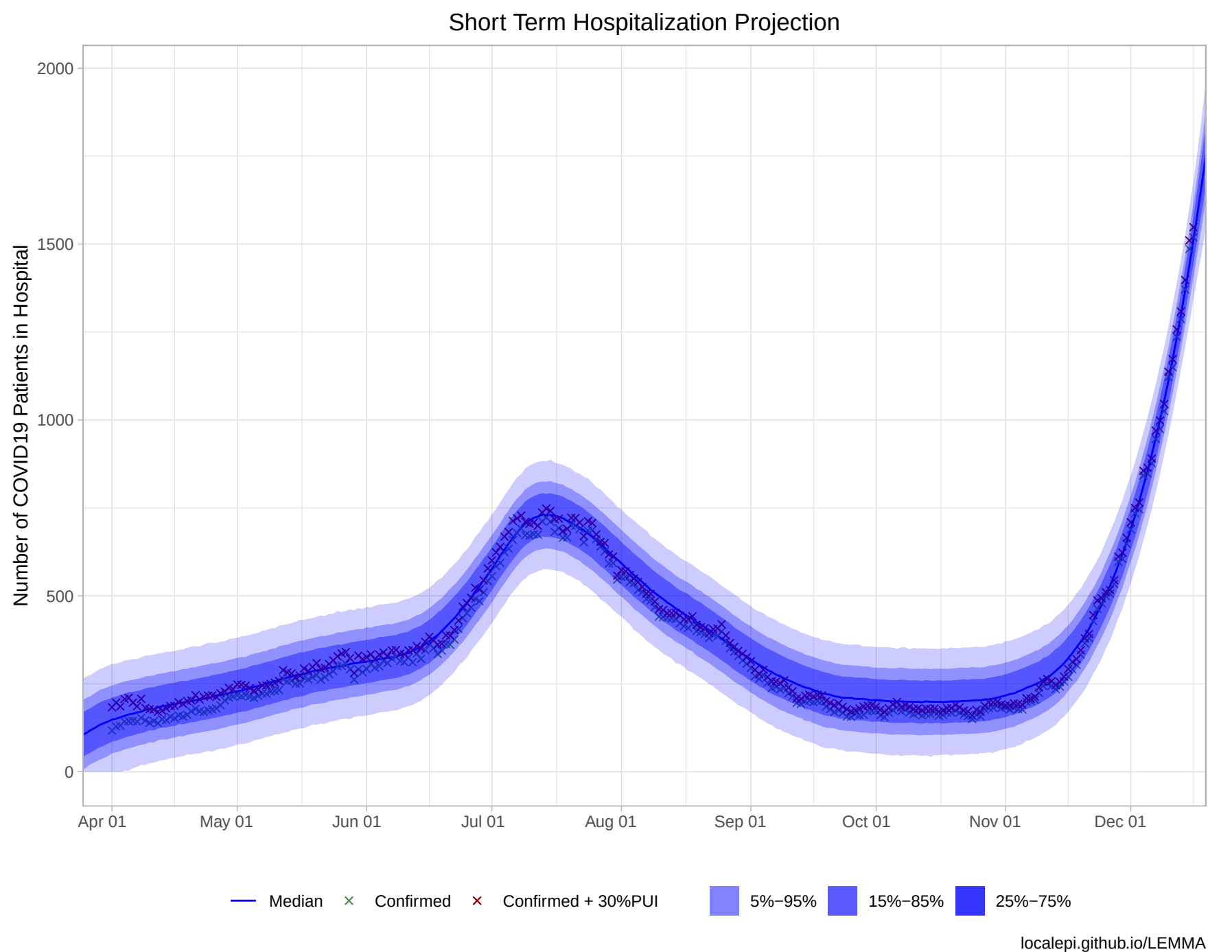
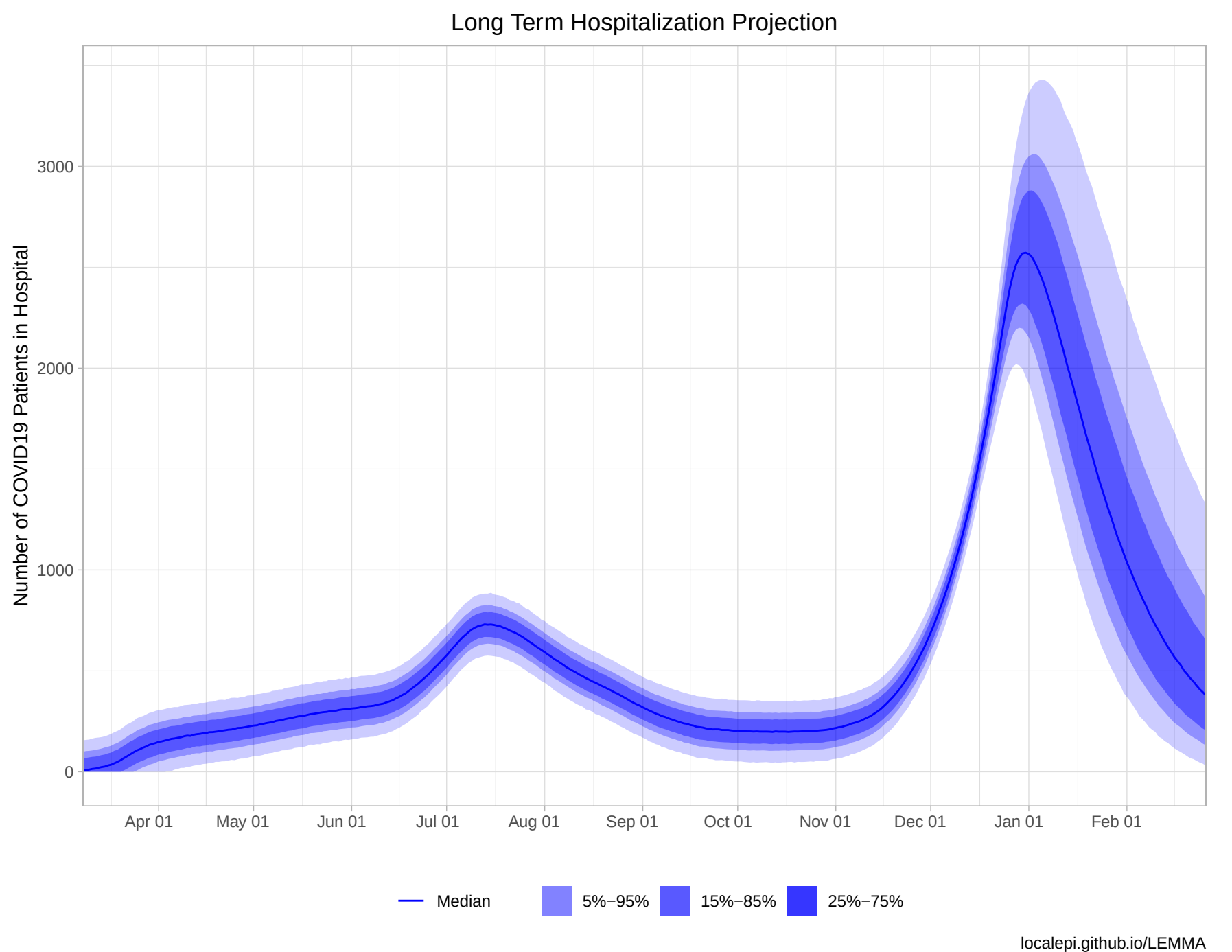
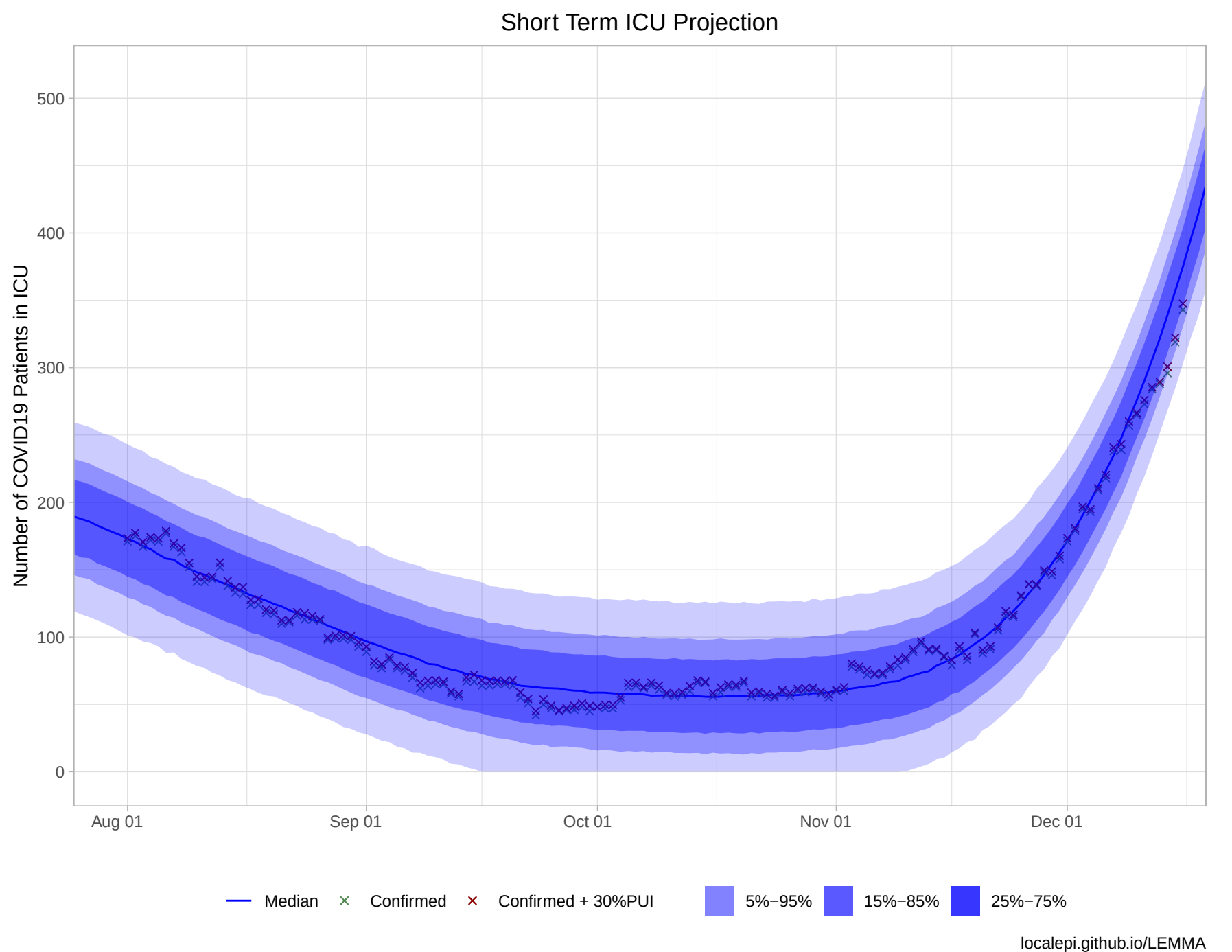
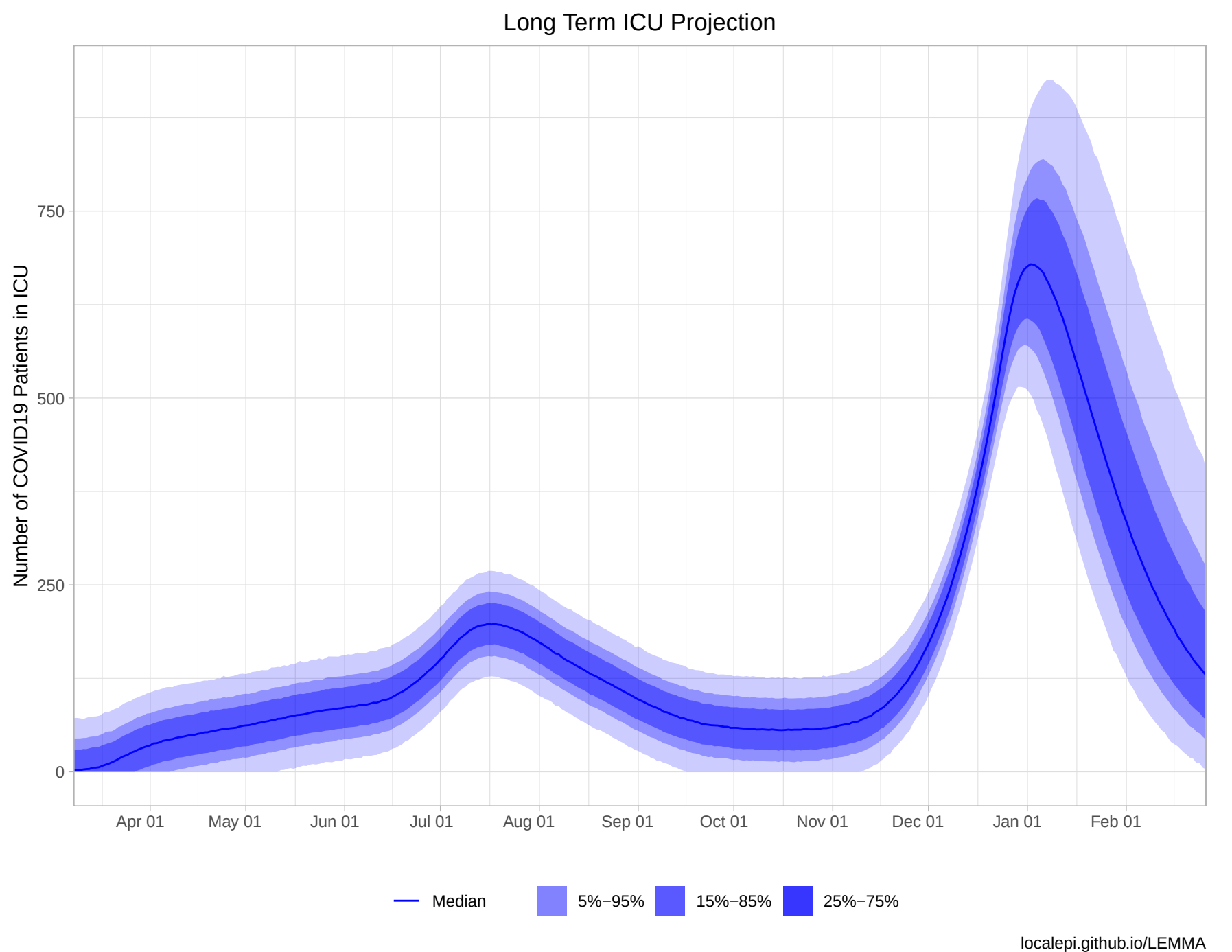
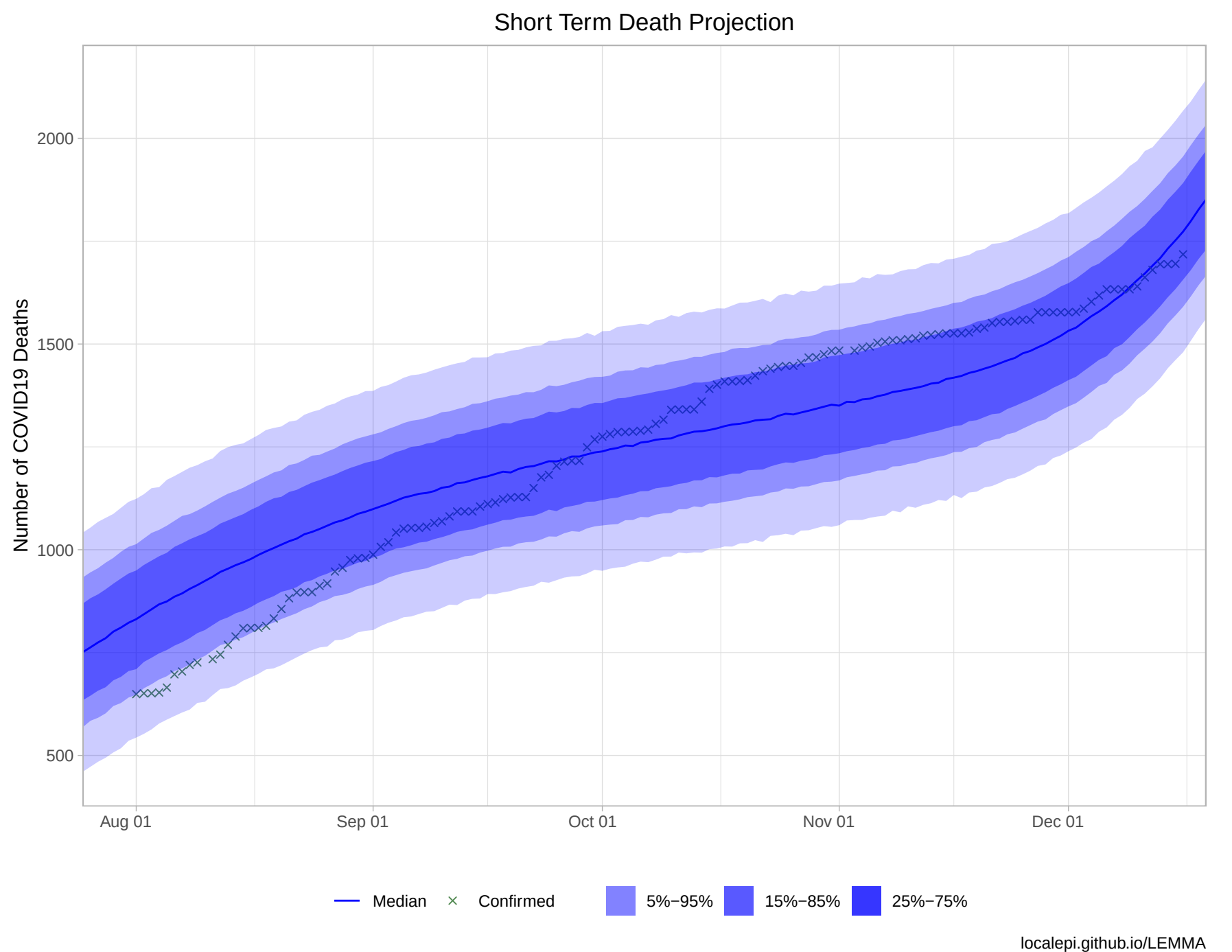
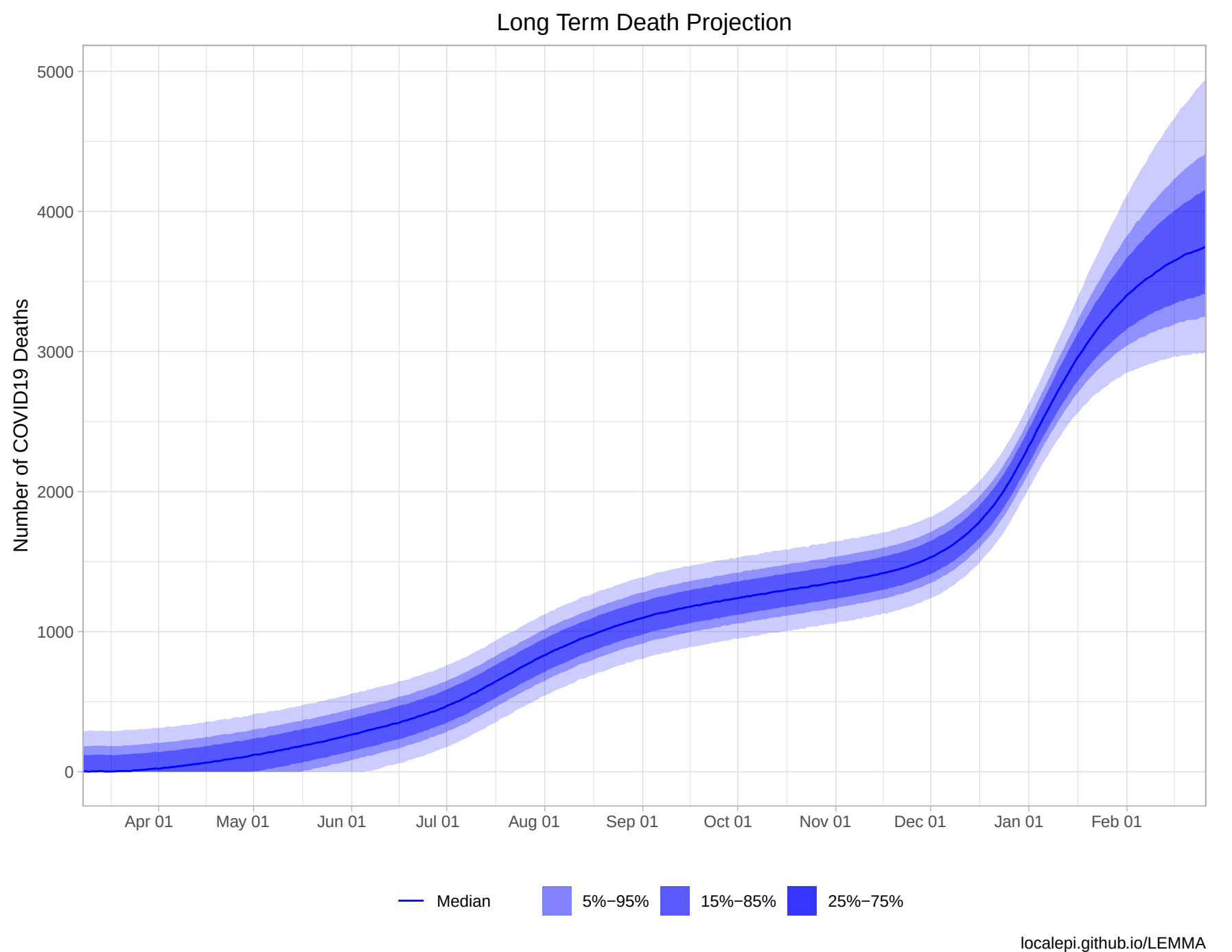

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
2000
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

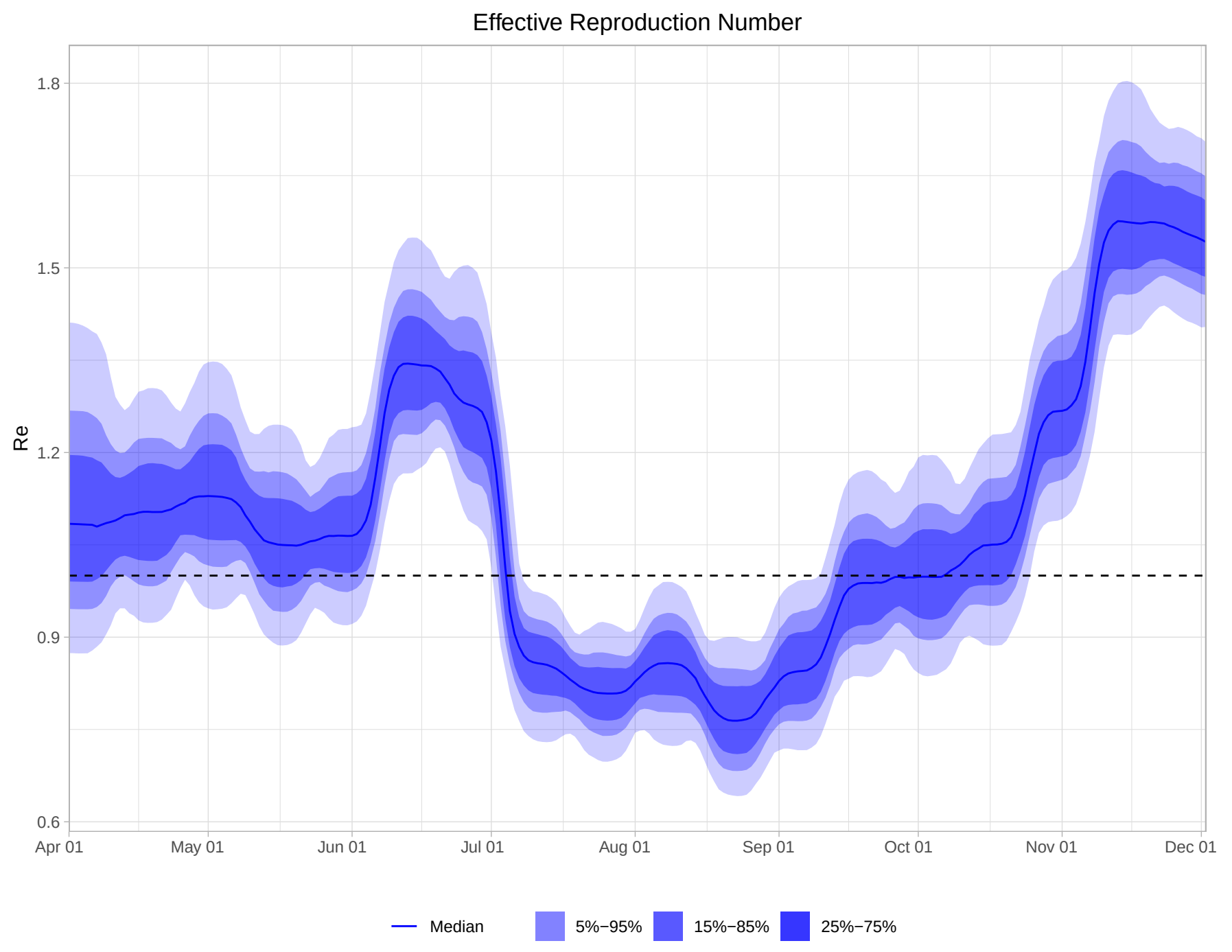

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
500
400
300
200
100
0
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
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
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

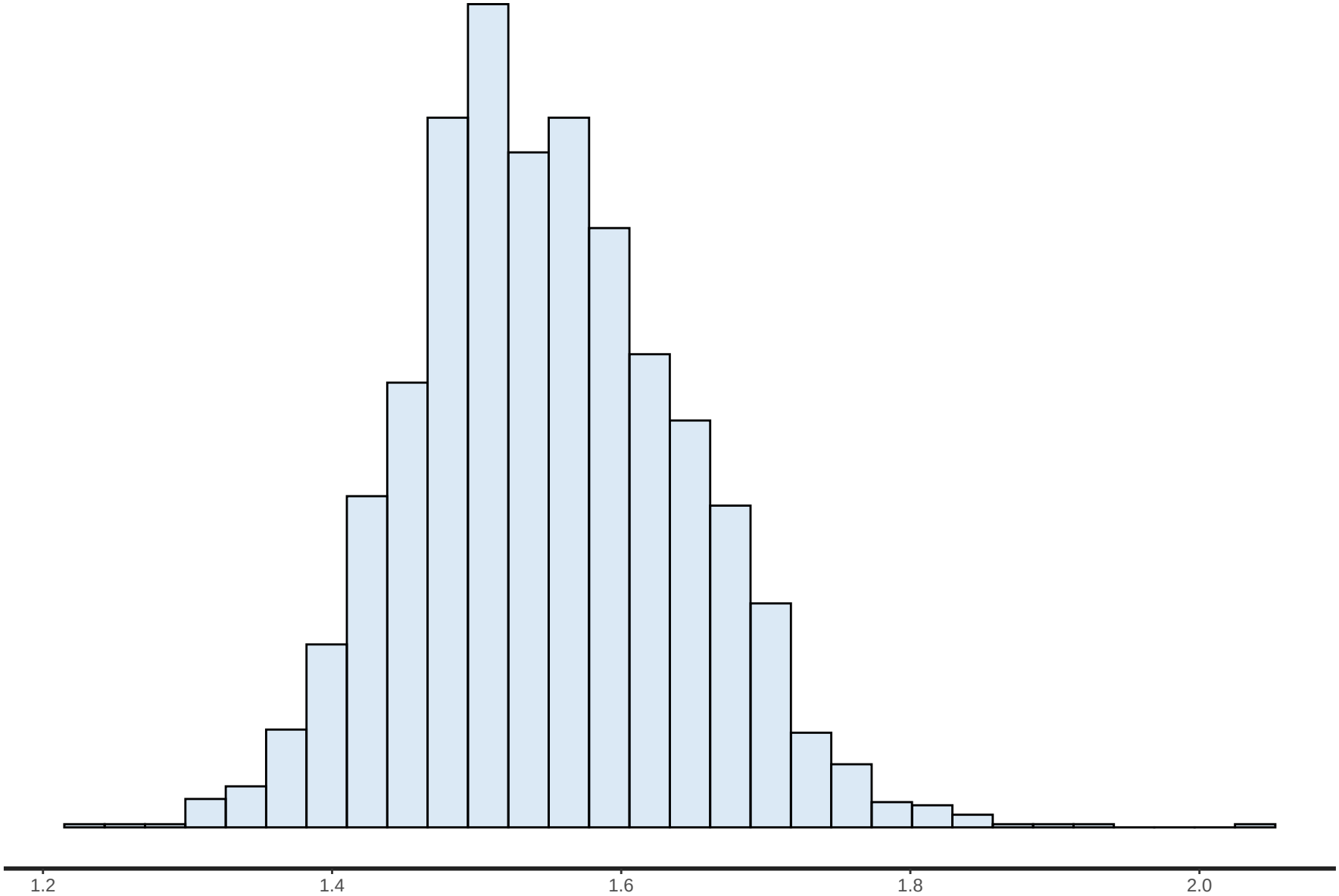

Short Term Death Projection
Number of COVID19 Deaths
2000
1500
1000
500
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

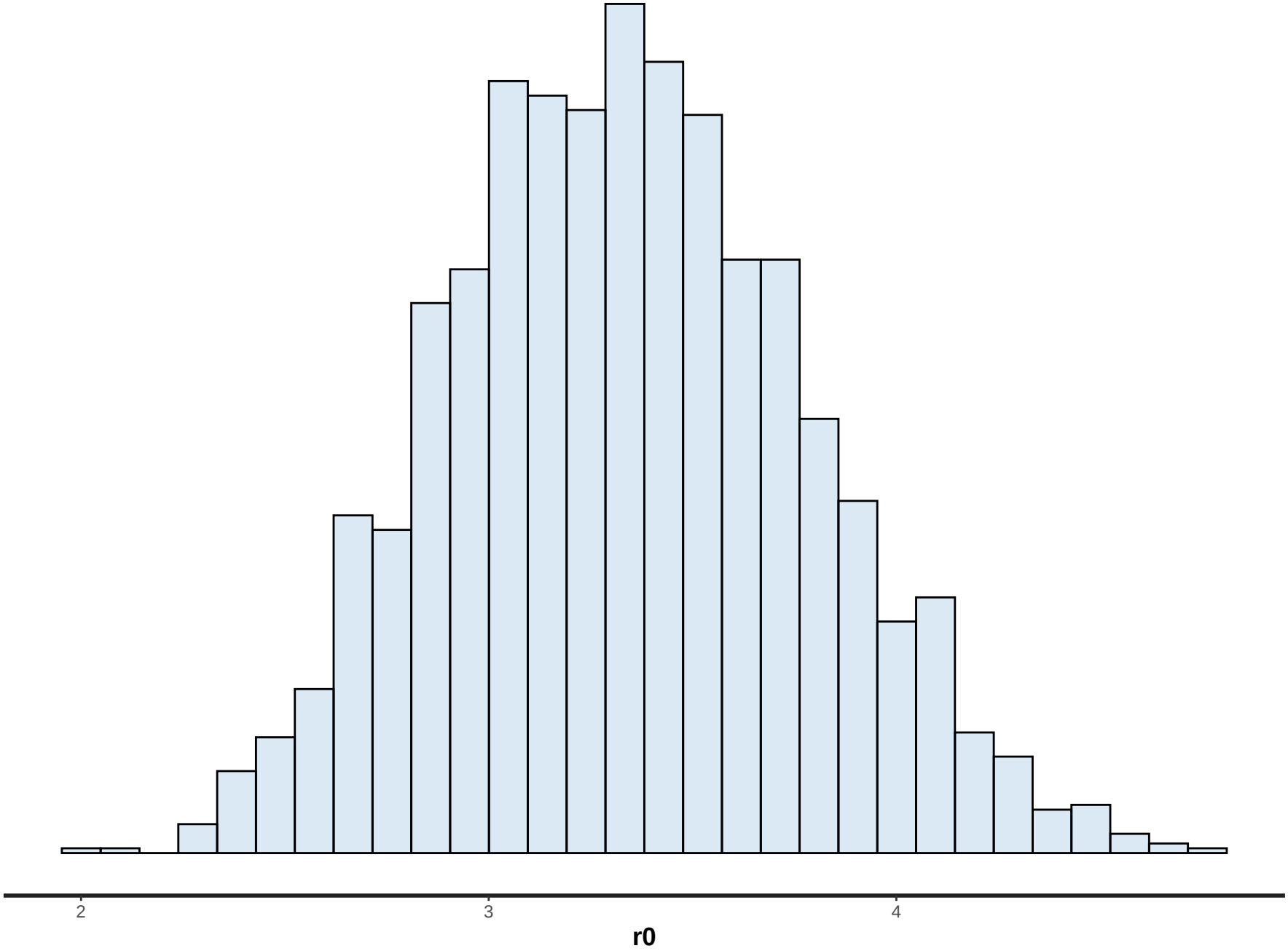

Long Term Death Projection
Number of COVID19 Deaths
5000
4000
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

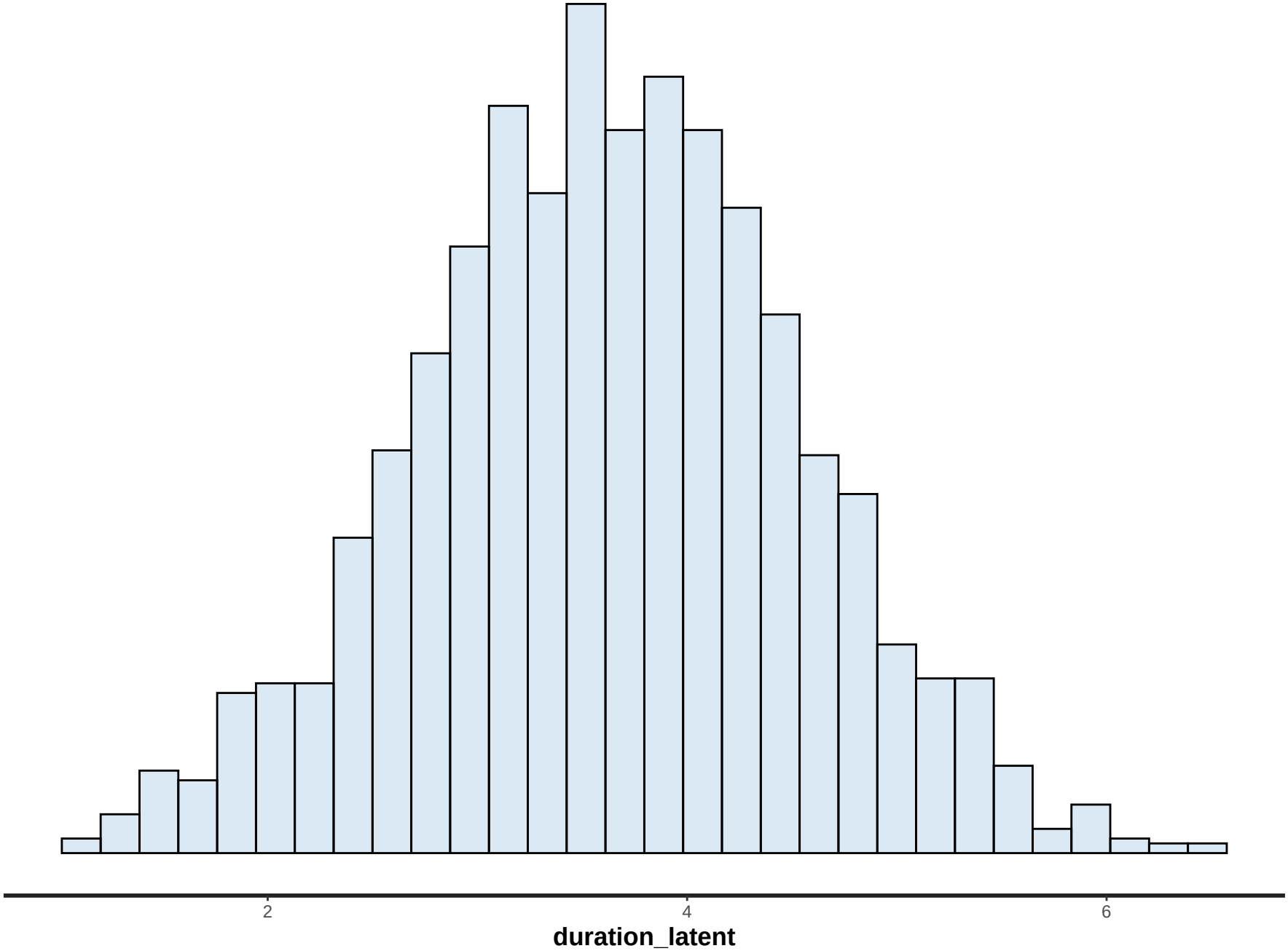

Effective Reproduction Number
Re
1.8
1.5
1.2
0.9
0.6
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

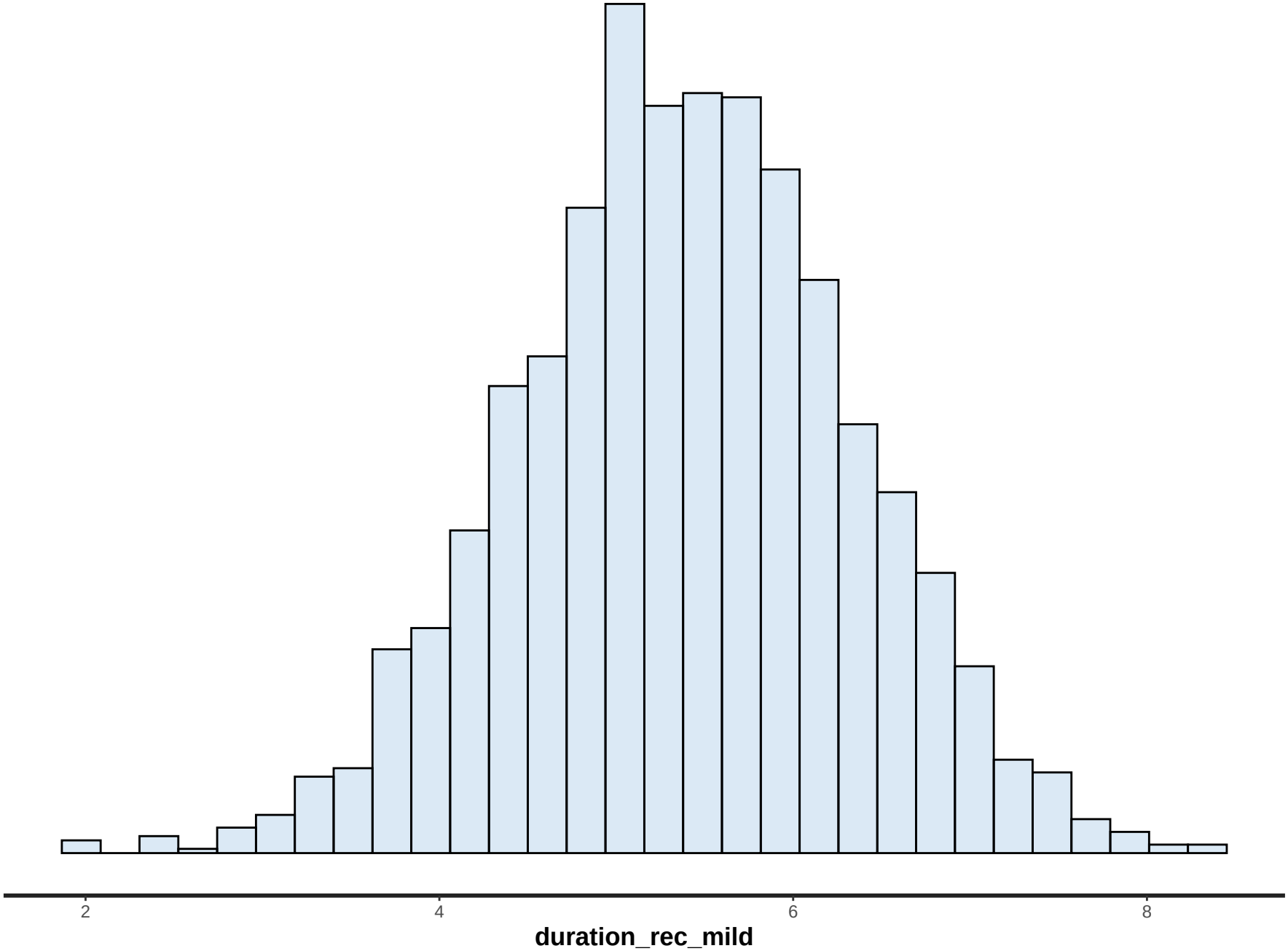
Rt as of 2020−12−02

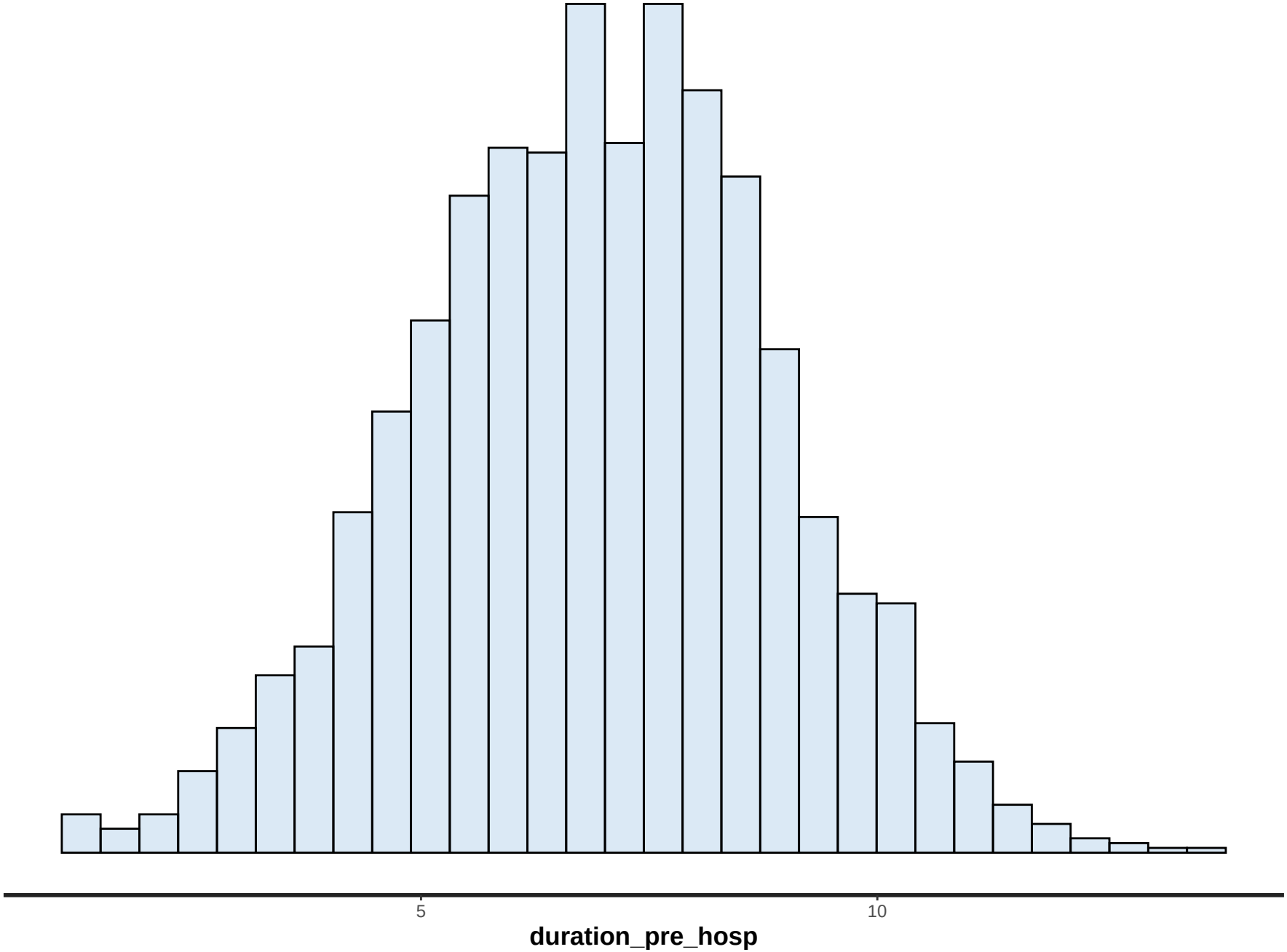
5%	10%	25%	50%	75%	90%	95%
1.40	1.43	1.49	1.54	1.61	1.67	1.70

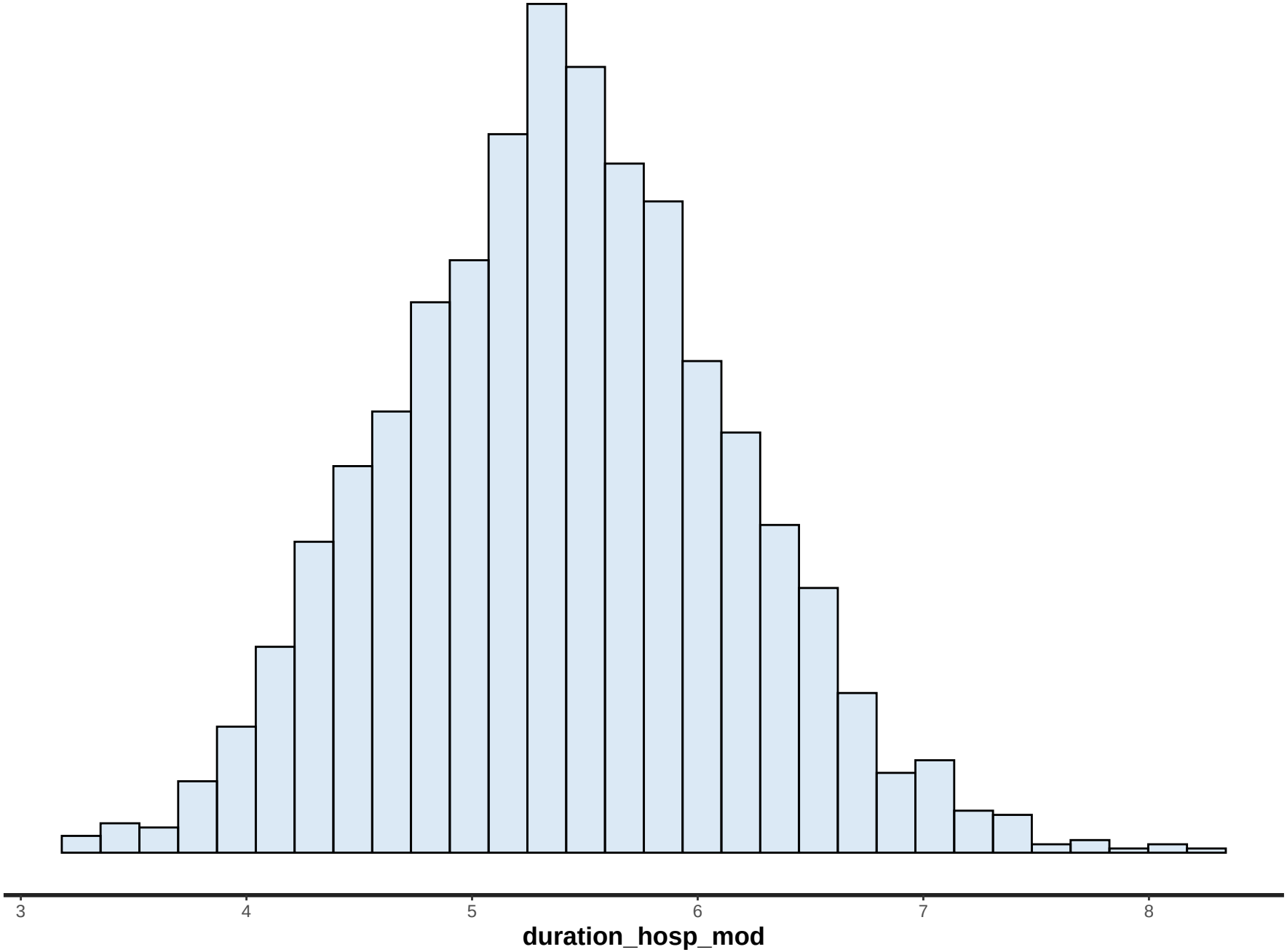


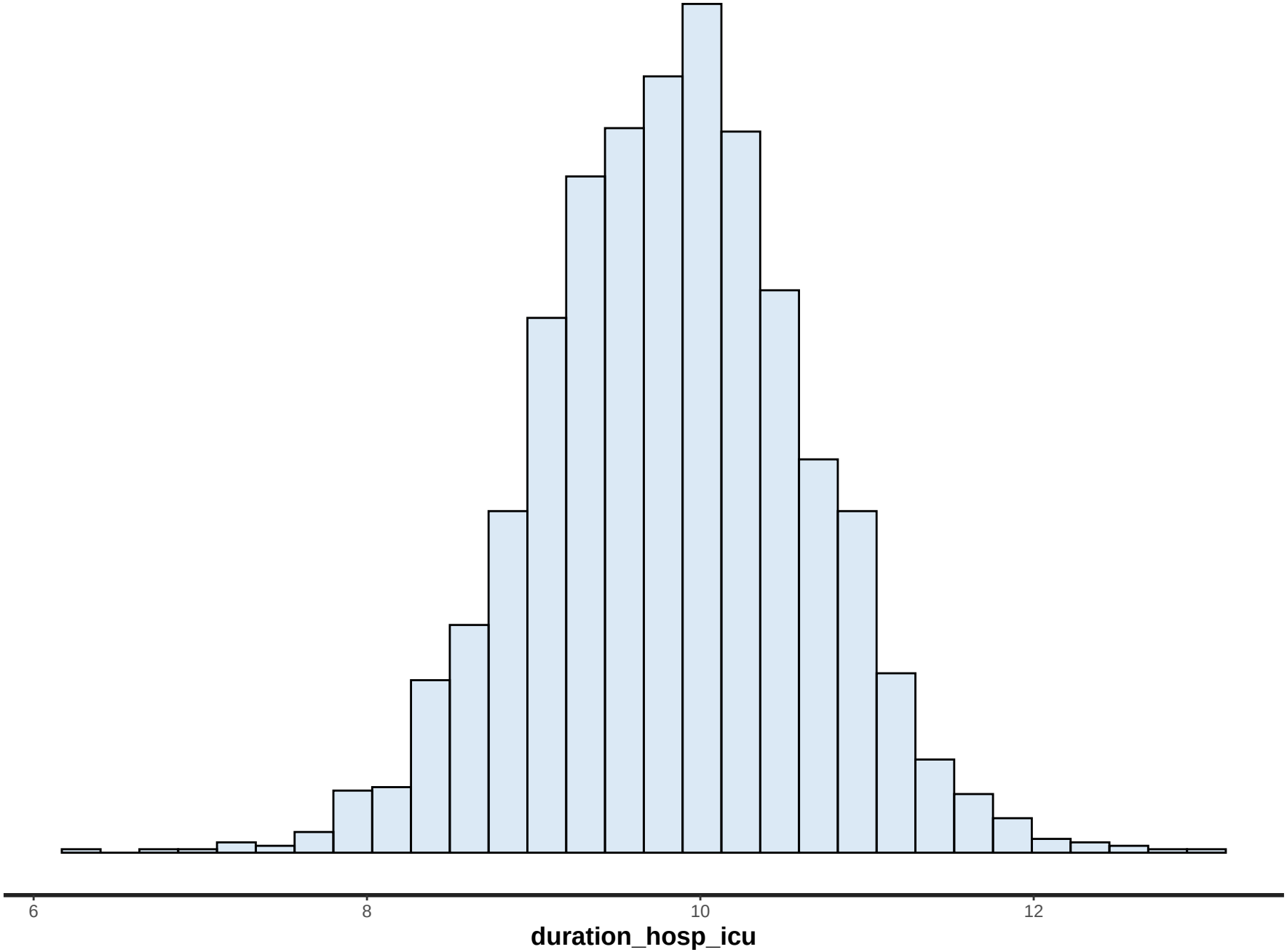

2
3
4
r0

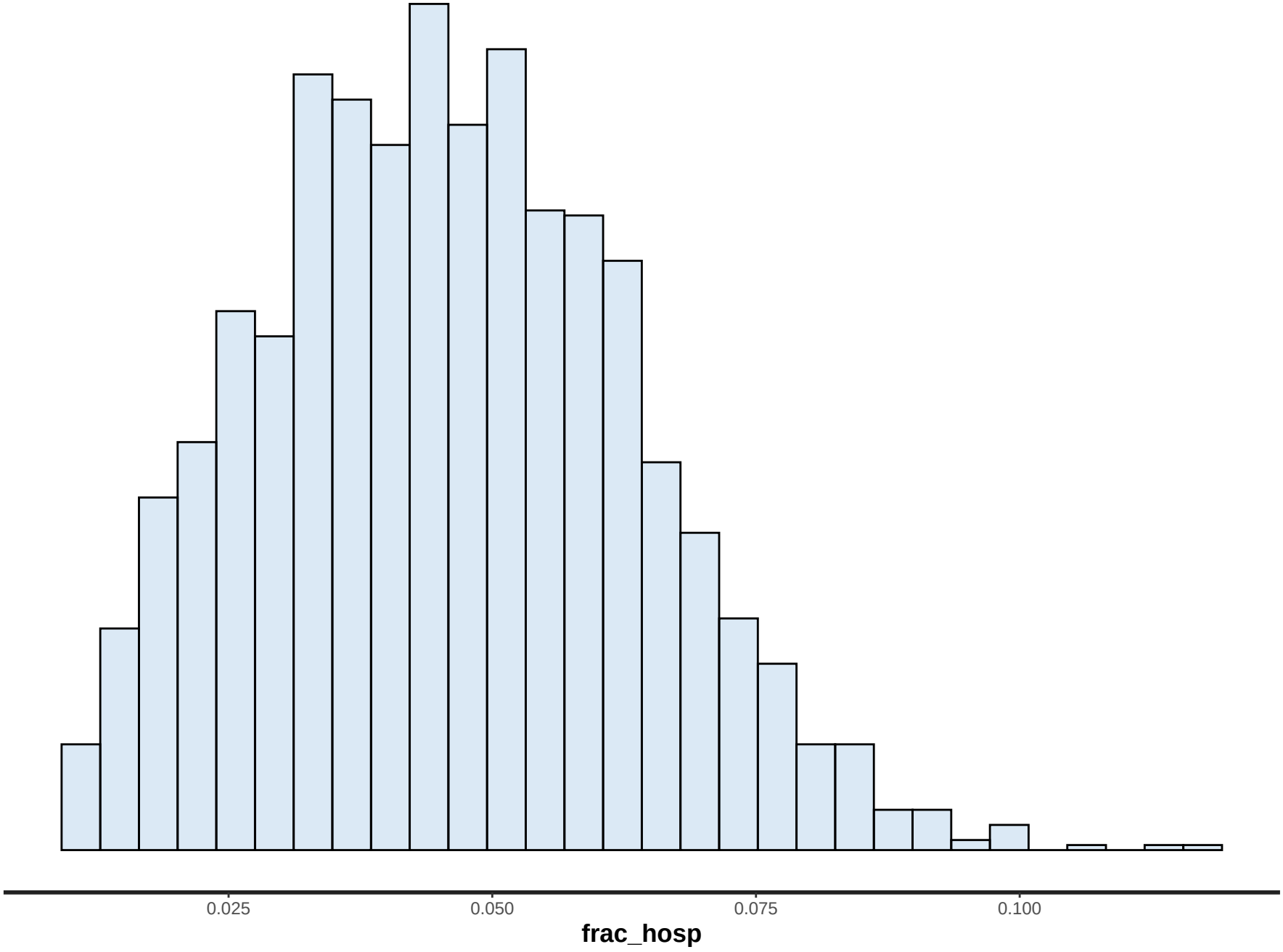

2
4
6
duration_latent

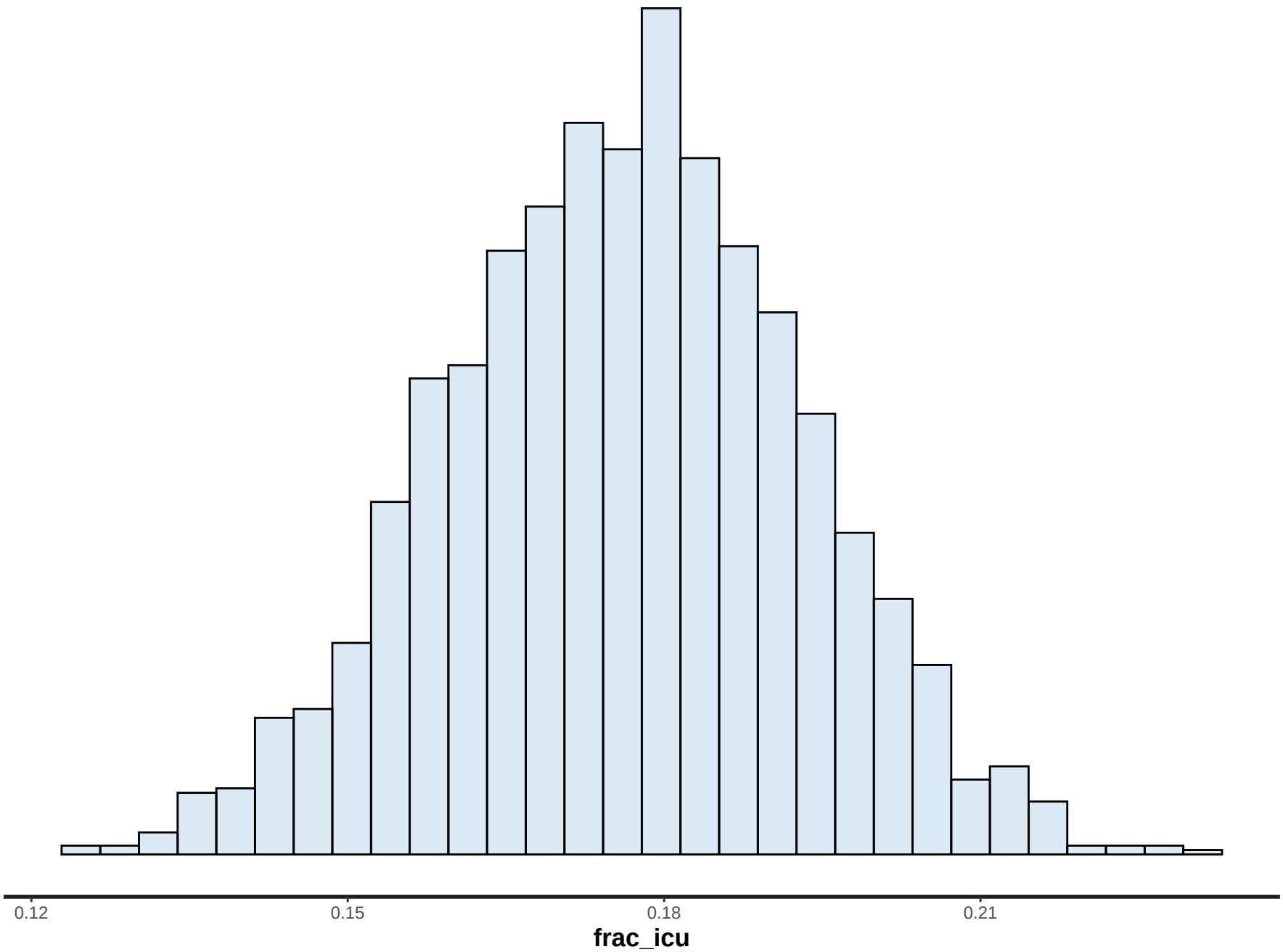

2
4
6
8
duration_rec_mild

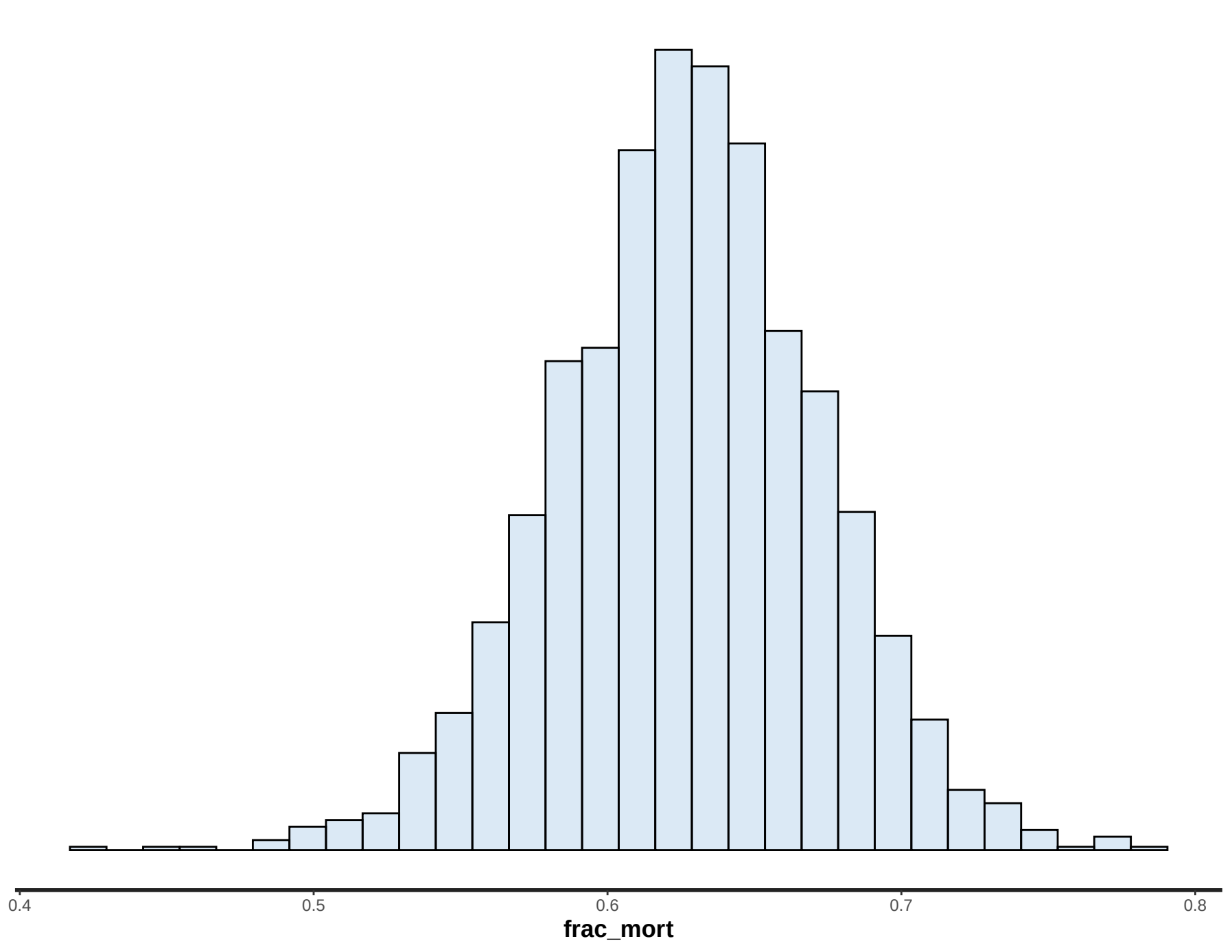

5
10
duration_pre_hosp

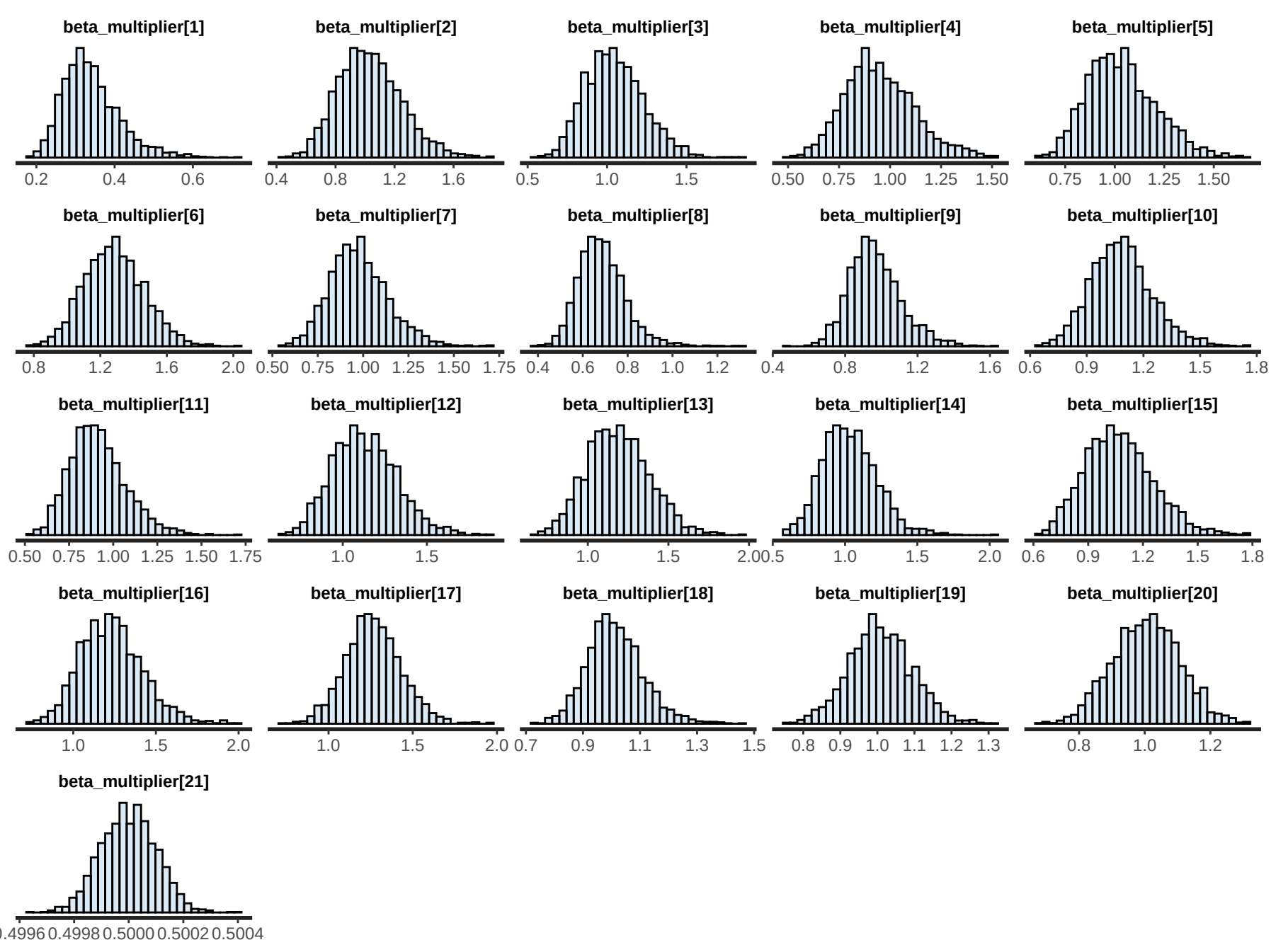

3
4
5
6
7
8
duration_hosp_mod


6
8
10
12
duration_hosp_icu


0.025
0.050
0.075
0.100
frac_hosp


0.12
0.15
0.18
0.21
frac_icu


0.4
0.5
0.6
0.7
0.8
frac_mort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0.2 0.4 0.6
beta_multiplier[2]
0.4 0.8 1.2 1.6
beta_multiplier[3]
0.5 1.0 1.5
beta_multiplier[4]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[5]
0.75 1.00 1.25 1.50
beta_multiplier[6]
0.8 1.2 1.6 2.0
beta_multiplier[7]
0.50 0.75 1.00 1.25 1.50 1.75
beta_multiplier[8]
0.4 0.6 0.8 1.0 1.2
beta_multiplier[9]
0.4 0.8 1.2 1.6
beta_multiplier[10]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[11]
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beta_multiplier[12]
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beta_multiplier[13]
1.0 1.5 2.0
beta_multiplier[14]
0.5 1.0 1.5 2.0
beta_multiplier[15]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[16]
1.0 1.5 2.0
beta_multiplier[17]
1.0 1.5 2.0
beta_multiplier[18]
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beta_multiplier[19]
0.8 0.9 1.0 1.1 1.2 1.3
beta_multiplier[20]
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beta_multiplier[21]
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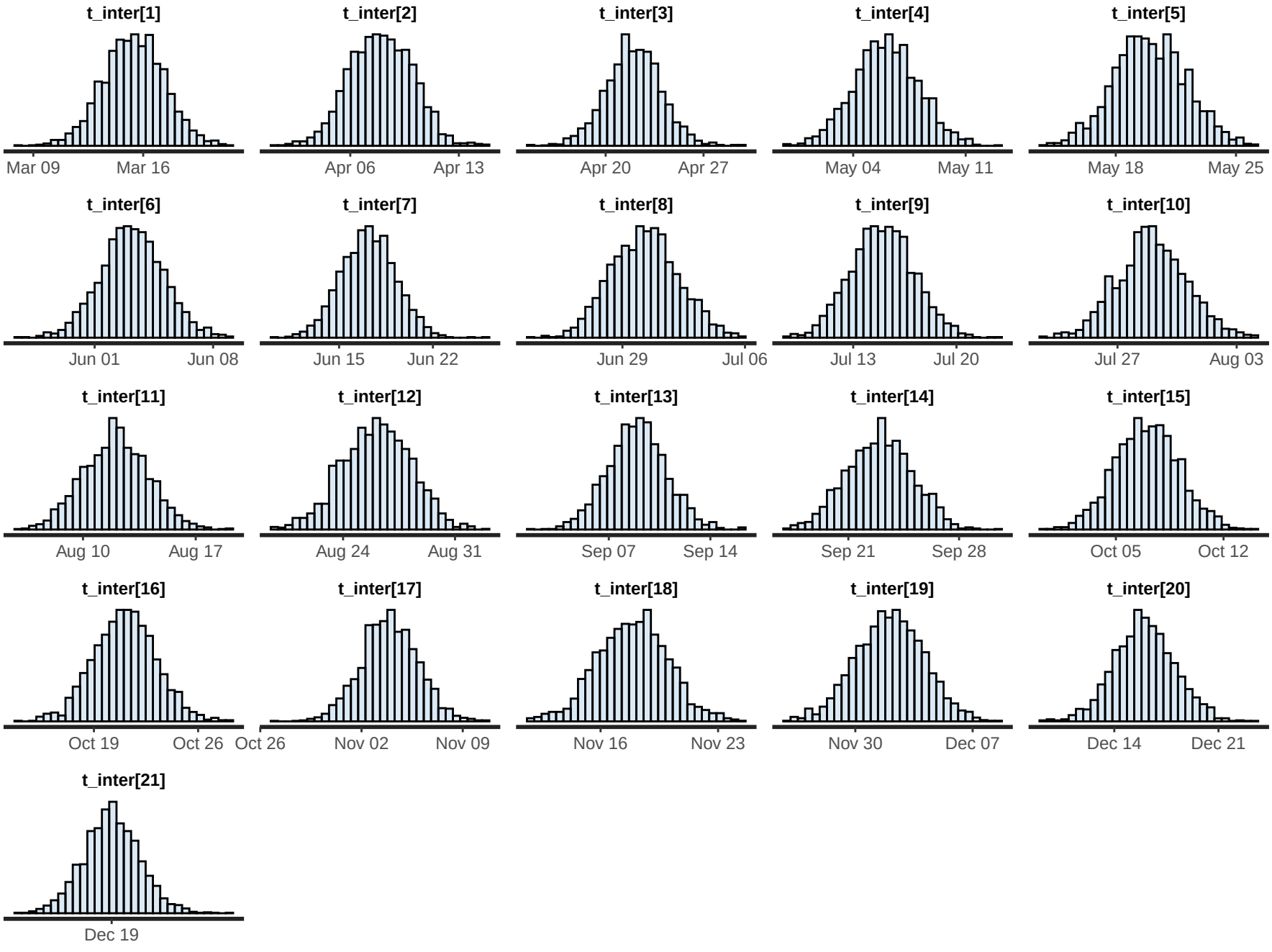
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Mar 09
Mar 16
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Apr 06
Apr 13
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Apr 20
Apr 27
t_inter[4]
May 04
May 11
t_inter[5]
May 18
May 25
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Jun 01
Jun 08
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Jun 15
Jun 22
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Jun 29
Jul 06
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Jul 13
Jul 20
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Aug 10
Aug 17
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Nov 02
Nov 09
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Nov 23
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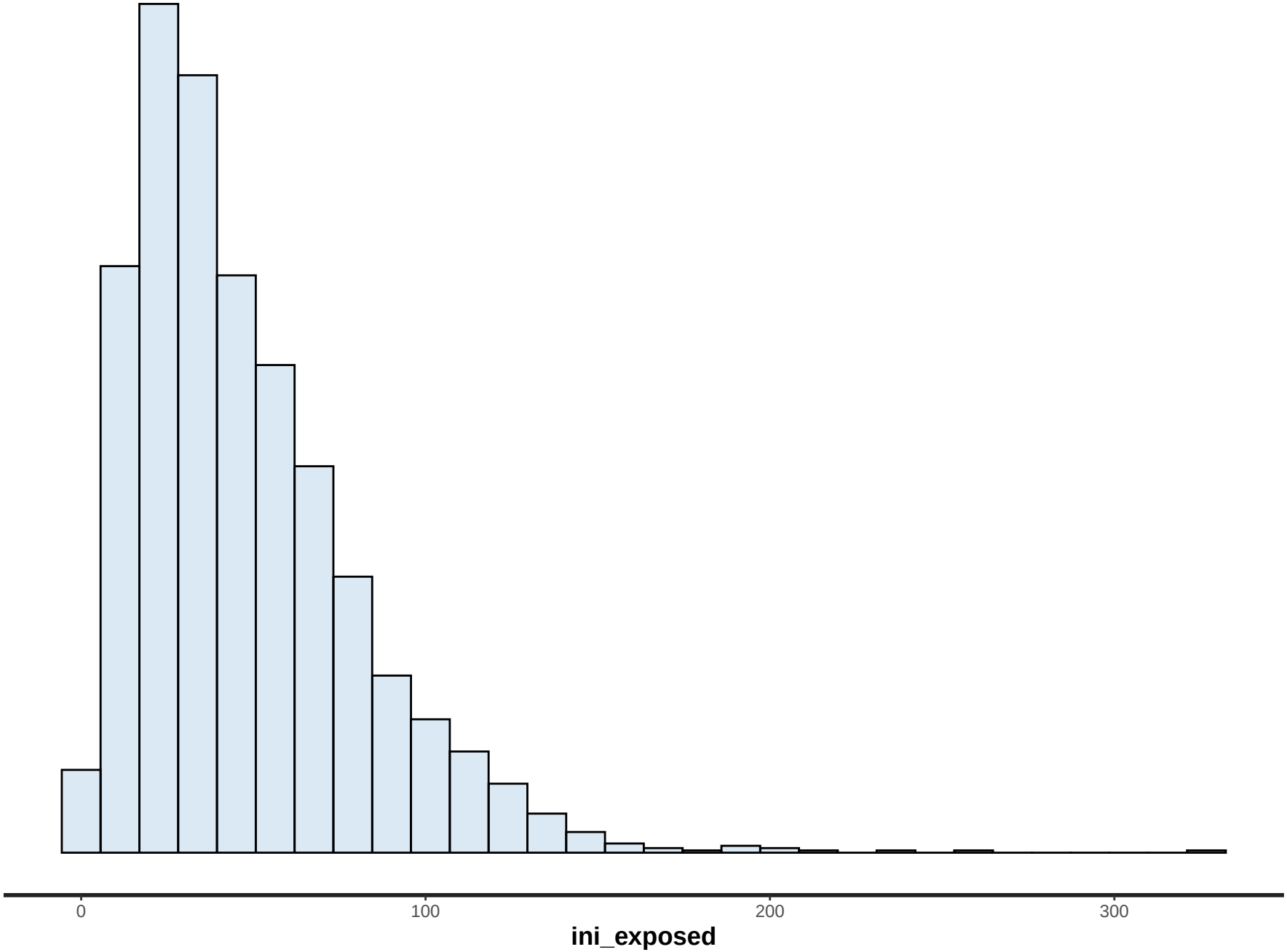
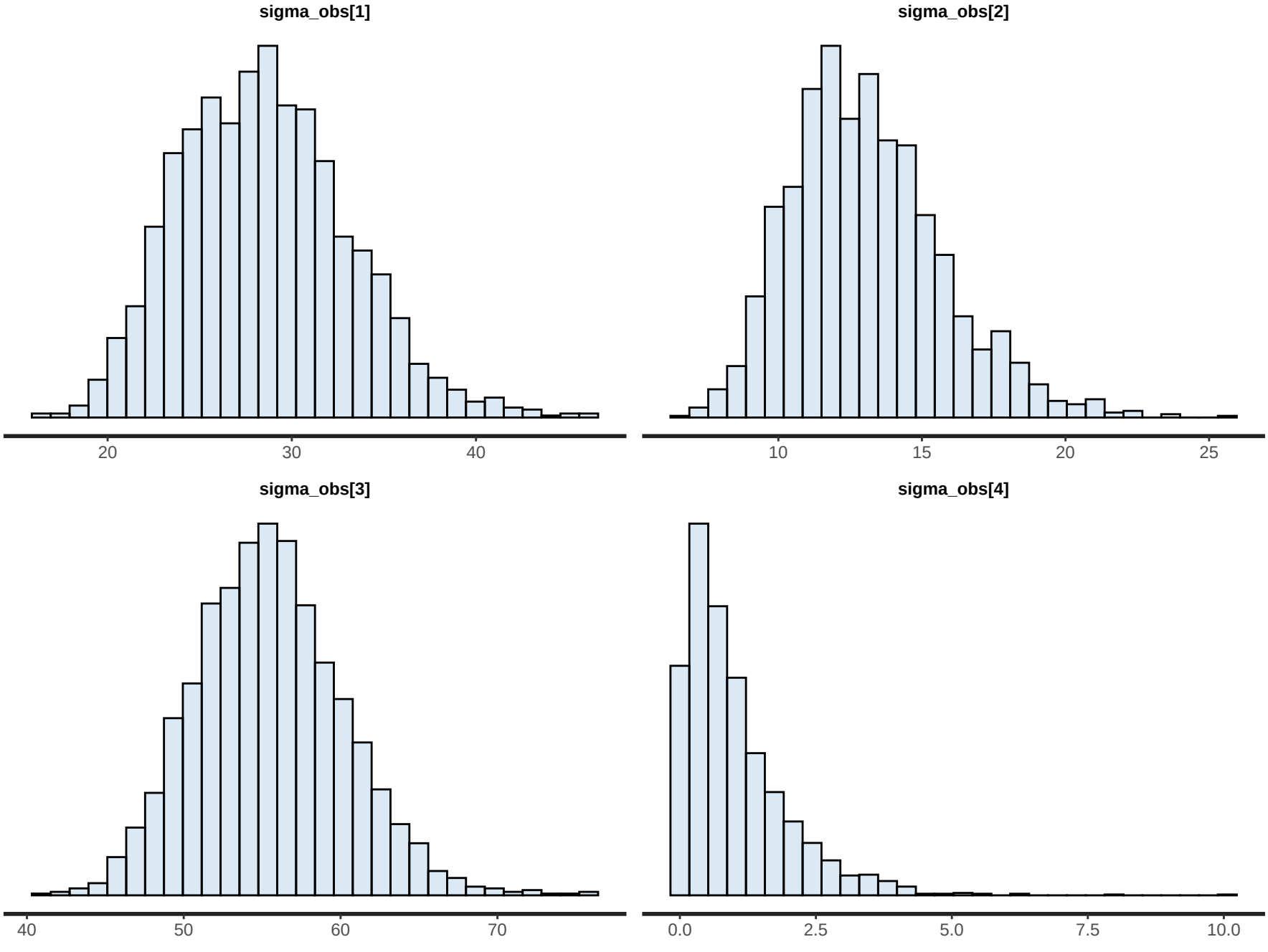
Nov 30
Dec 07
t_inter[20]
Dec 14
Dec 21
t_inter[21]
Dec 19


0
100
200
300
ini_exposed


sigma_obs[1]
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sigma_obs[2]
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sigma_obs[3]
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70
sigma_obs[4]
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2.5
5.0
7.5
10.0