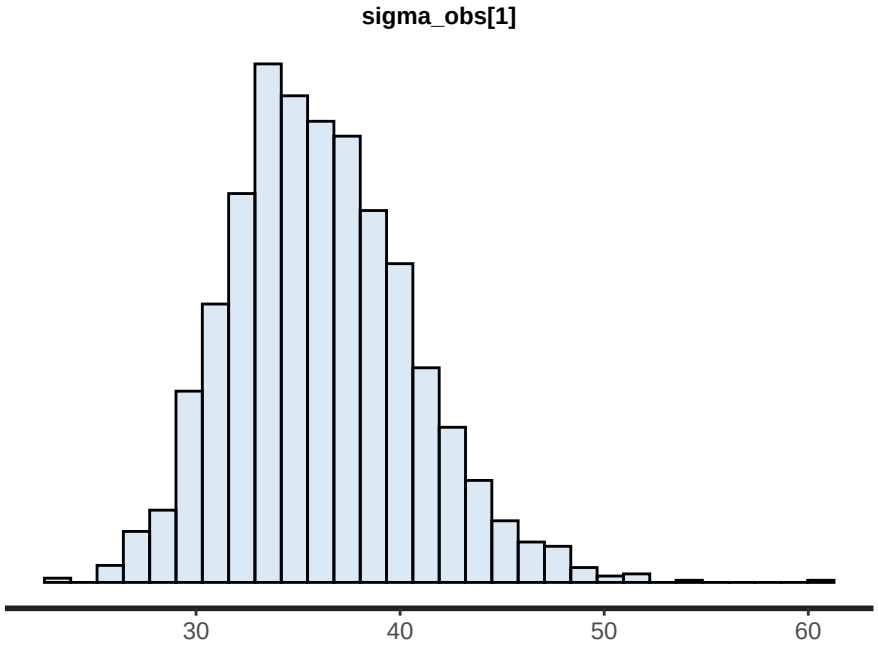
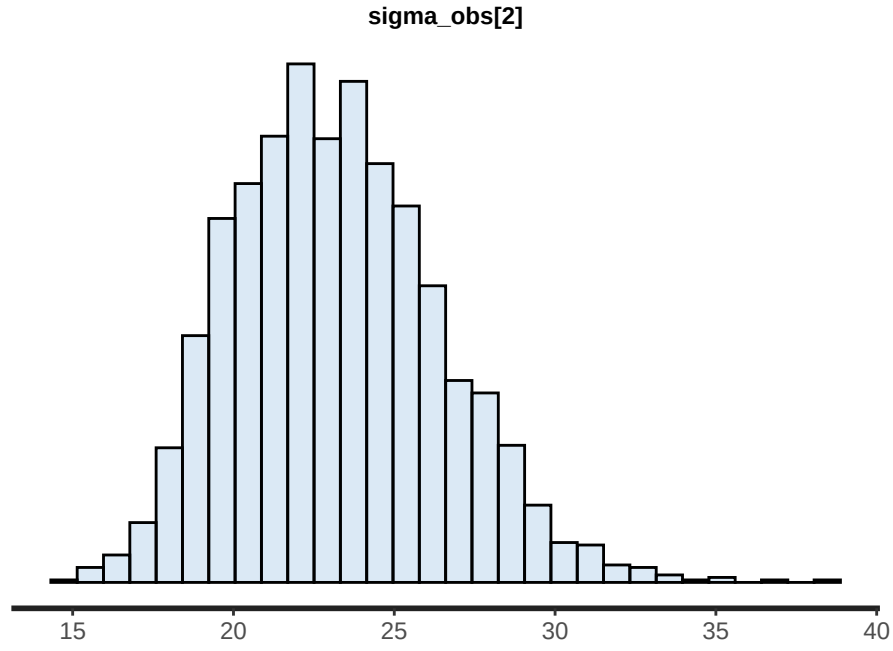
Dec 14
t_inter[21]
Dec 21
Dec 28
t_inter[22]
Jan 04
Jan 11
Jan 18
t_inter[23]
Jan 14


0
10
20
30
ini_exposed


sigma_obs[1]
30
40
50
60


sigma_obs[2]
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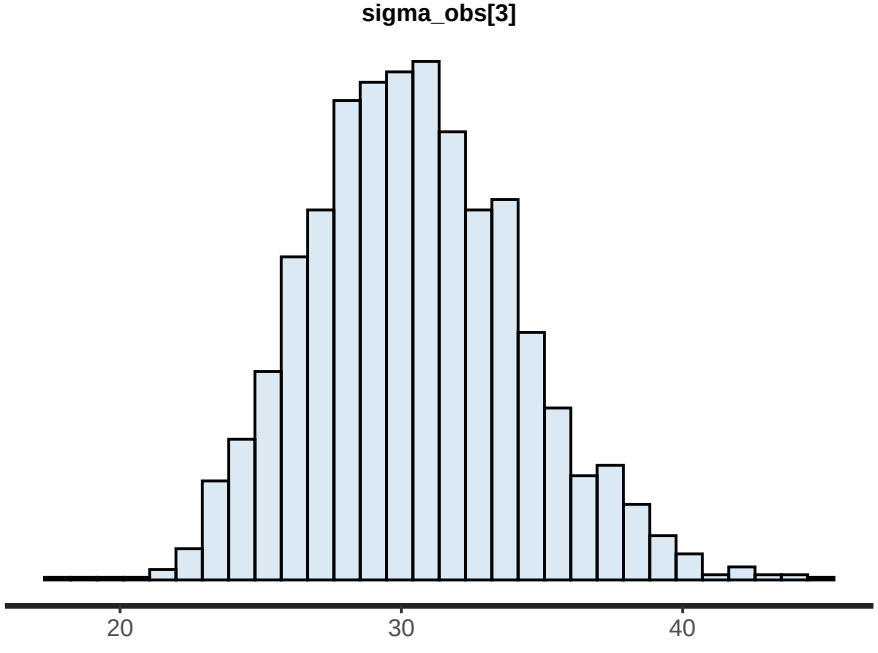
20
25
30
35
40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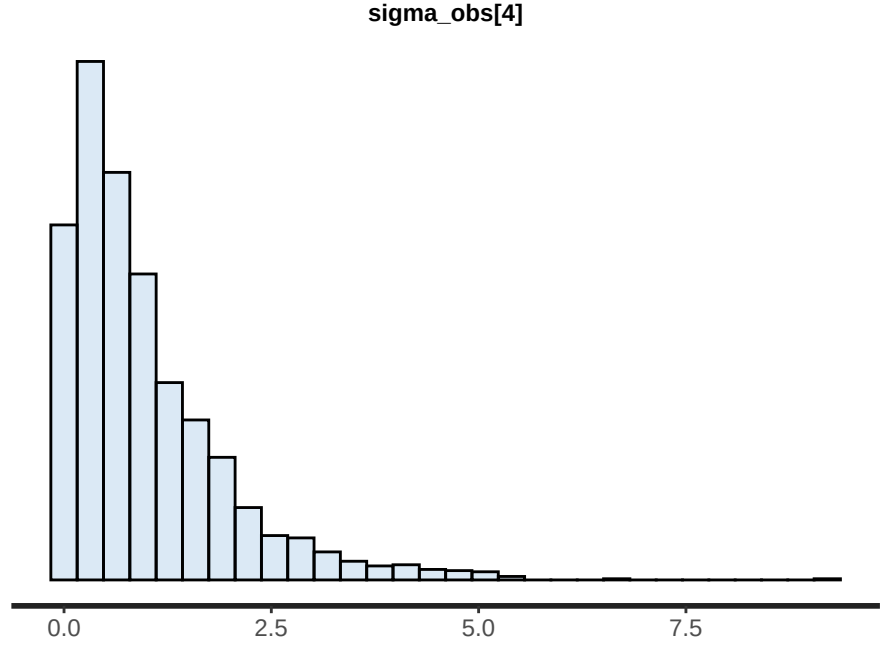
sigma_obs[4]
0.0
2.5
5.0
7.5