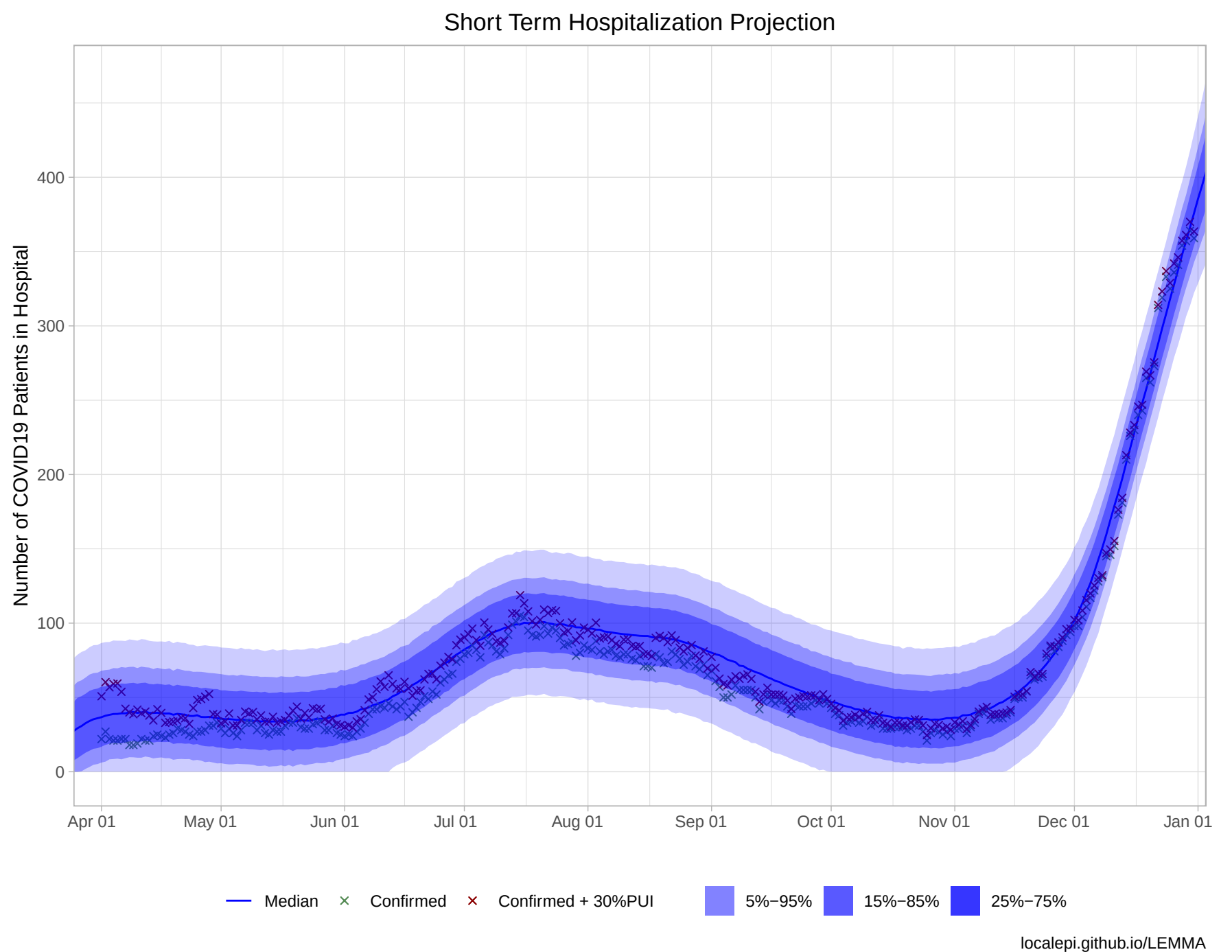
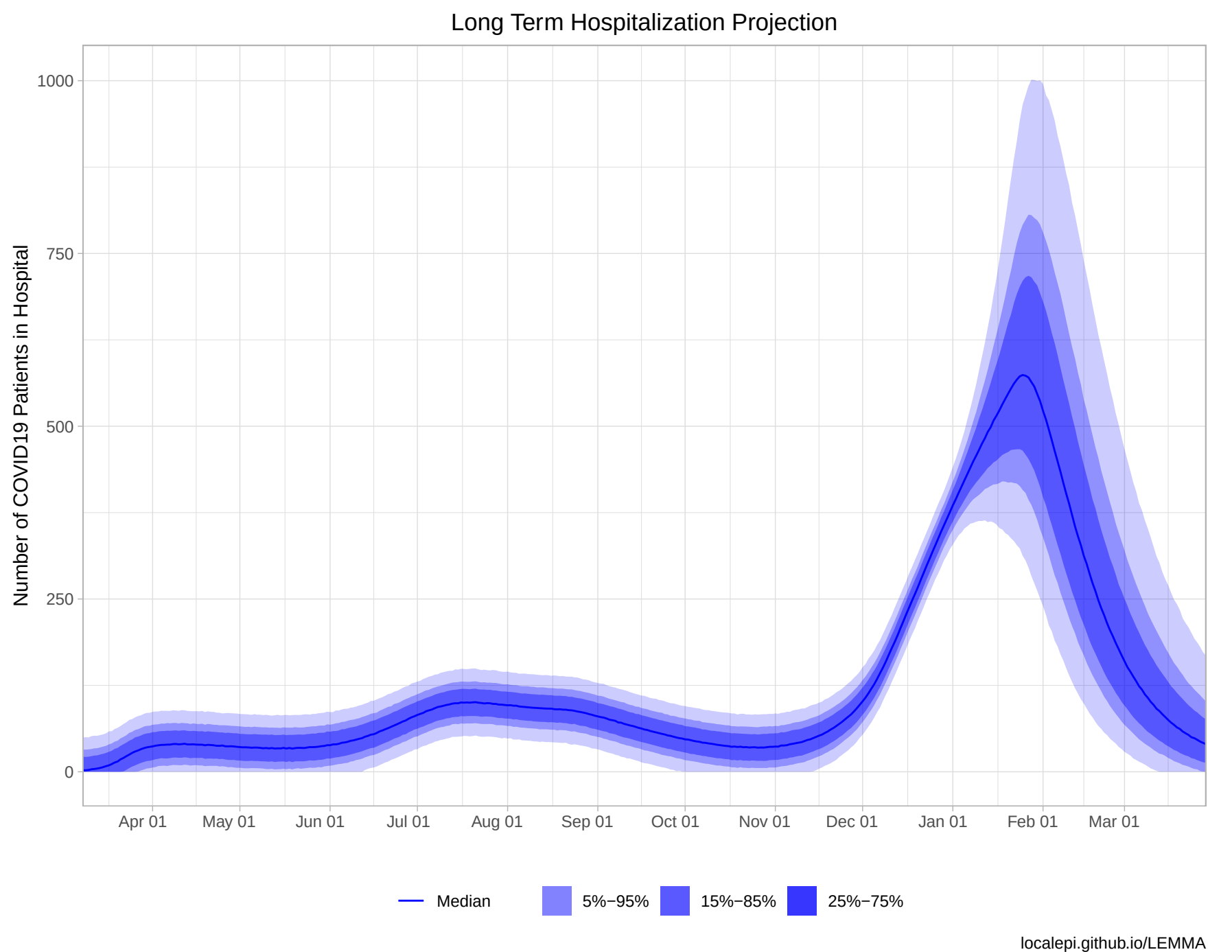
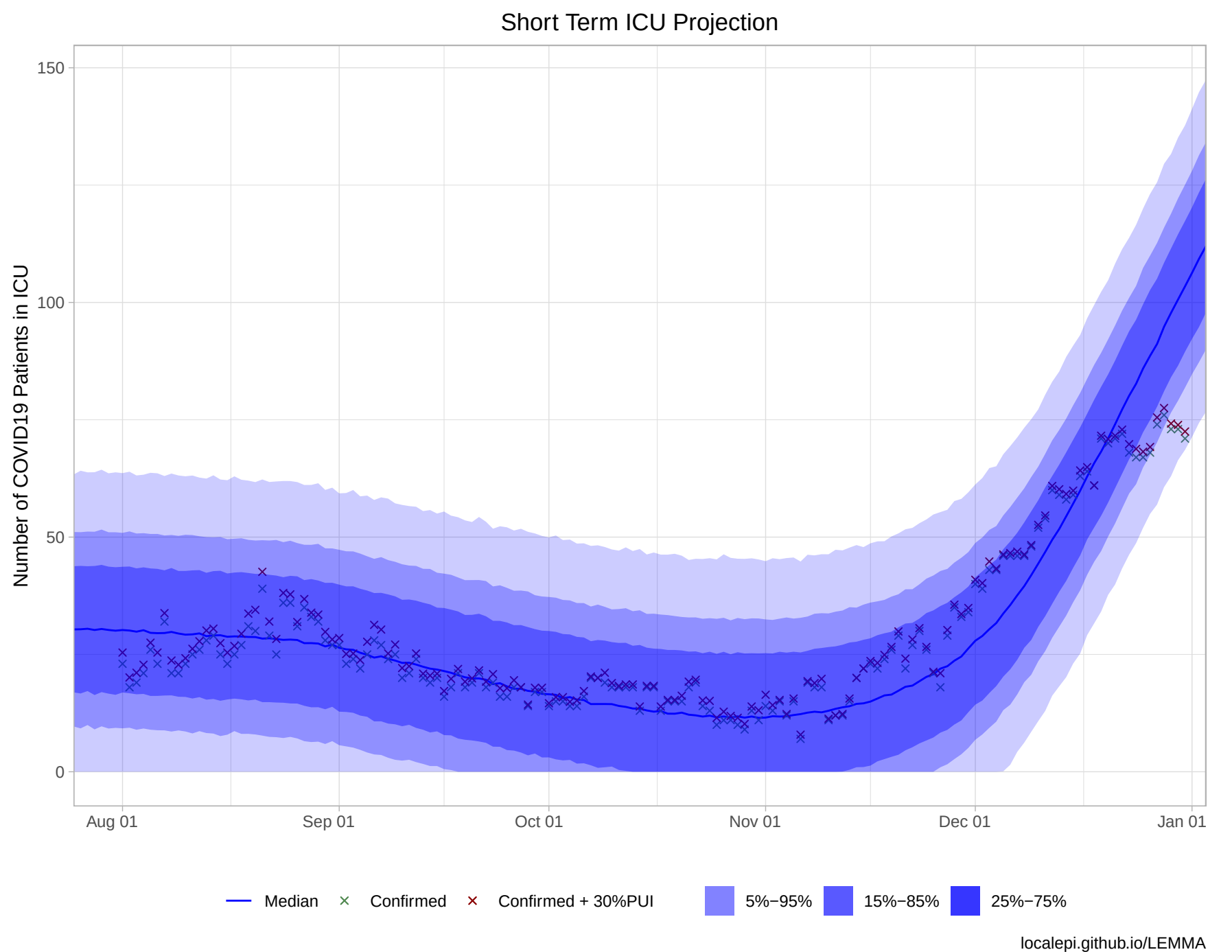
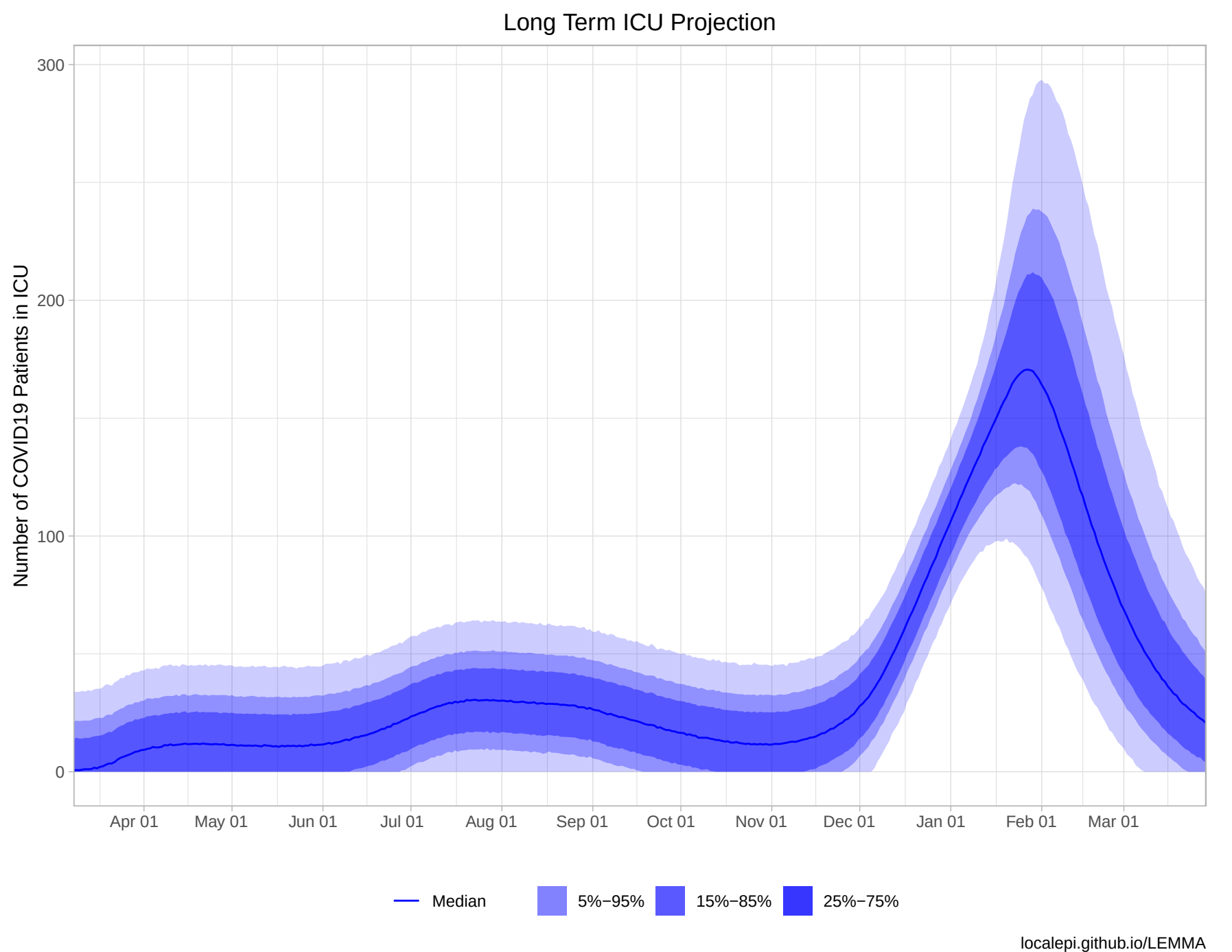
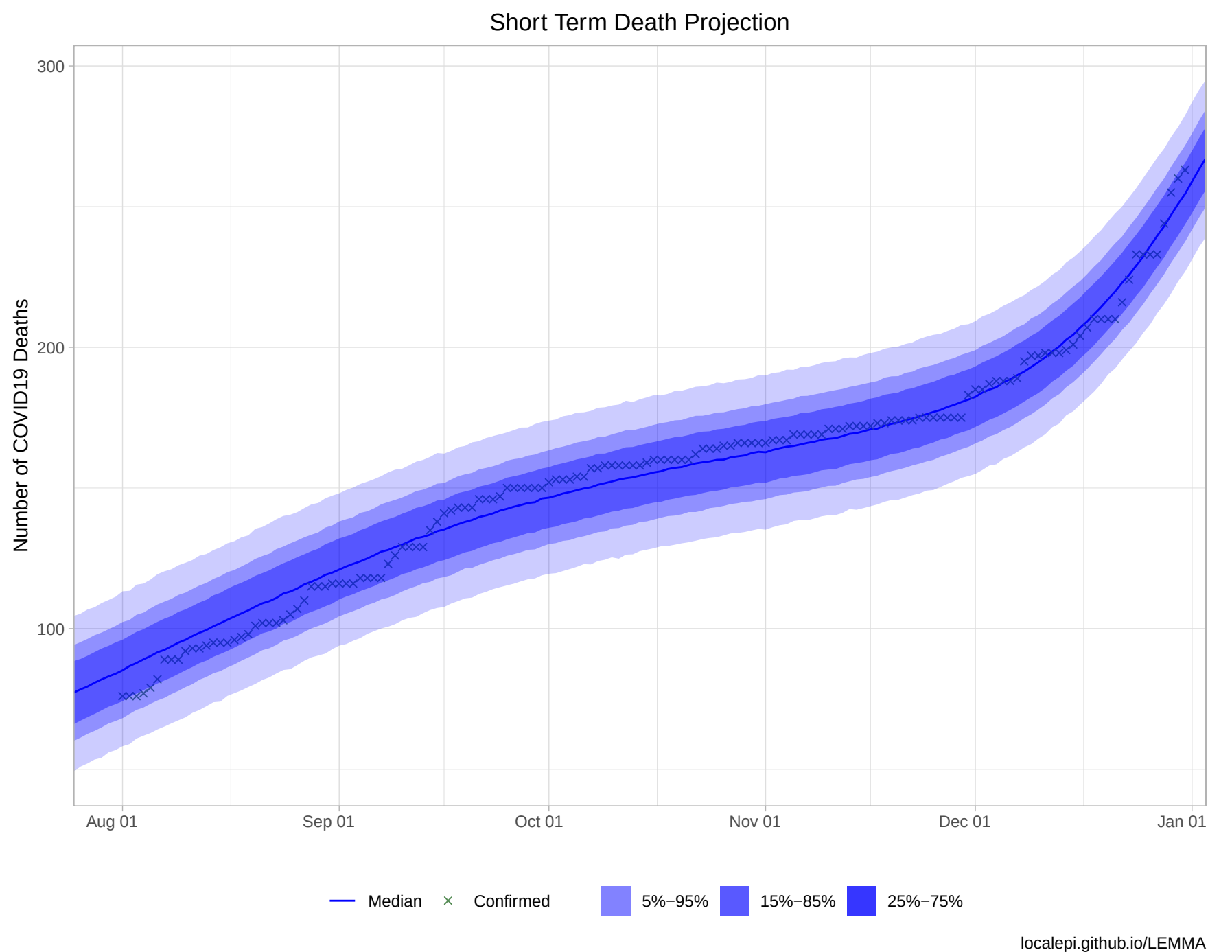
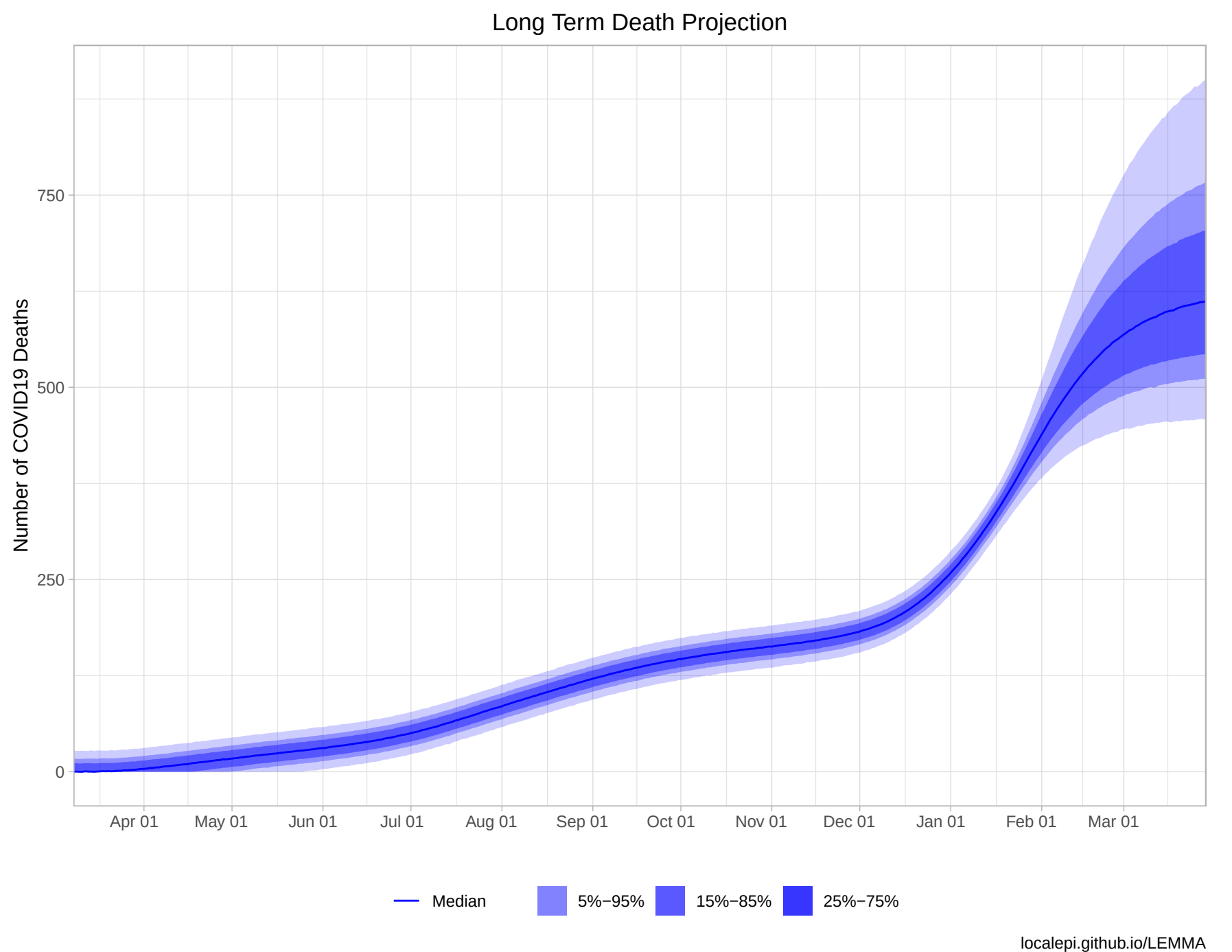

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
100
200
300
400
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

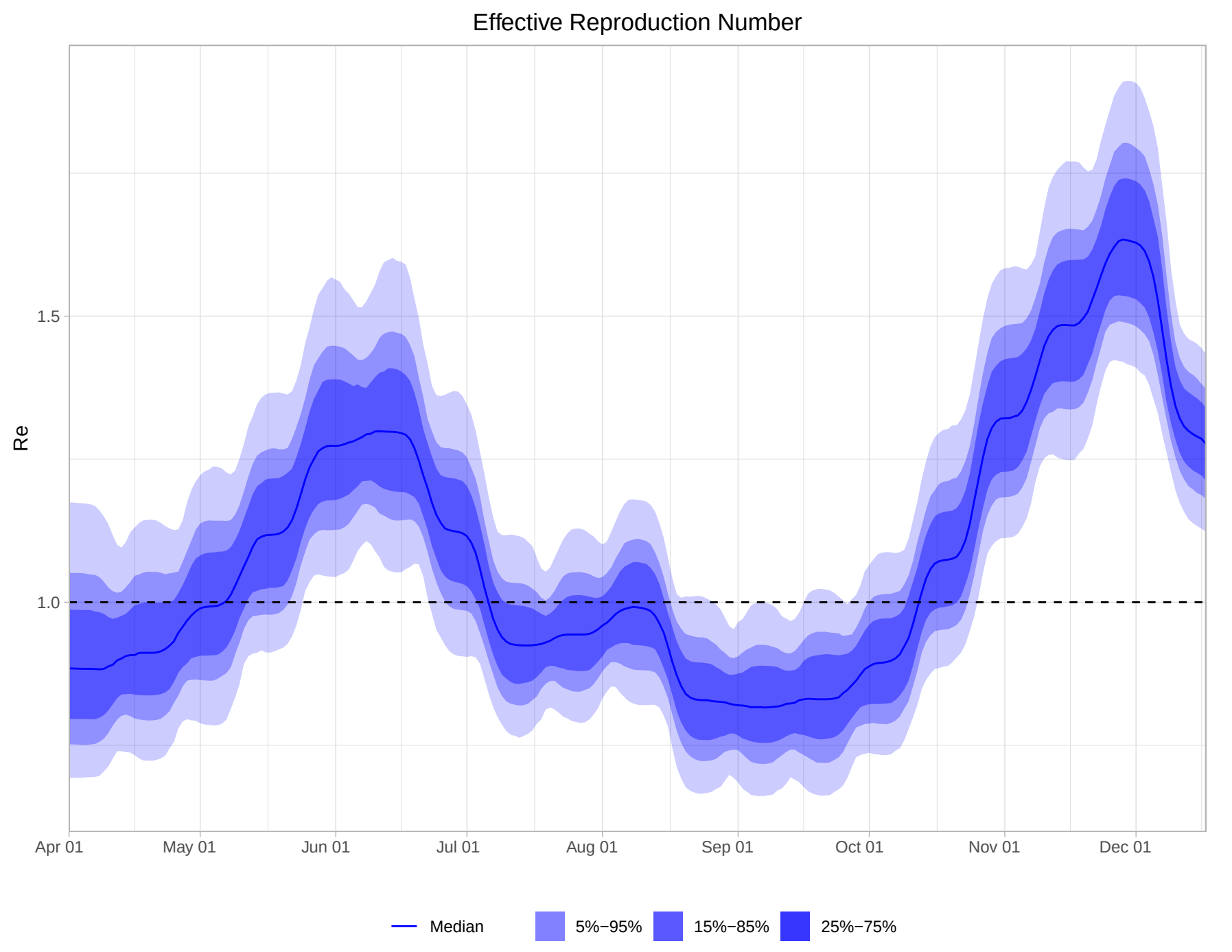

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1000
750
500
250
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
150
100
50
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
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

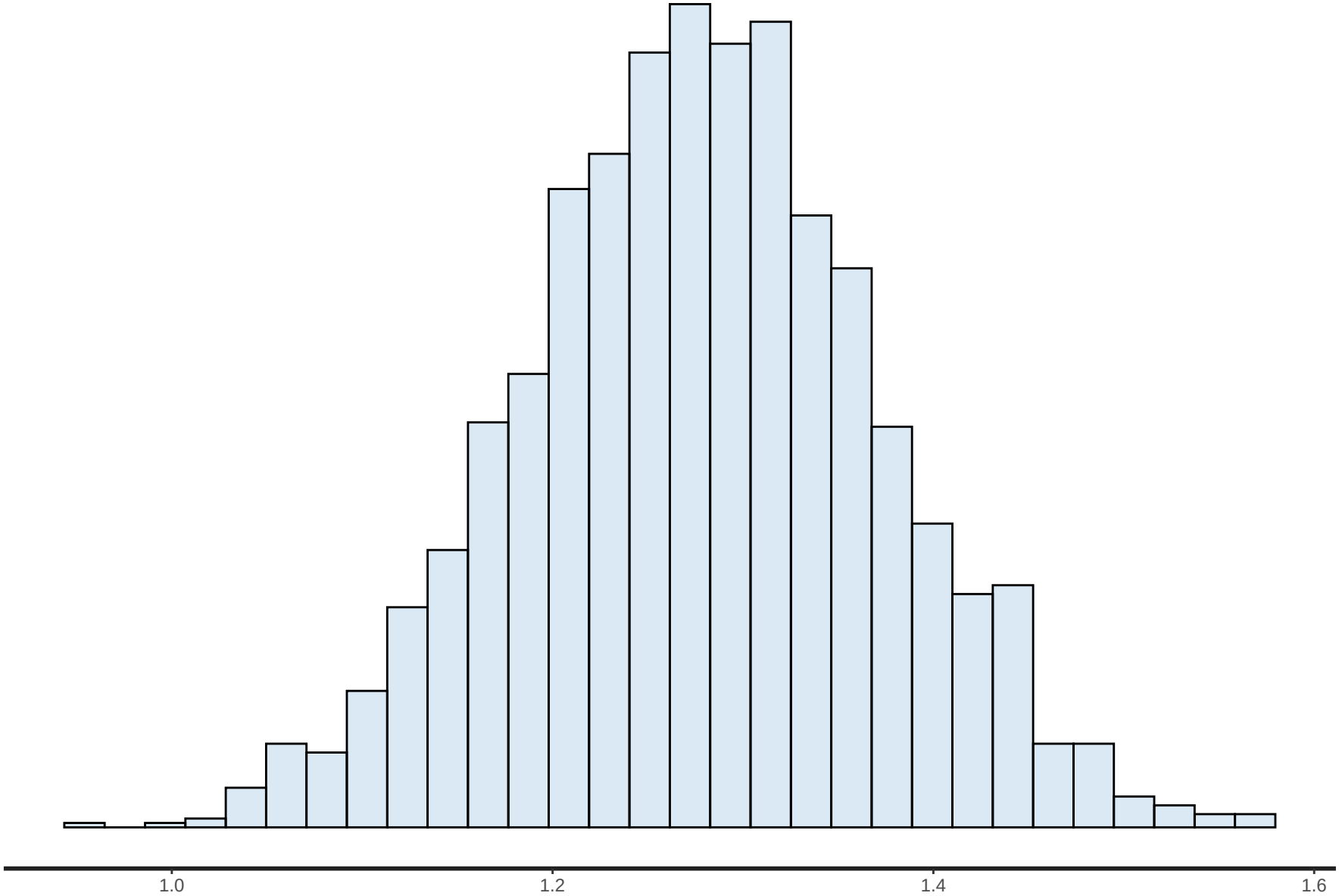

Short Term Death Projection
Number of COVID19 Deaths
300
200
100
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

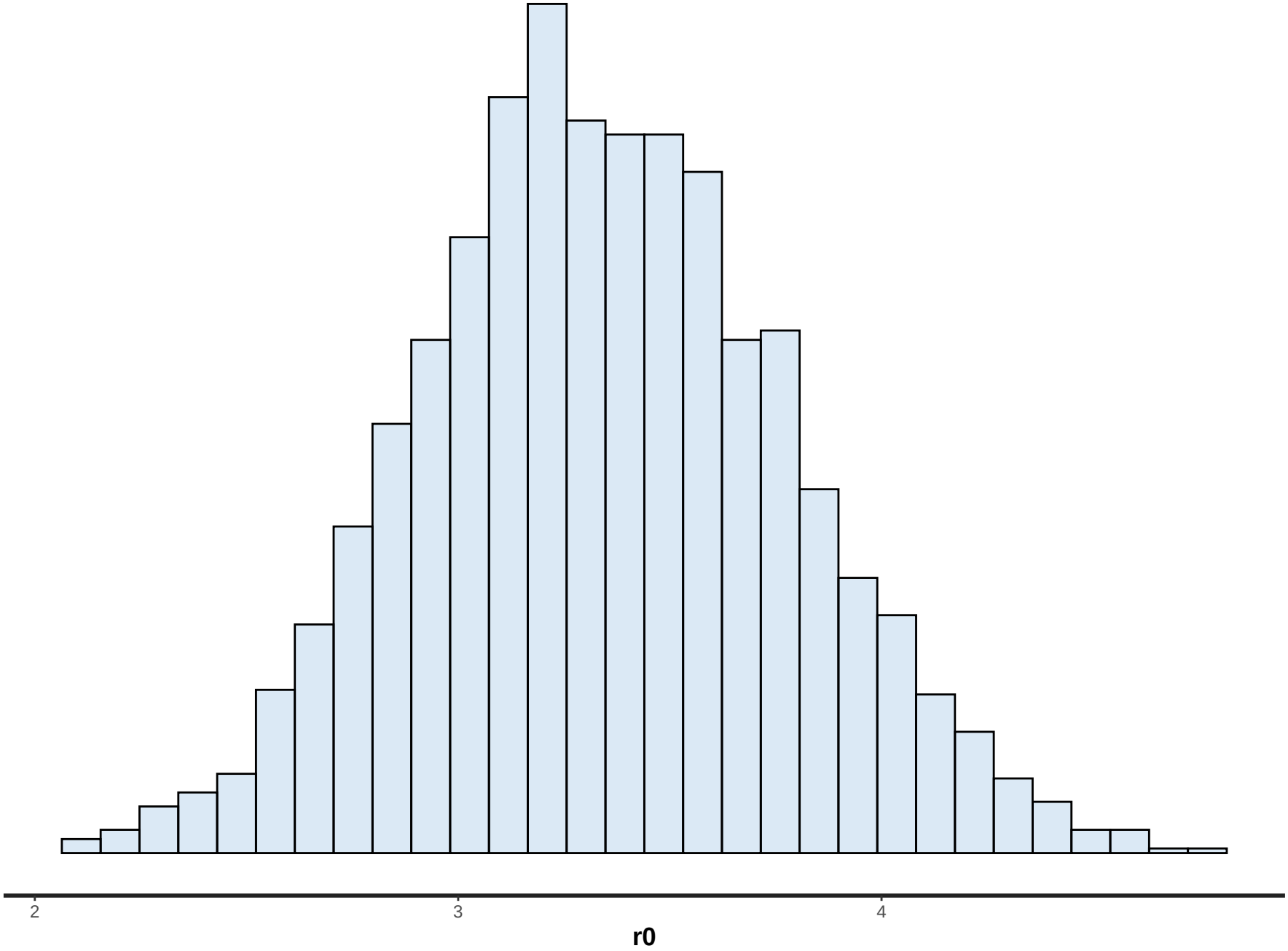

Long Term Death Projection
Number of COVID19 Deaths
750
500
250
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

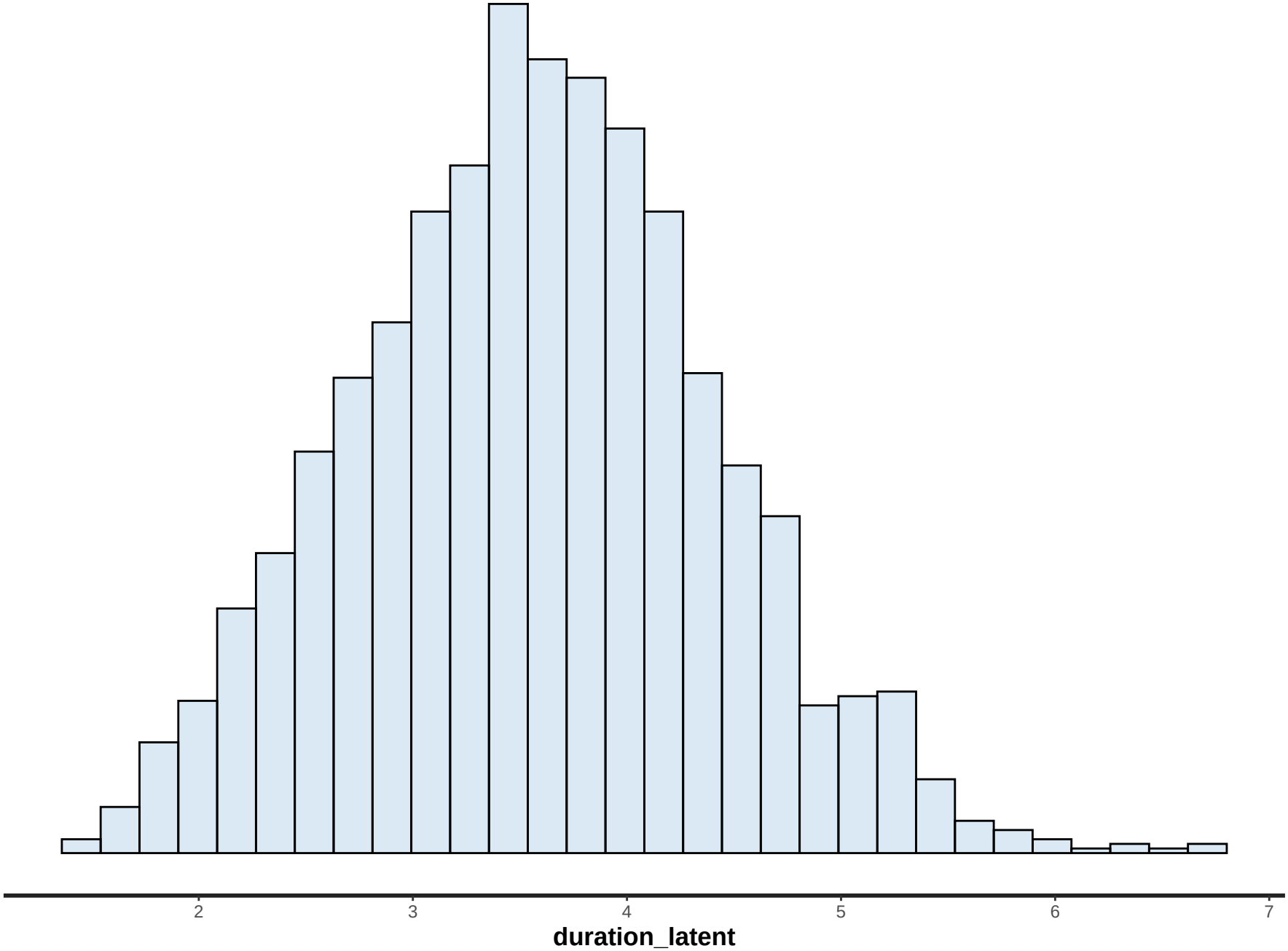

Effective Reproduction Number
Re
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

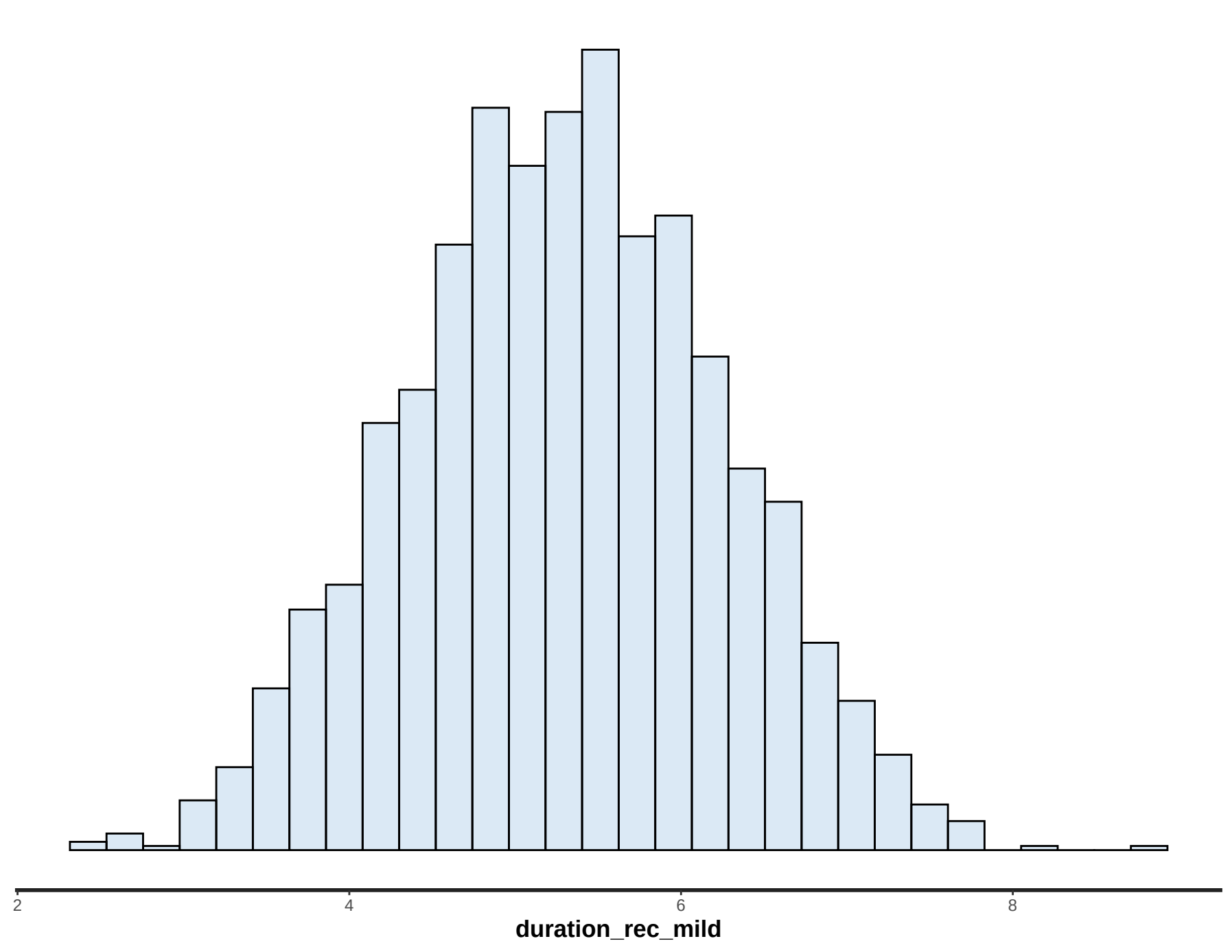
Rt as of 2020−12−17

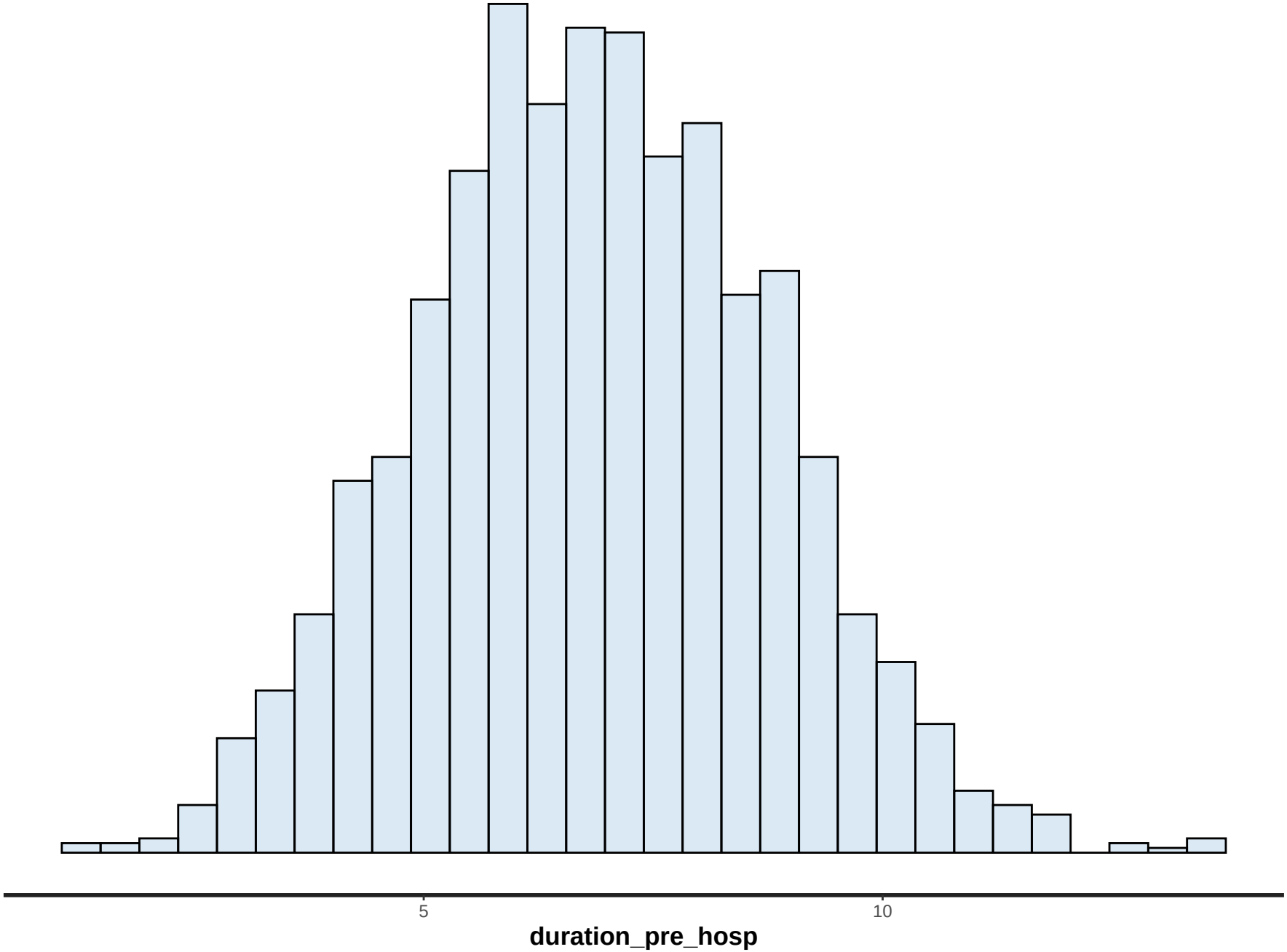
5%	10%	25%	50%	75%	90%	95%
1.12	1.16	1.21	1.28	1.34	1.40	1.43

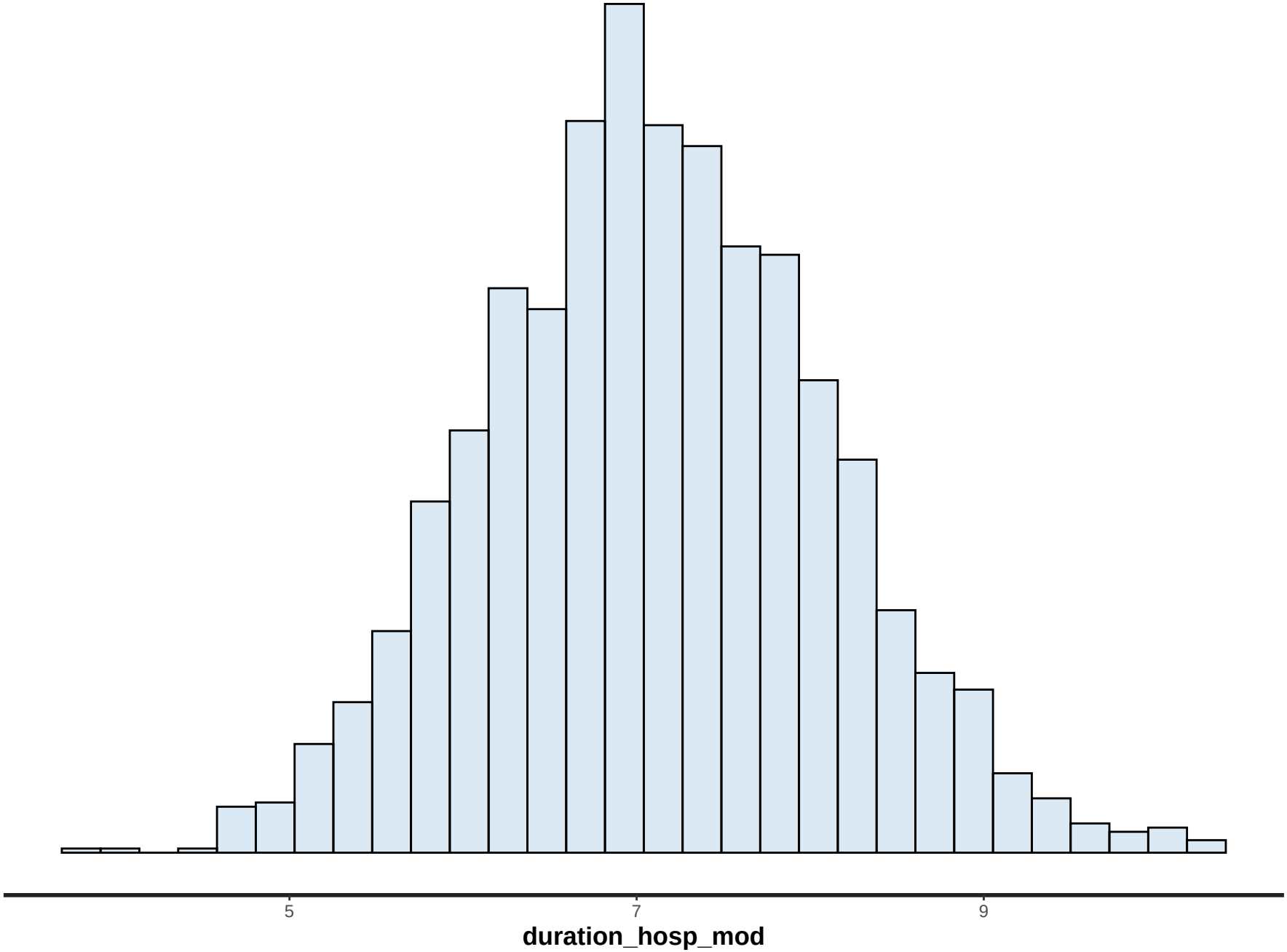


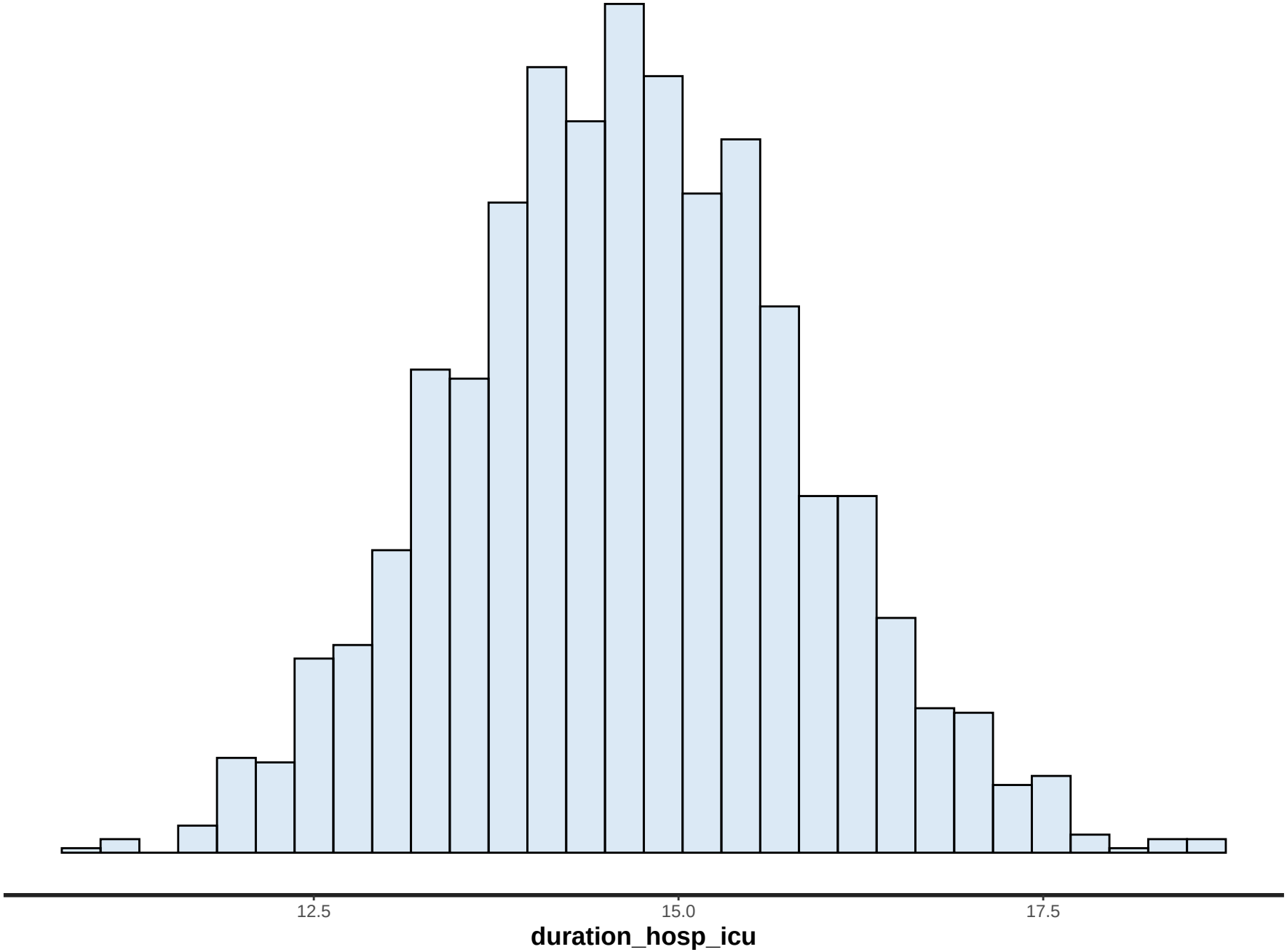

2
3
4
r0

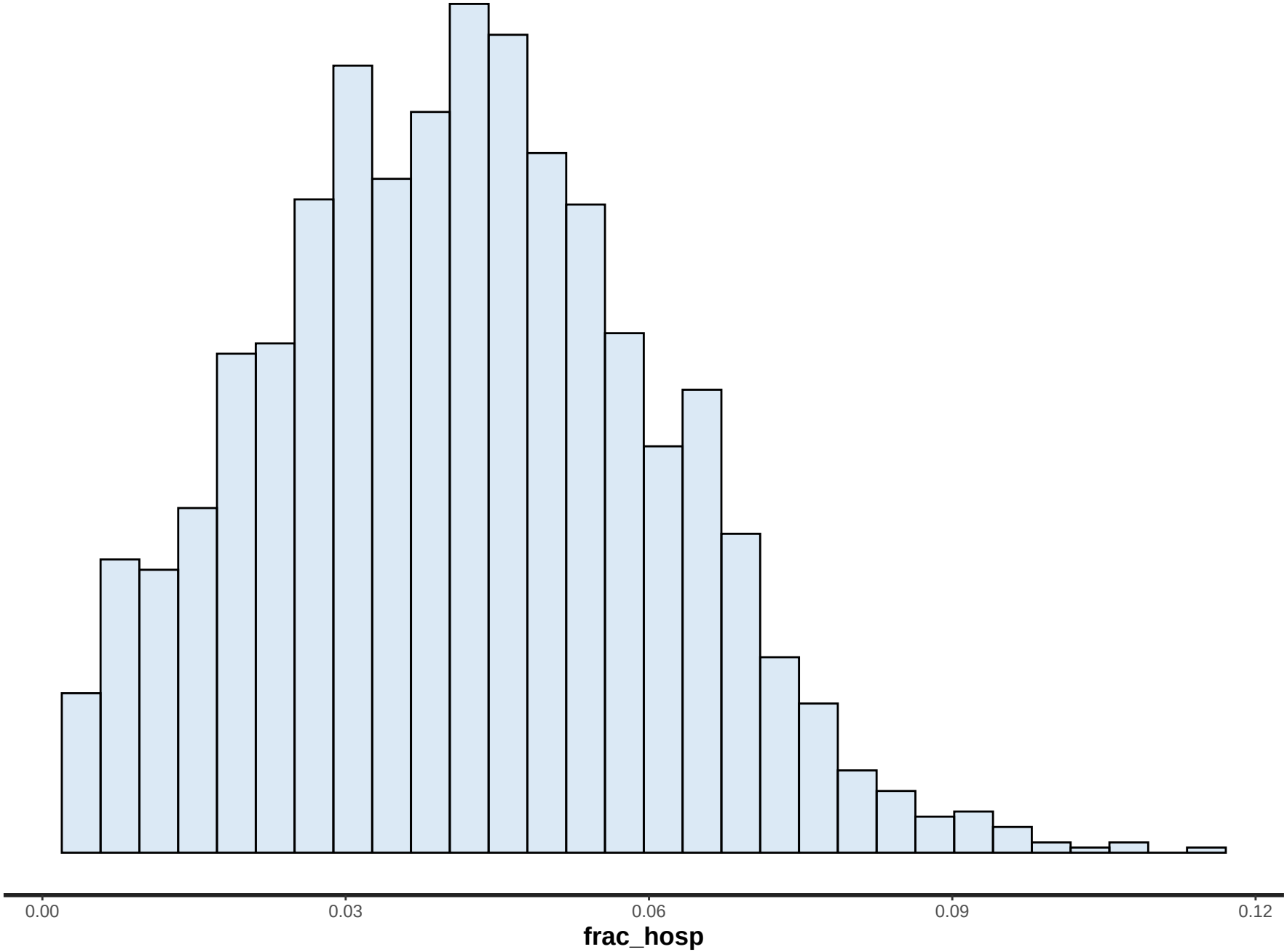

2
3
4
5
6
7
duration_latent

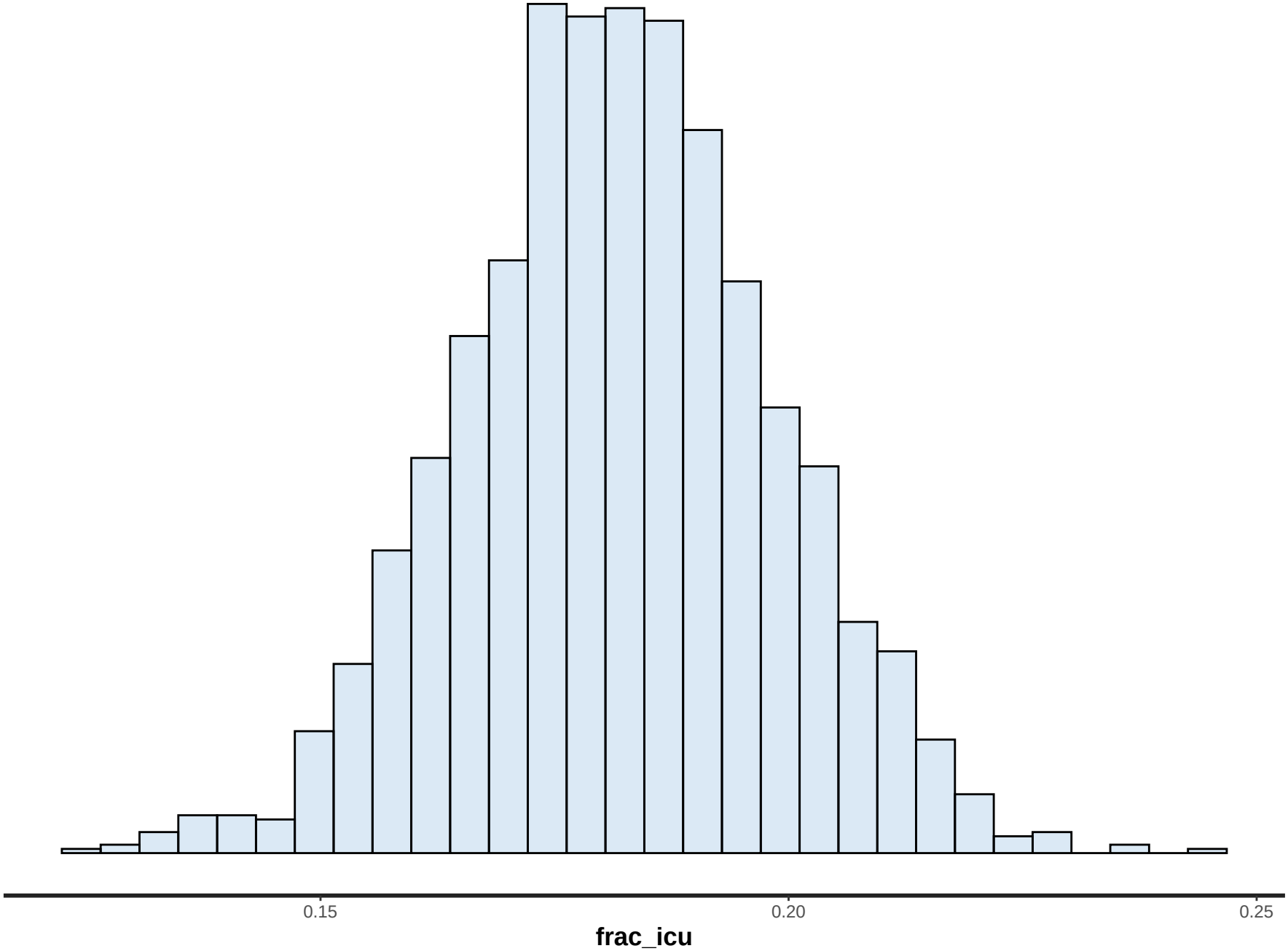

2
4
6
8
duration_rec_mild

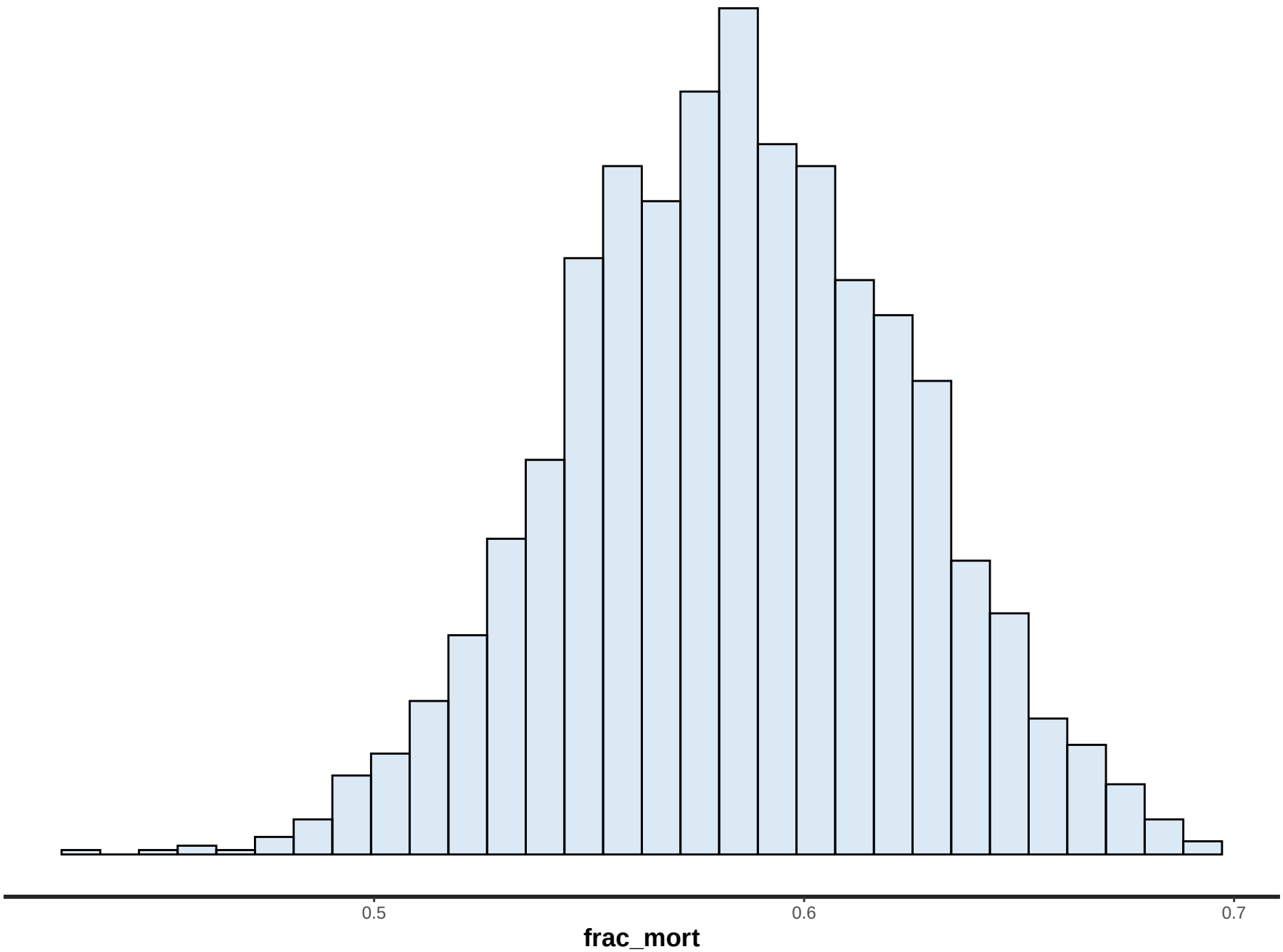

5
10
duration_pre_hosp

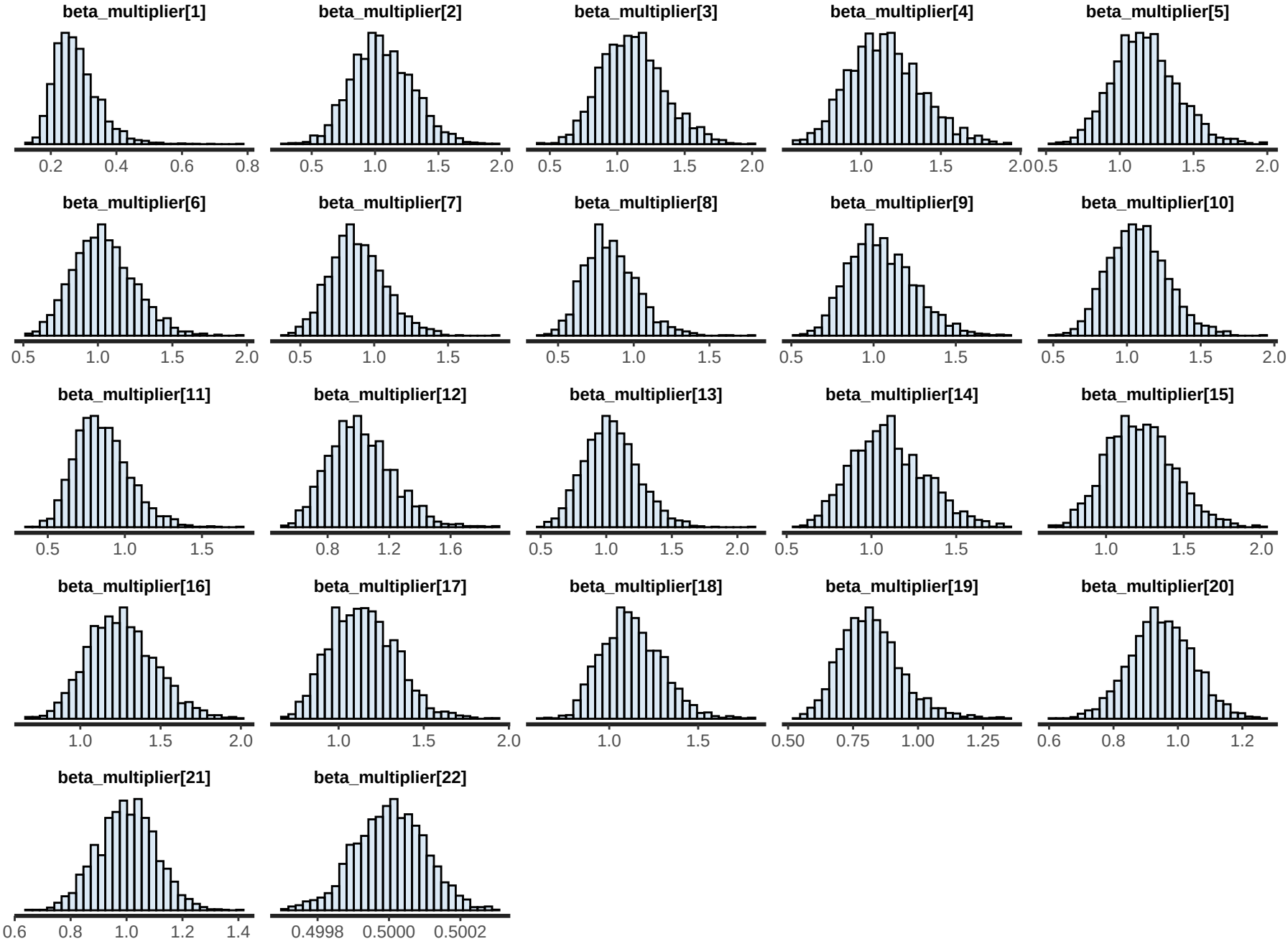

5
7
9
duration_hosp_mod


12.5
15.0
17.5
duration_hosp_icu


0.00
0.03
0.06
0.09
0.12
frac_hosp


0.15
0.20
0.25
frac_icu


0.5
0.6
0.7
frac_mort


beta_multiplier[1]
0.2 0.4 0.6 0.8
beta_multiplier[2]
0.5 1.0 1.5 2.0
beta_multiplier[3]
0.5 1.0 1.5 2.0
beta_multiplier[4]
1.0 1.5 2.0
beta_multiplier[5]
0.5 1.0 1.5 2.0
beta_multiplier[6]
0.5 1.0 1.5 2.0
beta_multiplier[7]
0.5 1.0 1.5
beta_multiplier[8]
0.5 1.0 1.5
beta_multiplier[9]
0.5 1.0 1.5
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 2.0
beta_multiplier[14]
0.5 1.0 1.5
beta_multiplier[15]
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]
0.50 0.75 1.00 1.25
beta_multiplier[20]
0.6 0.8 1.0 1.2
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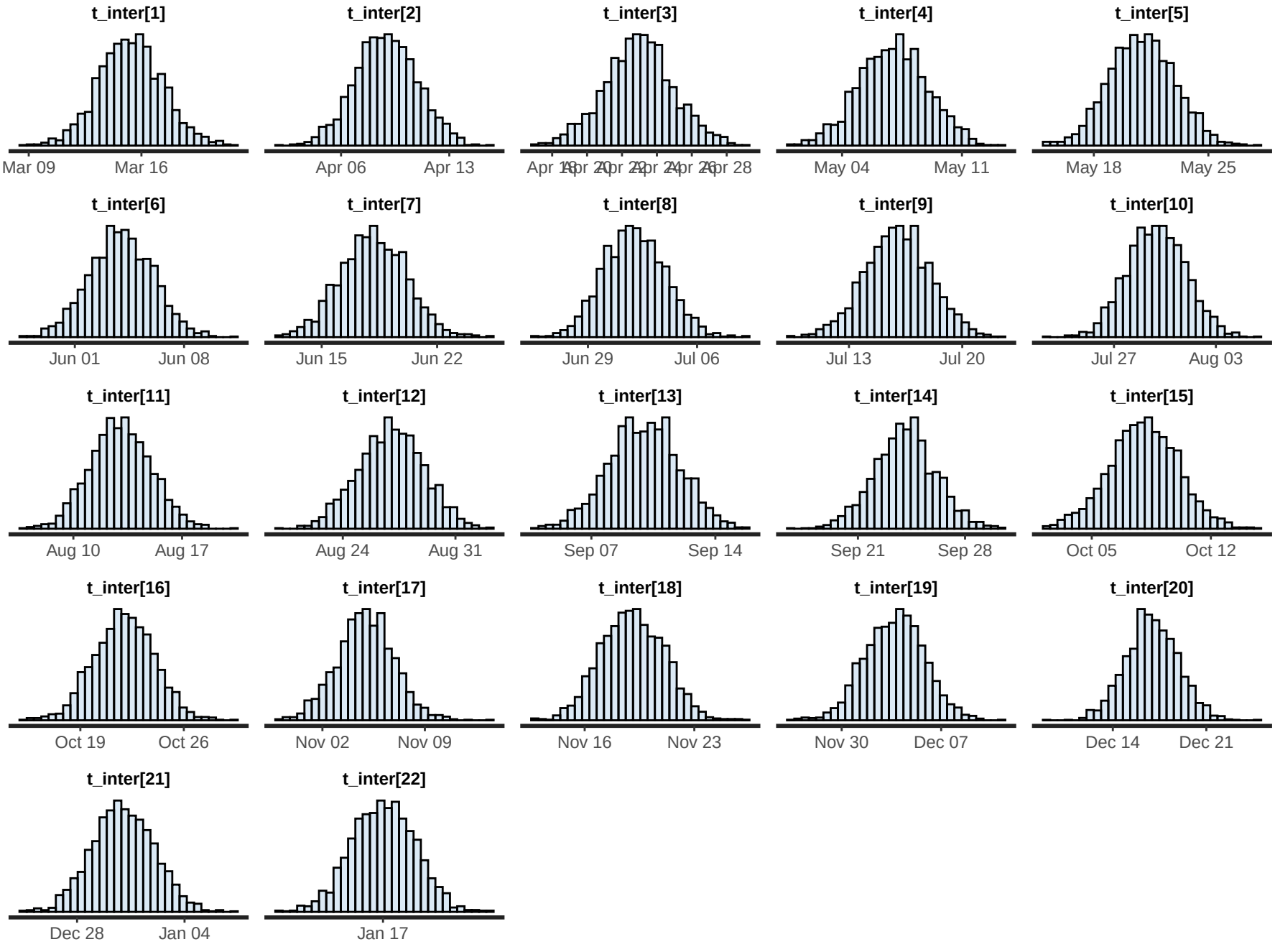
0.6 0.8 1.0 1.2 1.4
beta_multiplier[22]
0.4998 0.5000 0.5002


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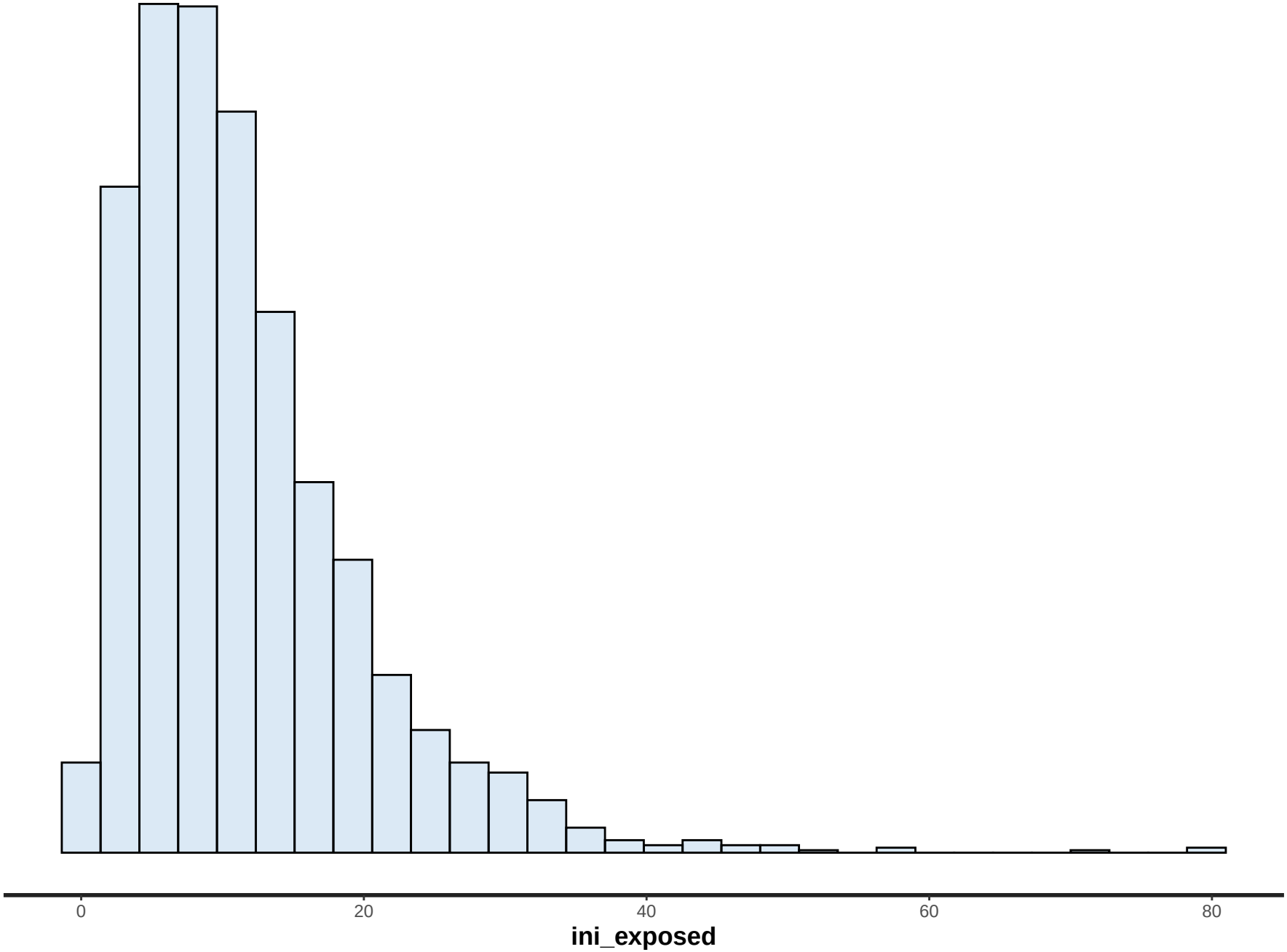
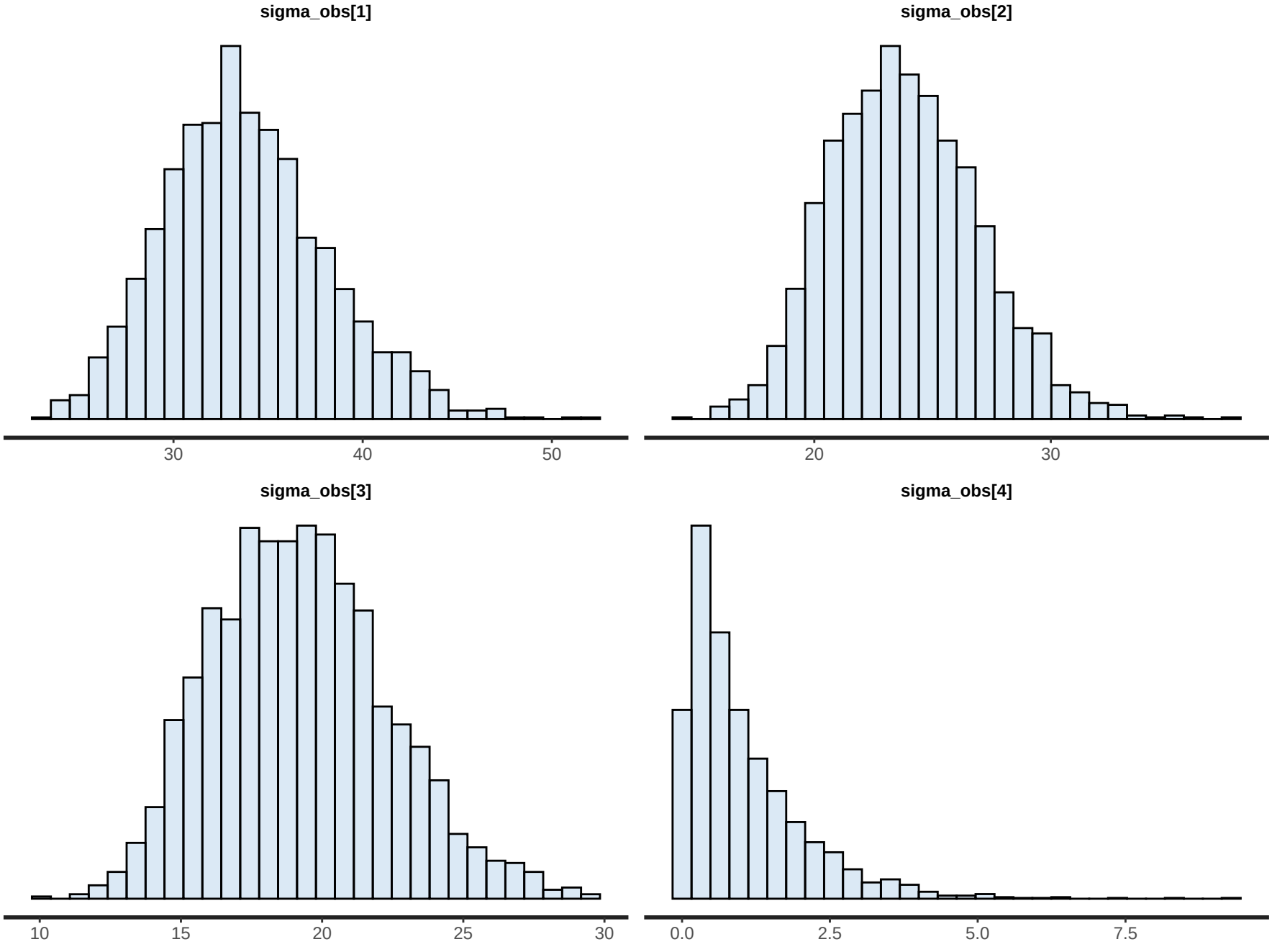
Dec 14
Dec 21
t_inter[21]
Dec 28
Jan 04
t_inter[22]
Jan 17


0
20
40
60
80
ini_exposed


sigma_obs[1]
30
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50
sigma_obs[2]
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30
sigma_obs[3]
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15
20
25
30
sigma_obs[4]
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2.5
5.0
7.5