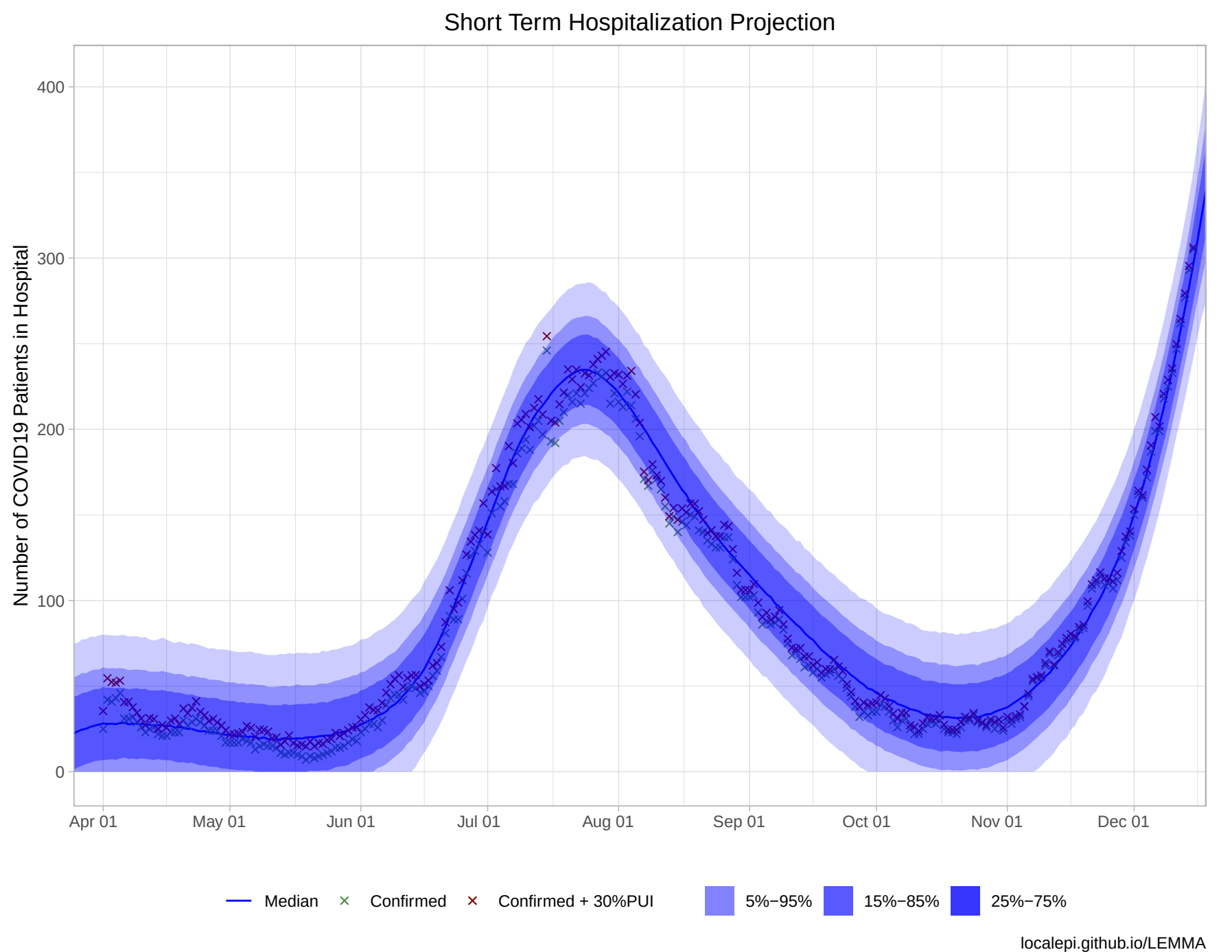
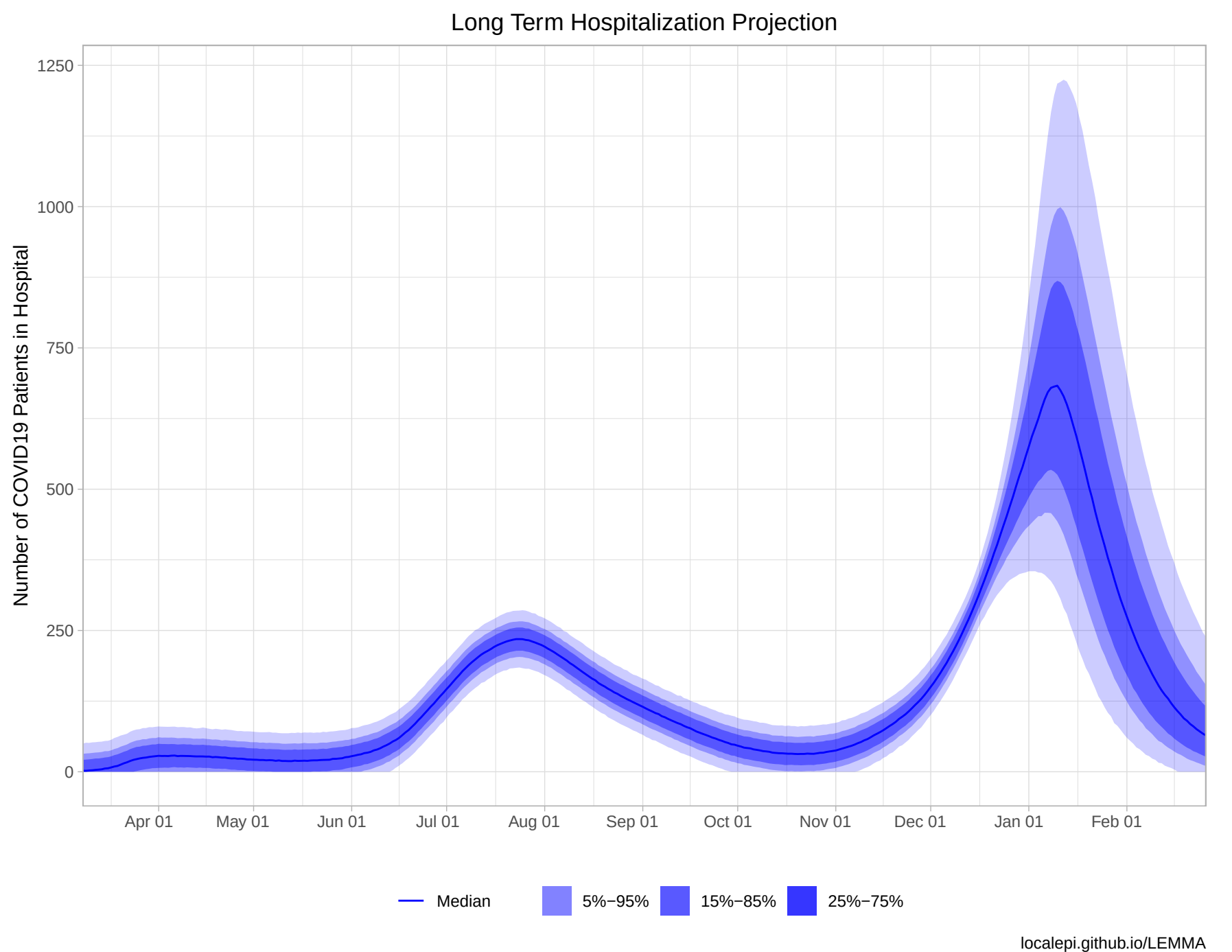
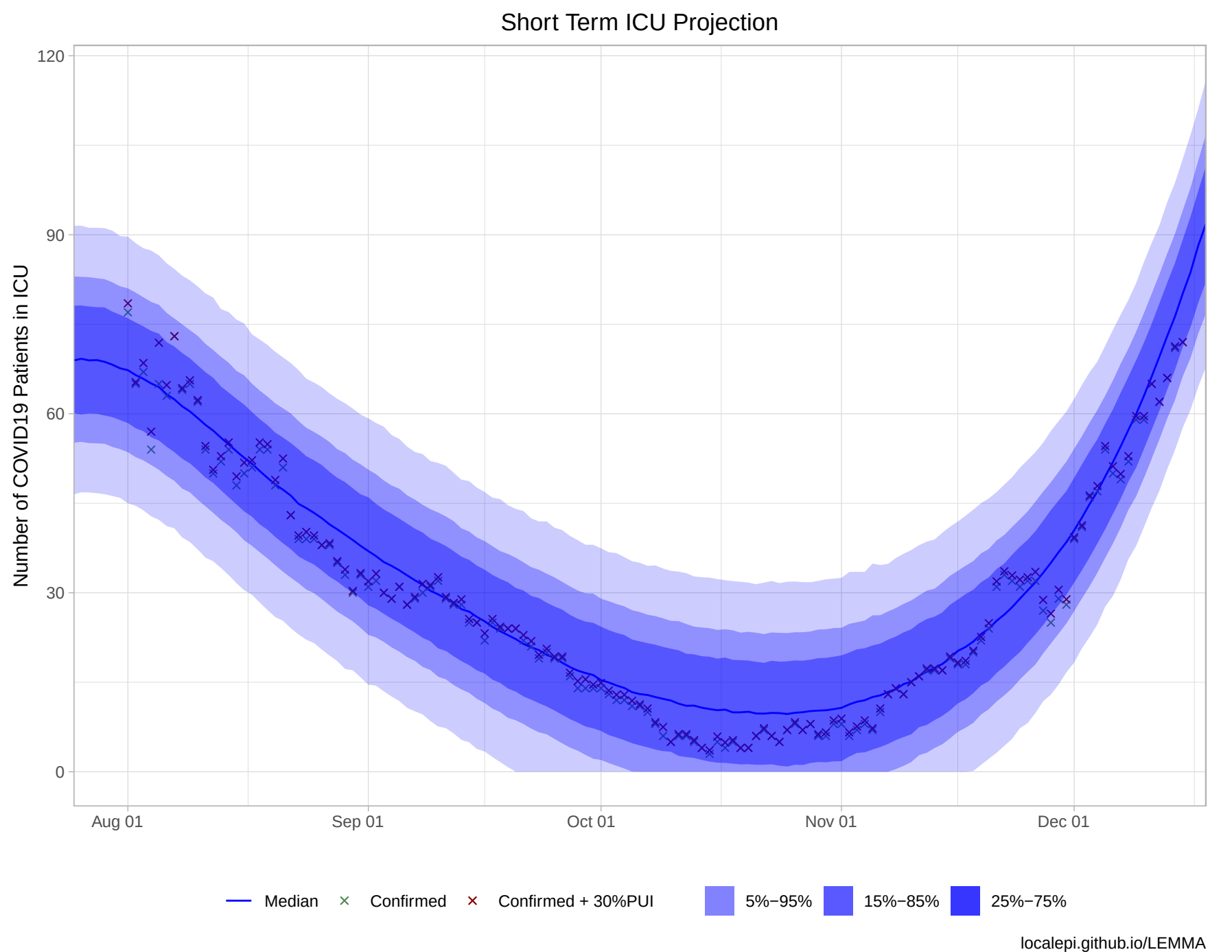
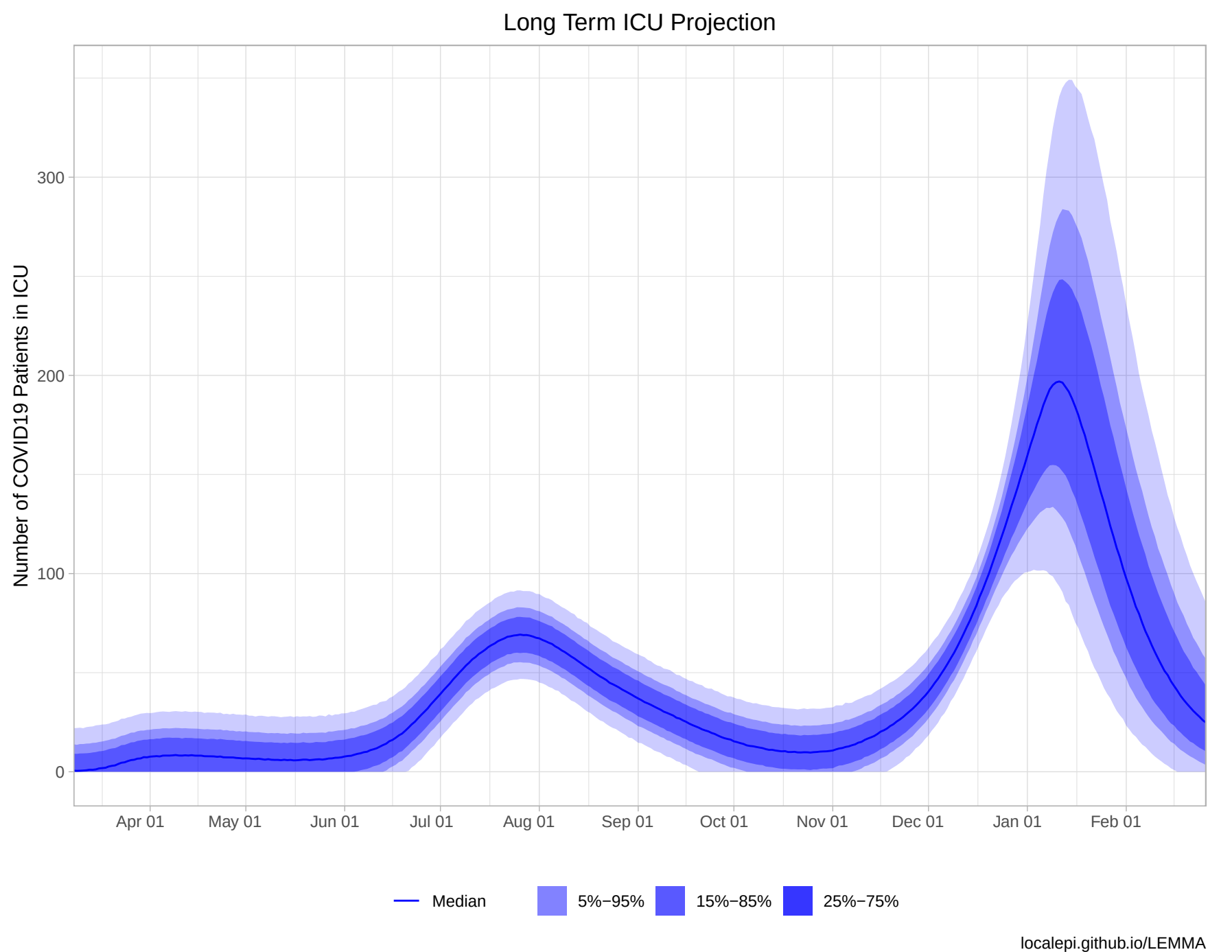
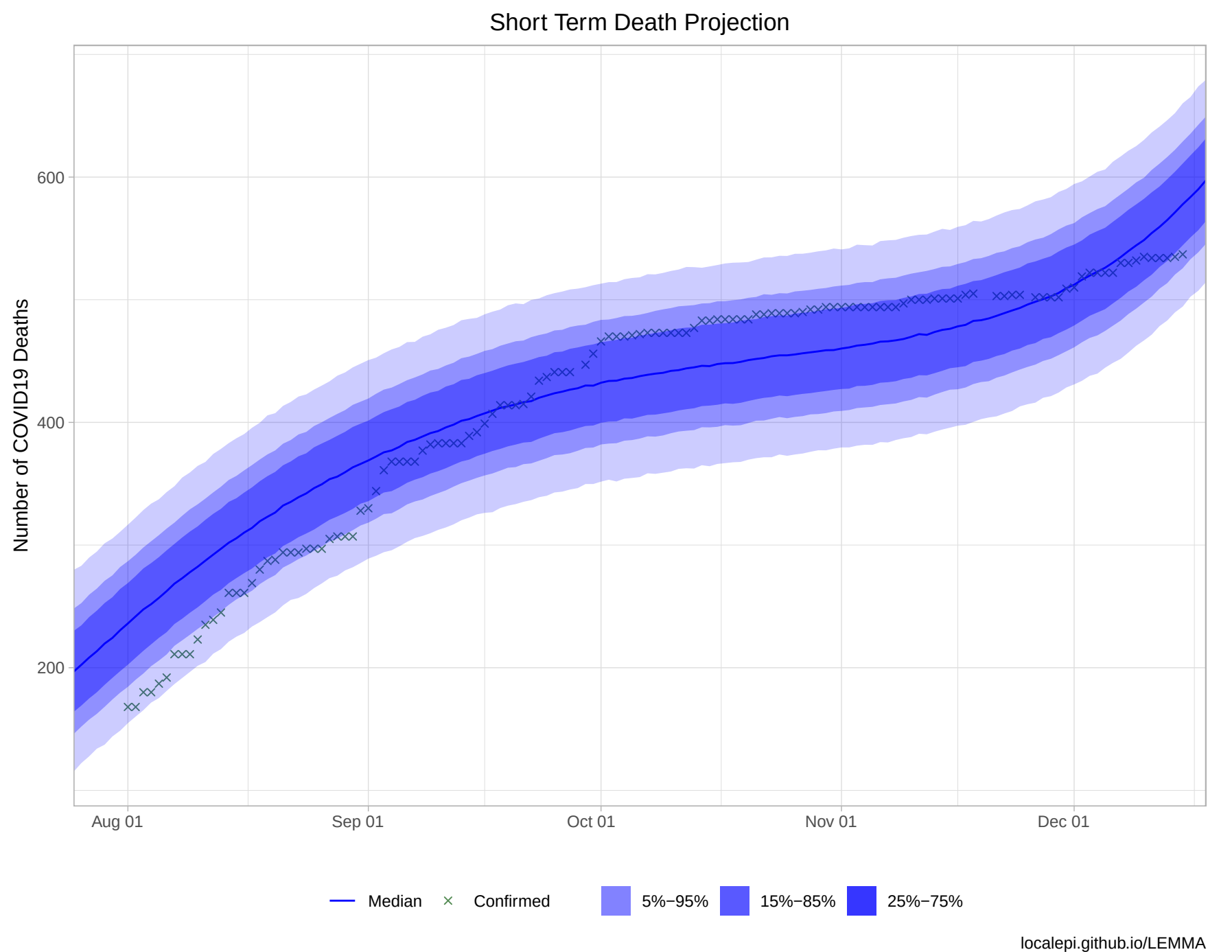
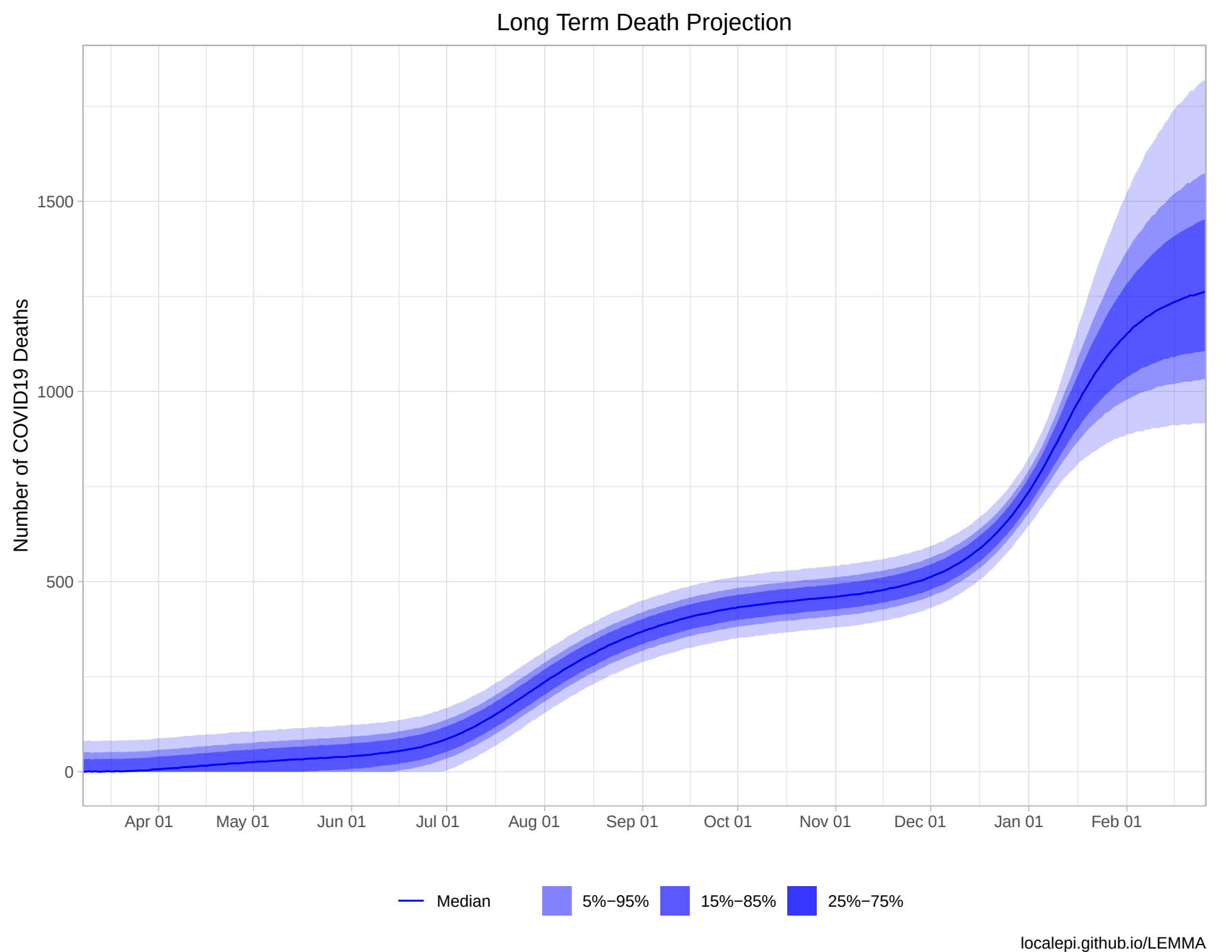

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
400
300
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

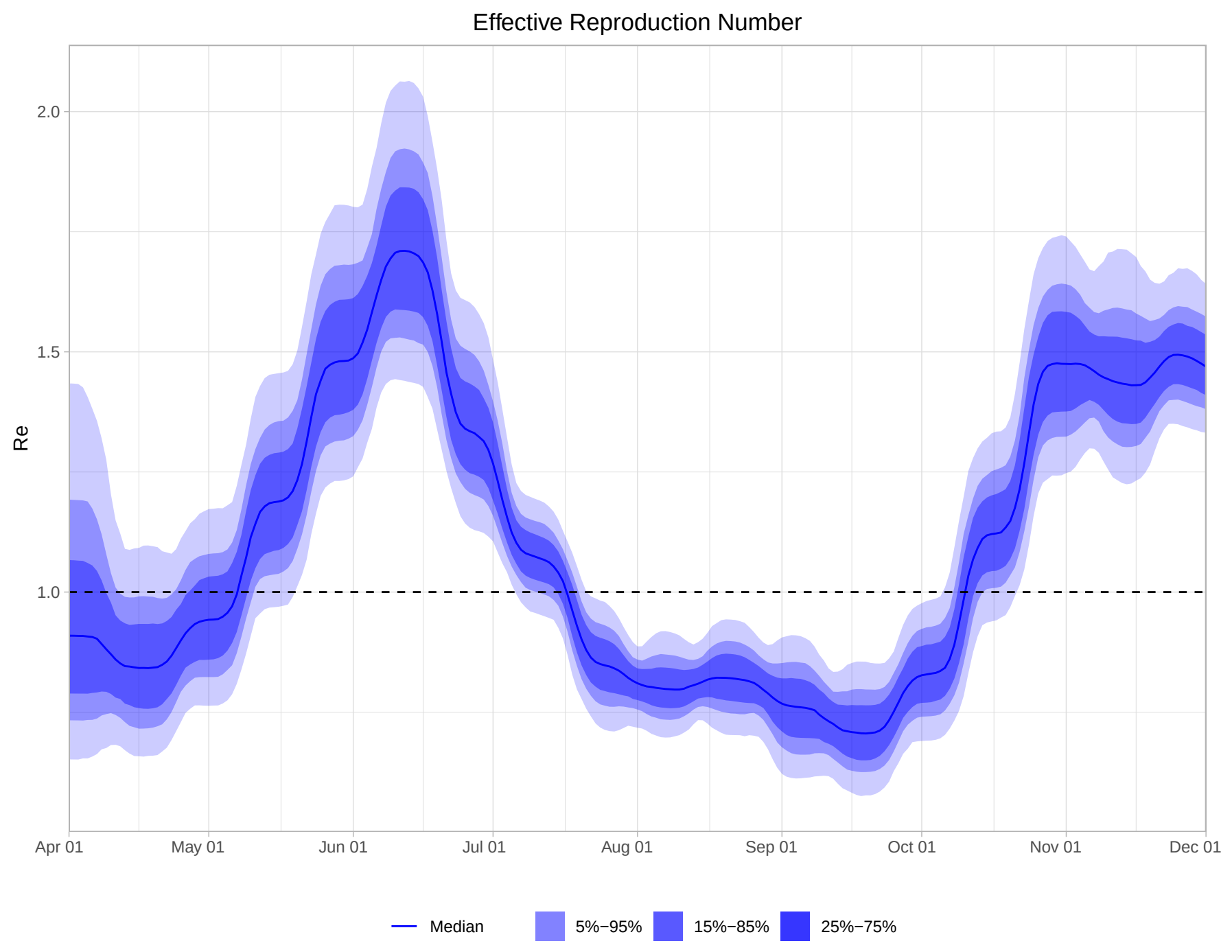

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1250
1000
750
500
250
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
120
90
60
30
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
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
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

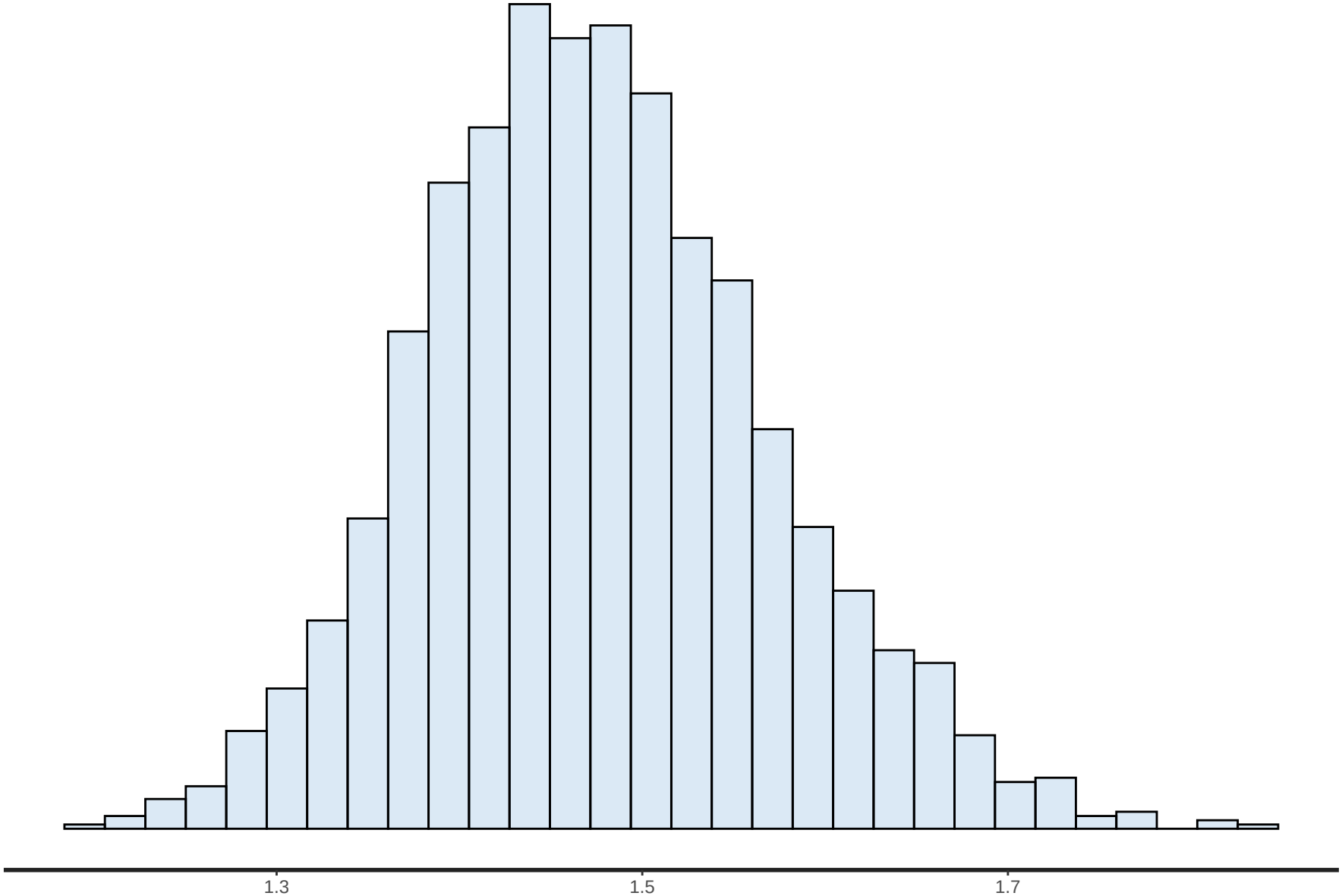

Short Term Death Projection
Number of COVID19 Deaths
600
400
200
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

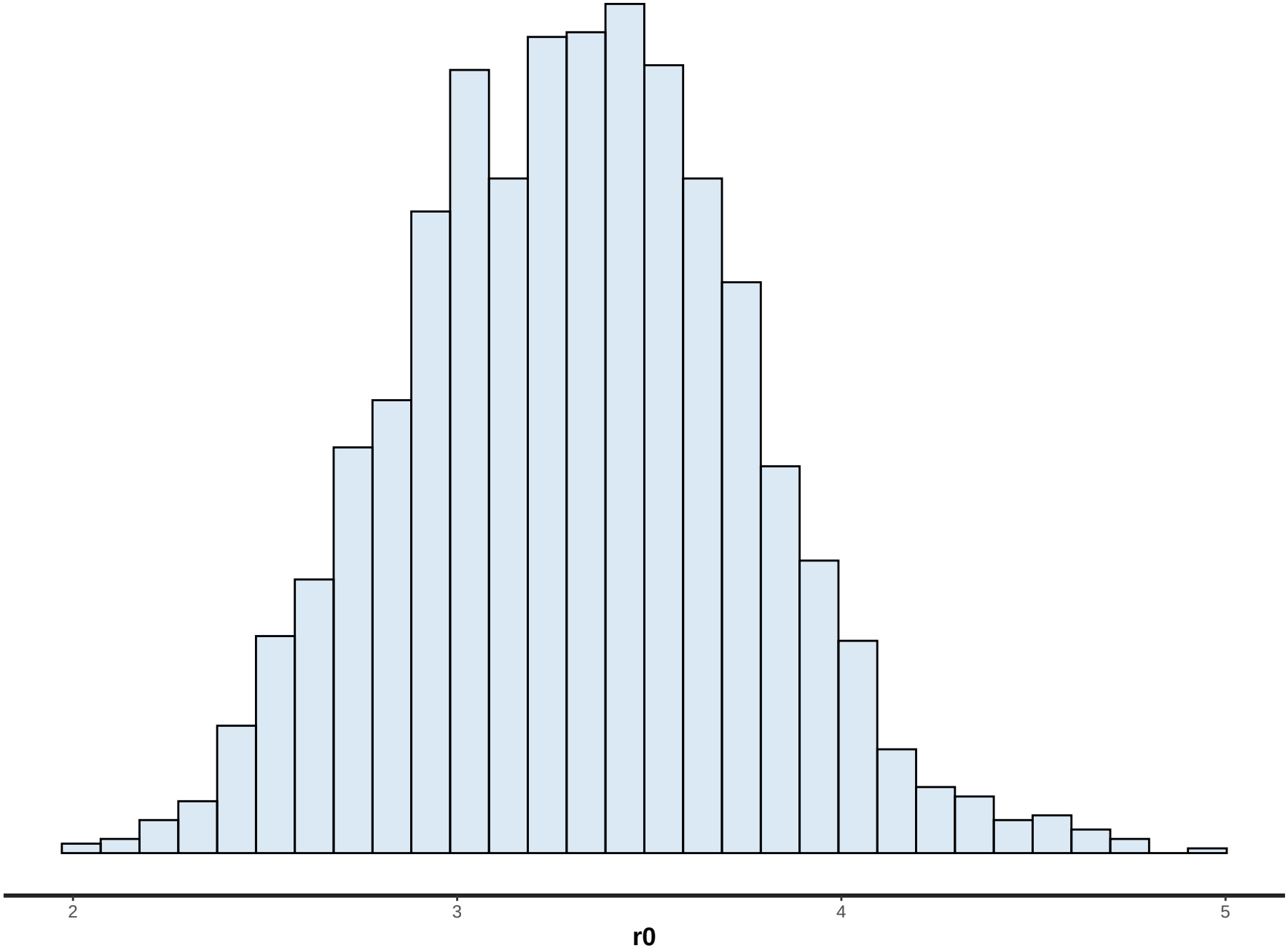

Long Term Death Projection
Number of COVID19 Deaths
0
500
1000
1500
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

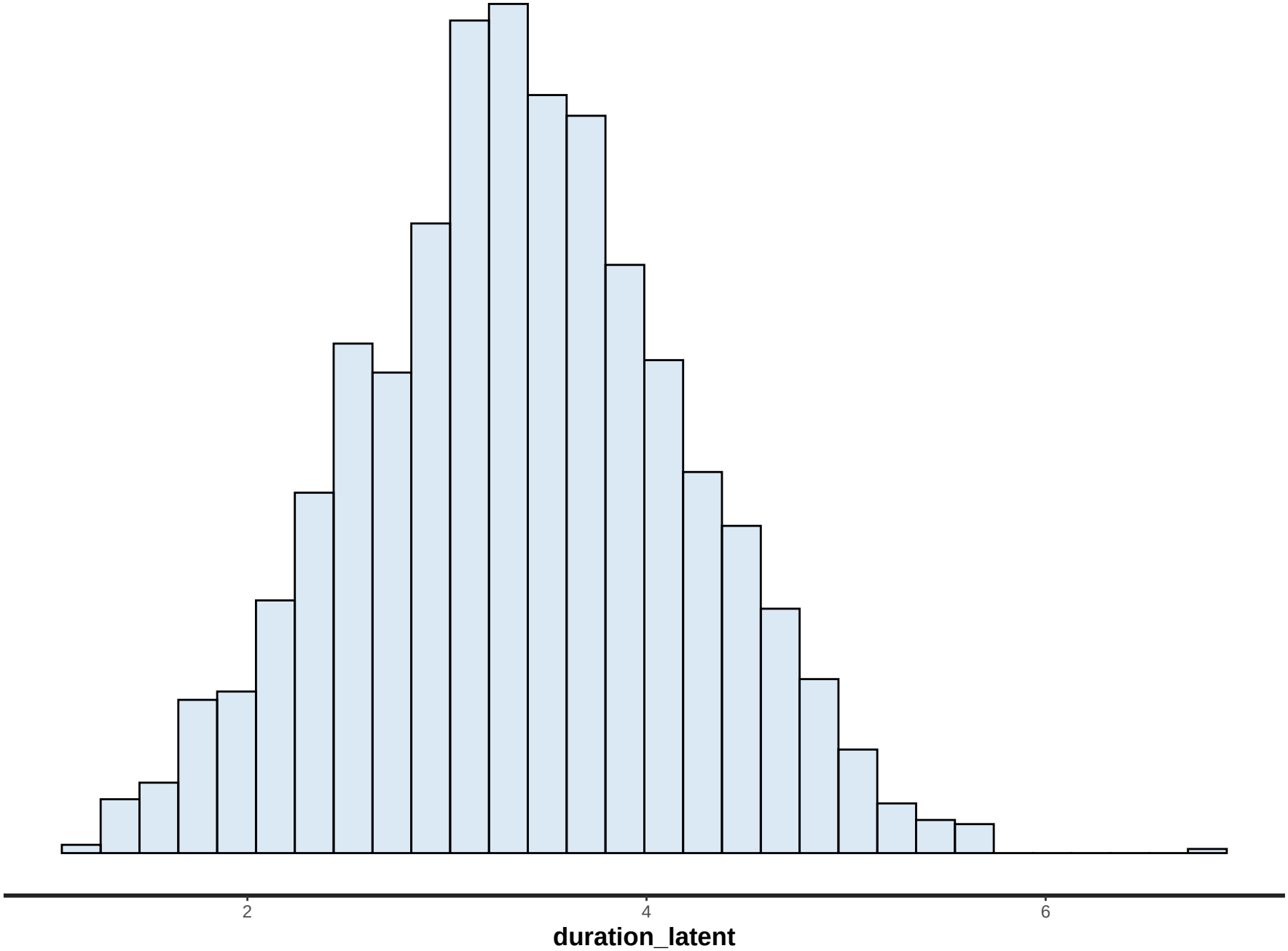

Effective Reproduction Number
Re
2.0
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

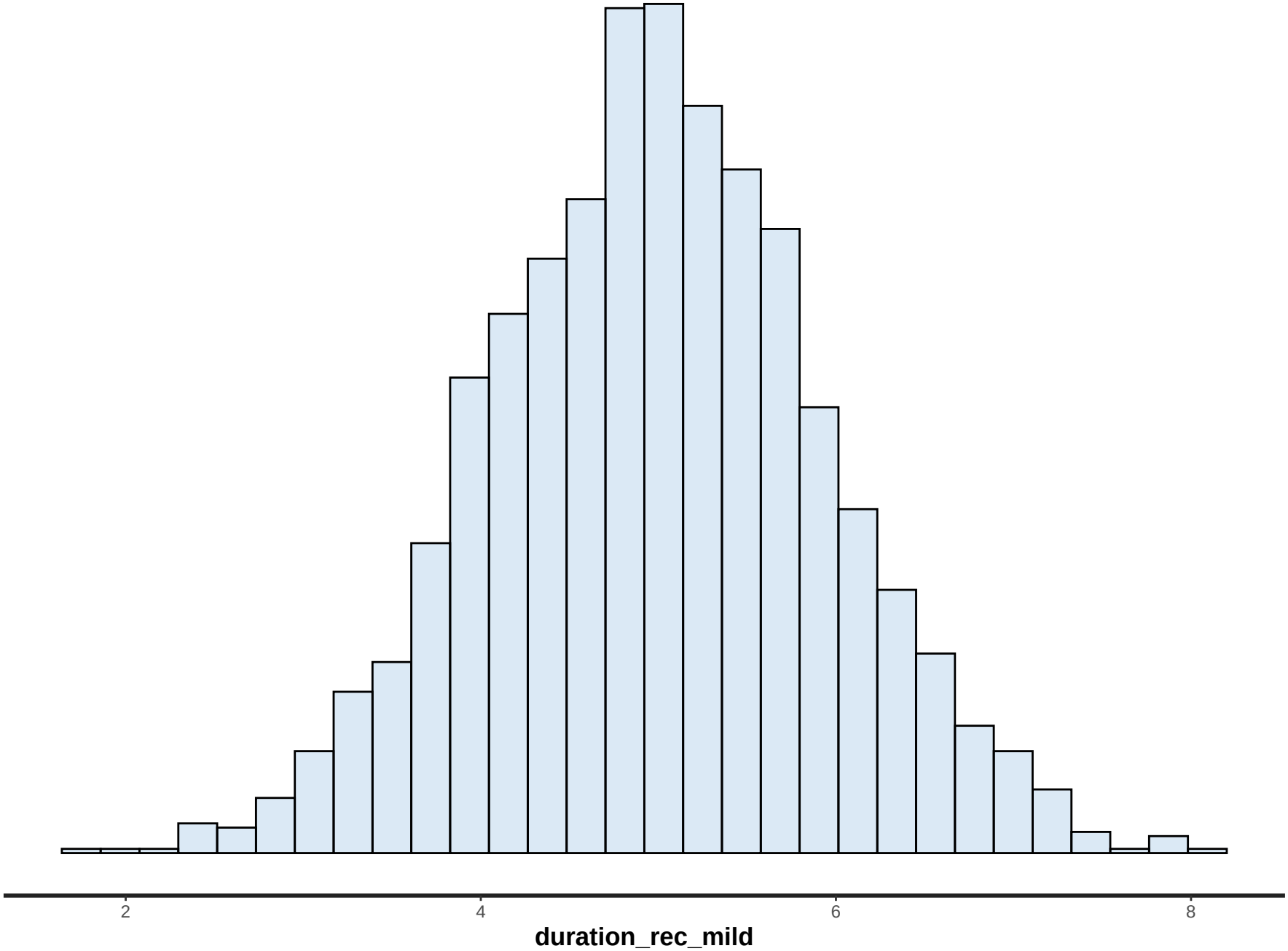
Rt as of 2020−12−01

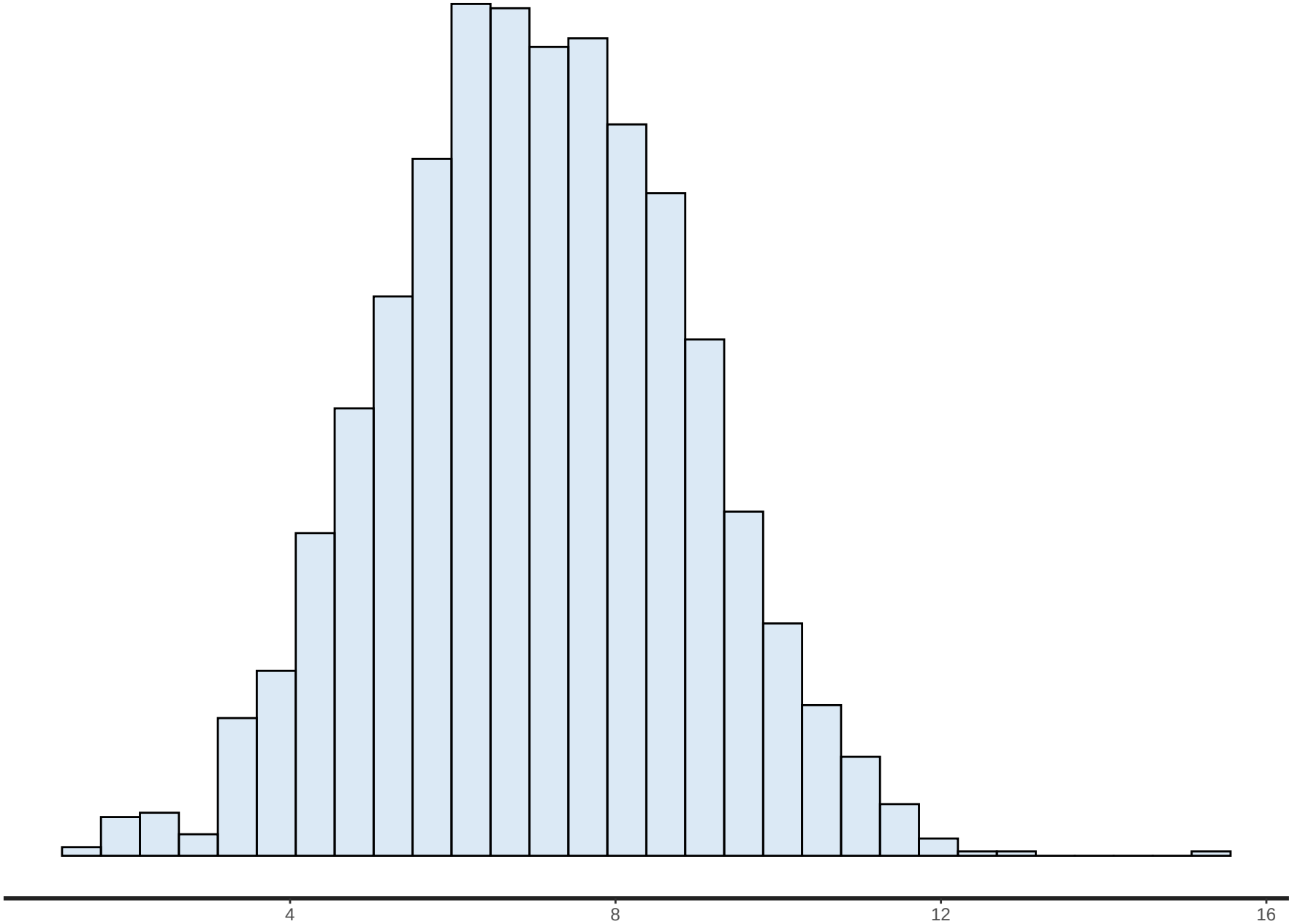
5%	10%	25%	50%	75%	90%	95%
1.33	1.36	1.41	1.47	1.54	1.60	1.64

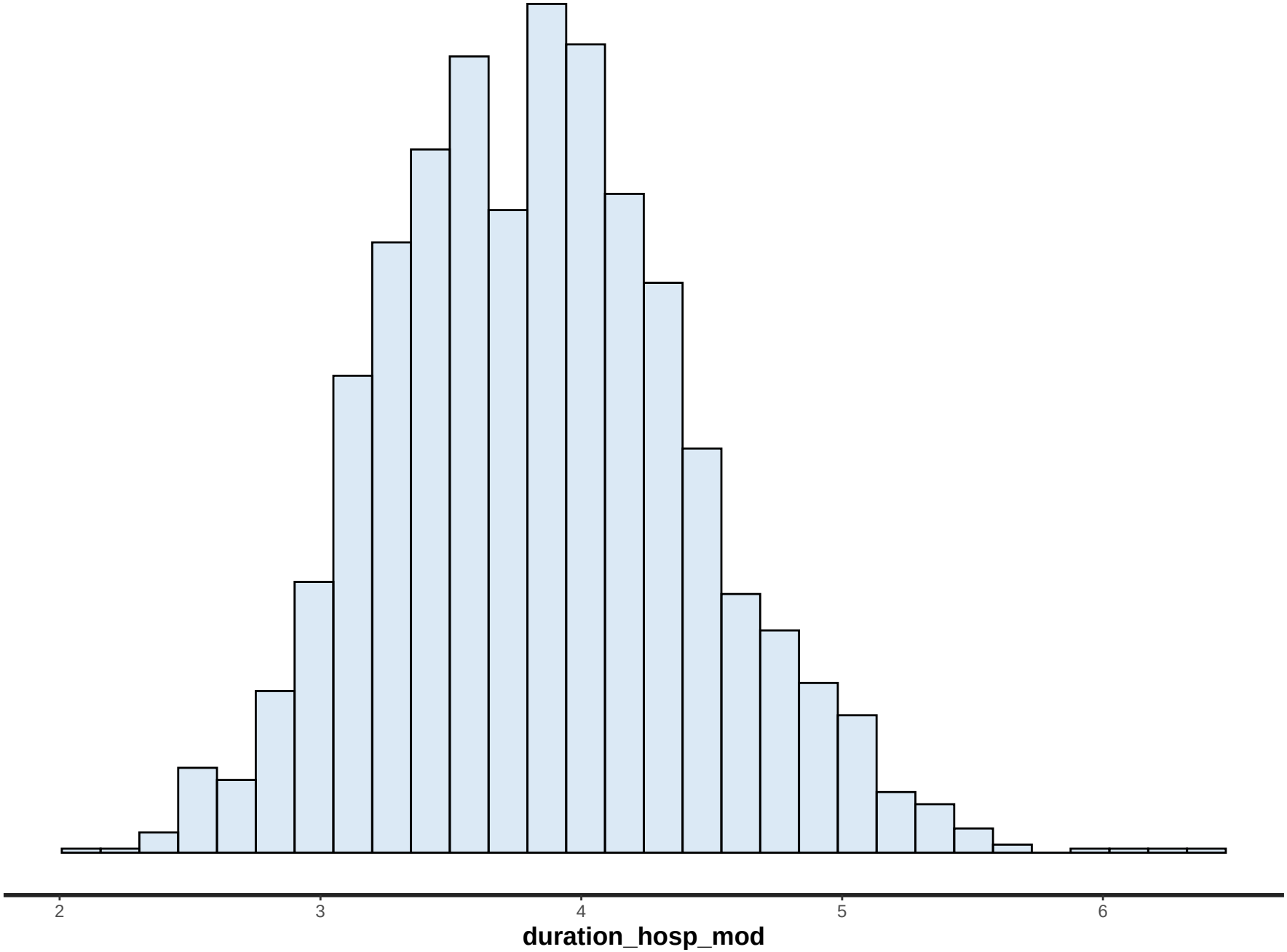


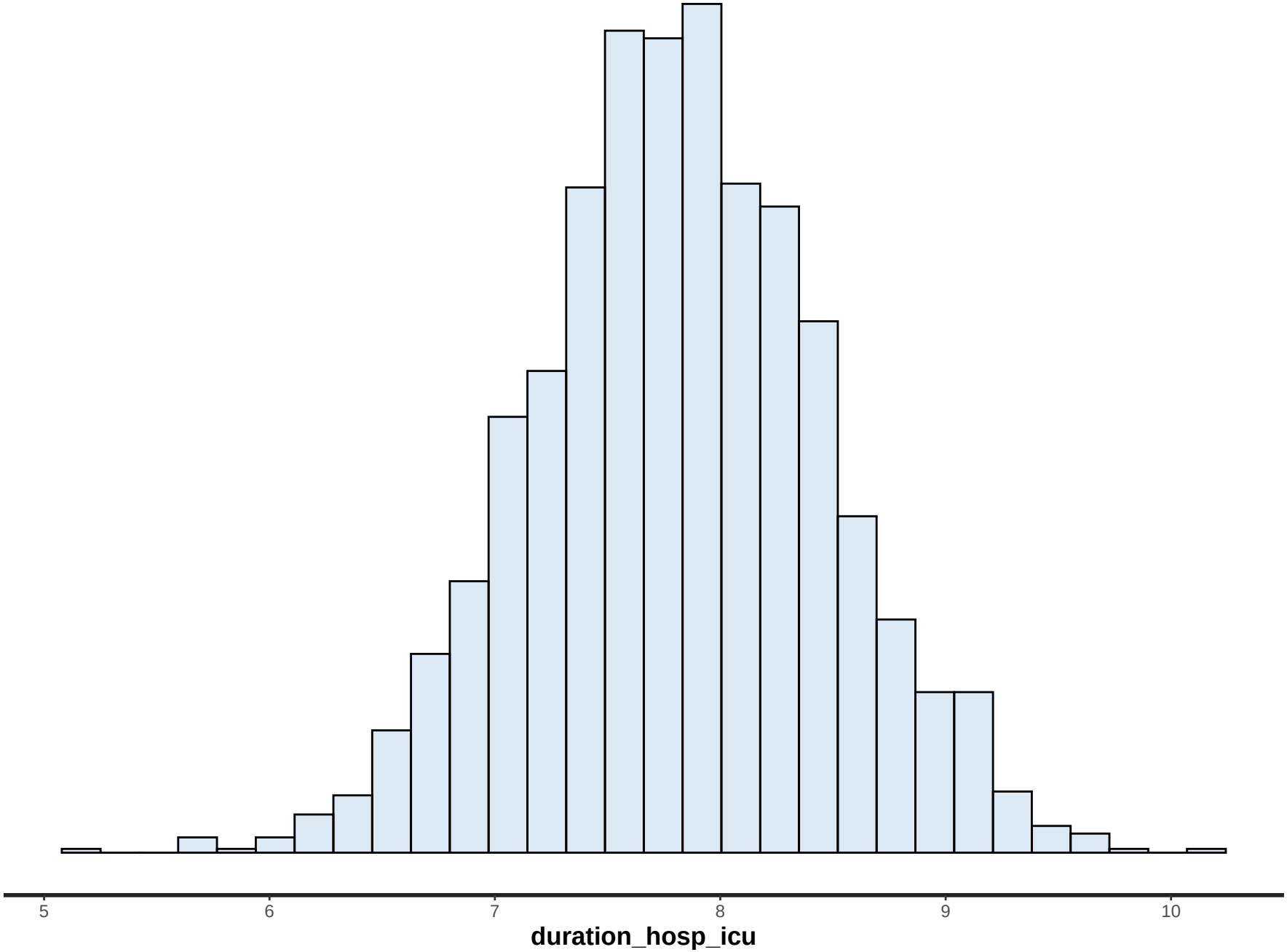

2
3
4
5
r0

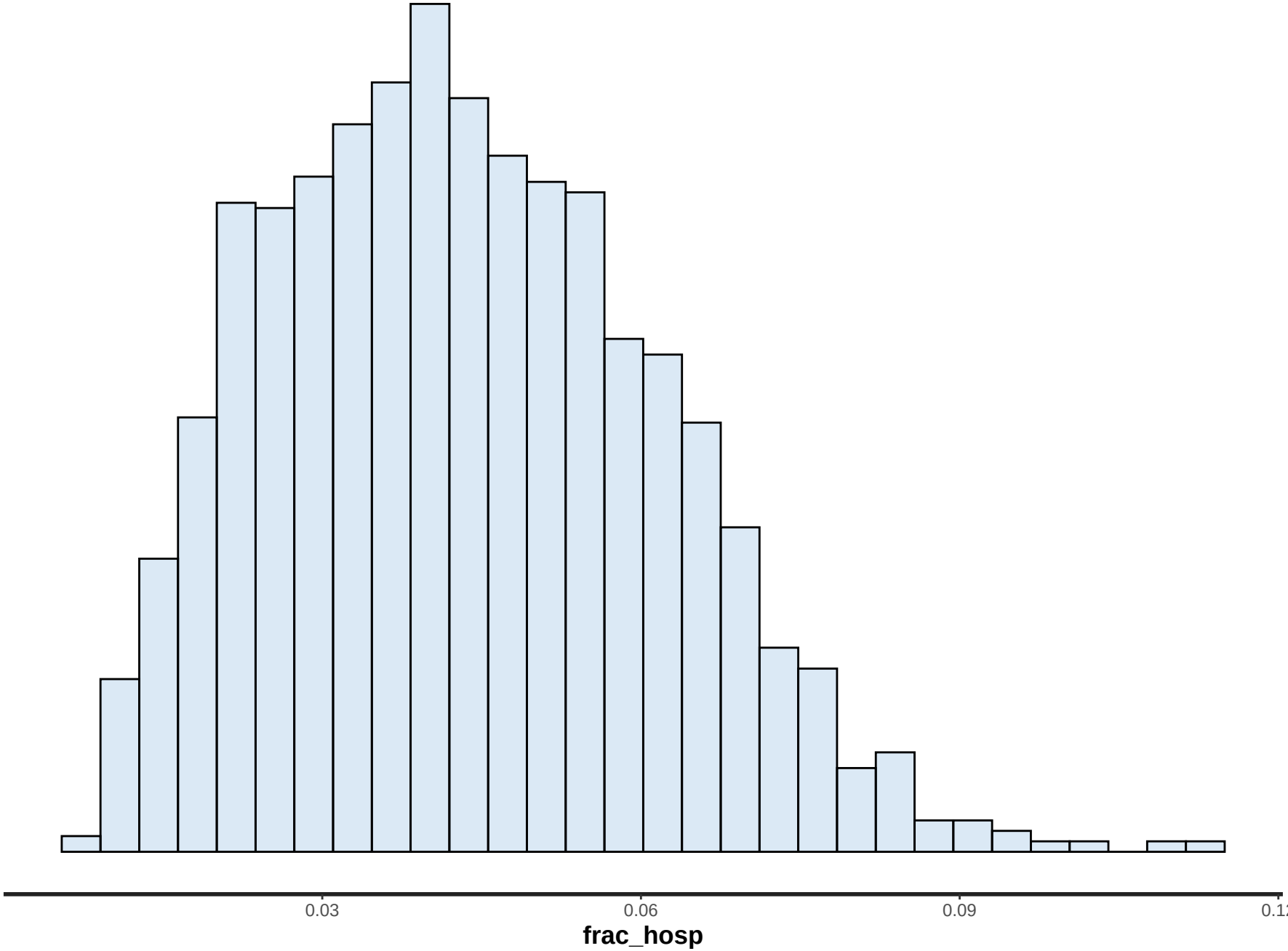

2
4
6
duration_latent

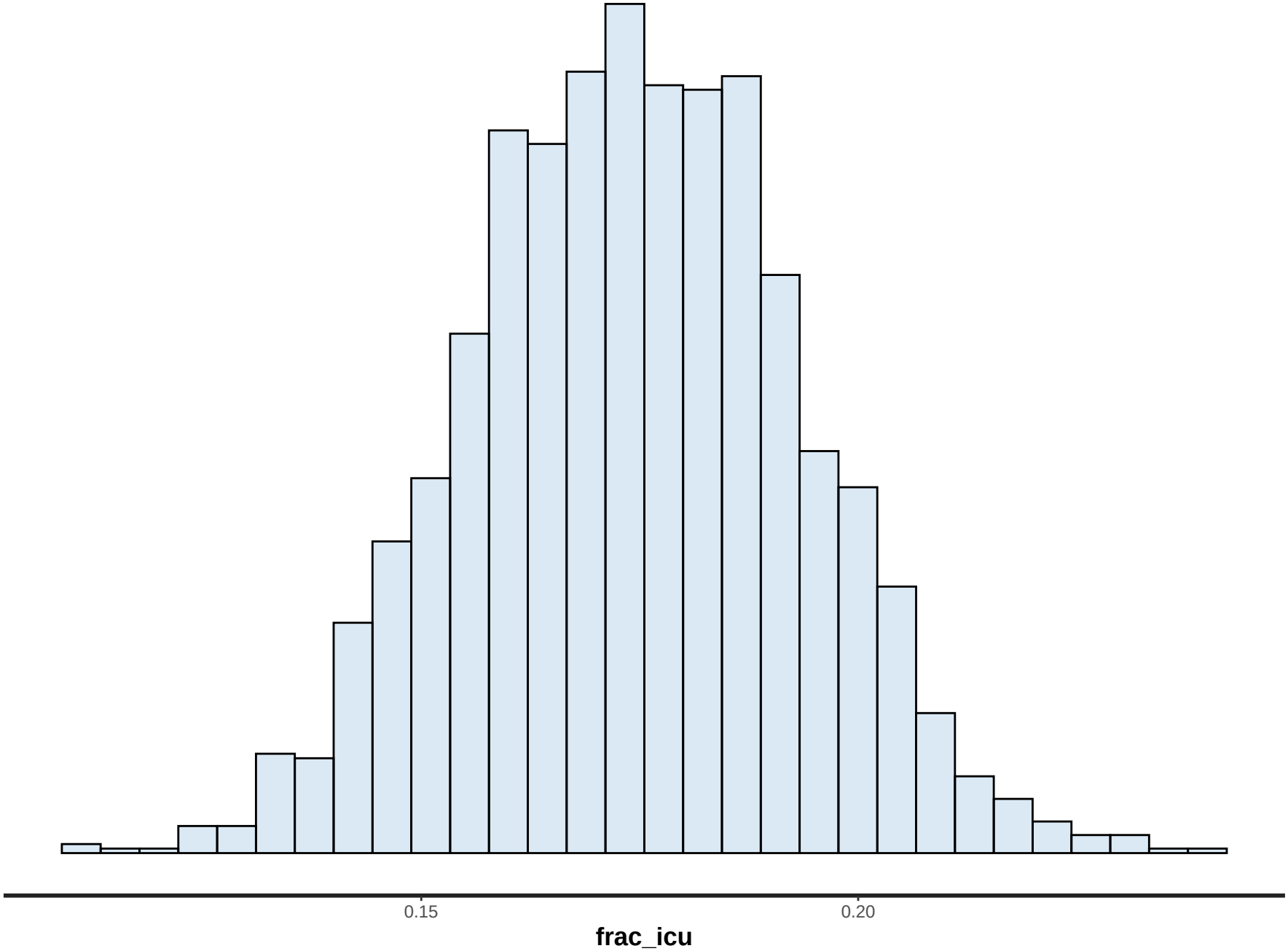

2
4
6
8
duration_rec_mild

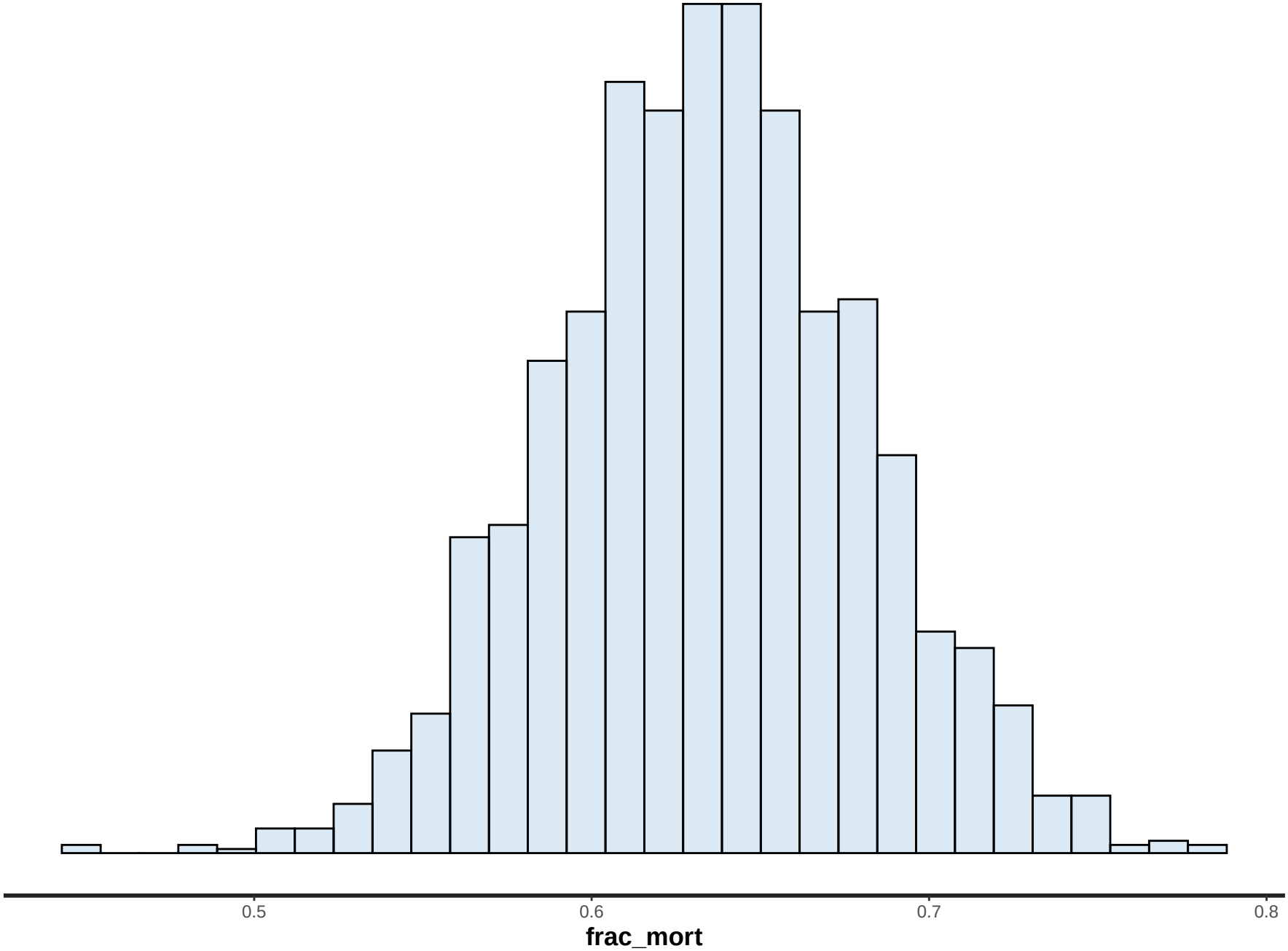

4
8
12
16
duration_pre_hosp

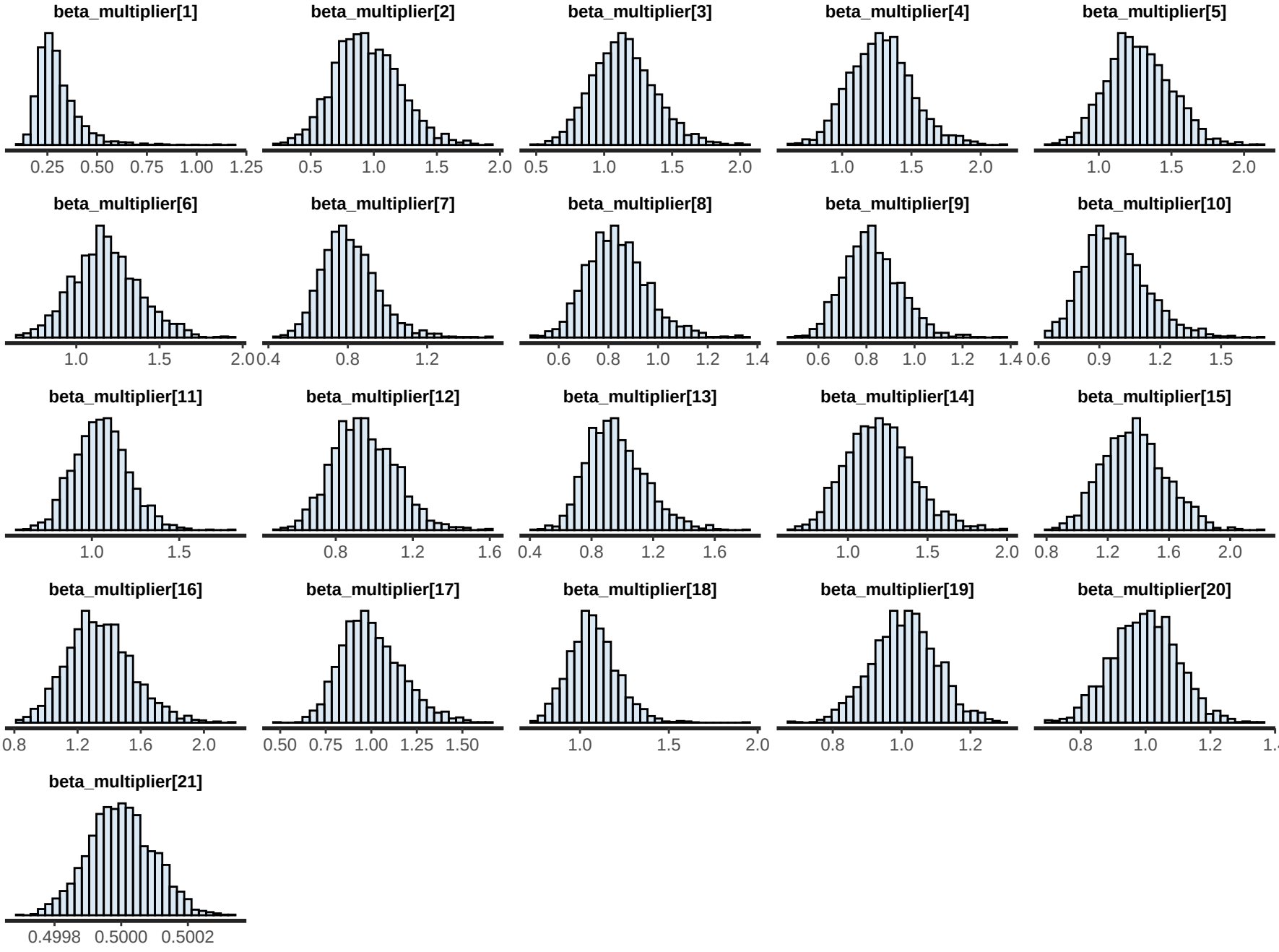

2
3
4
5
6
duration_hosp_mod


5
6
7
8
9
10
duration_hosp_icu


0.03
0.06
0.09
0.12
frac_hosp


0.15
0.20
frac_icu


0.5
0.6
0.7
0.8
frac_mort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0.25 0.50 0.75 1.00 1.25
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]
1.0 1.5 2.0
beta_multiplier[6]
1.0 1.5 2.0
beta_multiplier[7]
0.4 0.8 1.2
beta_multiplier[8]
0.6 0.8 1.0 1.2 1.4
beta_multiplier[9]
0.6 0.8 1.0 1.2 1.4
beta_multiplier[10]
0.6 0.9 1.2 1.5
beta_multiplier[11]
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]
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beta_multiplier[15]
0.8 1.2 1.6 2.0
beta_multiplier[16]
0.8 1.2 1.6 2.0
beta_multiplier[17]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[18]
1.0 1.5 2.0
beta_multiplier[19]
0.8 1.0 1.2
beta_multiplier[20]
0.8 1.0 1.2 1.4
beta_multiplier[21]
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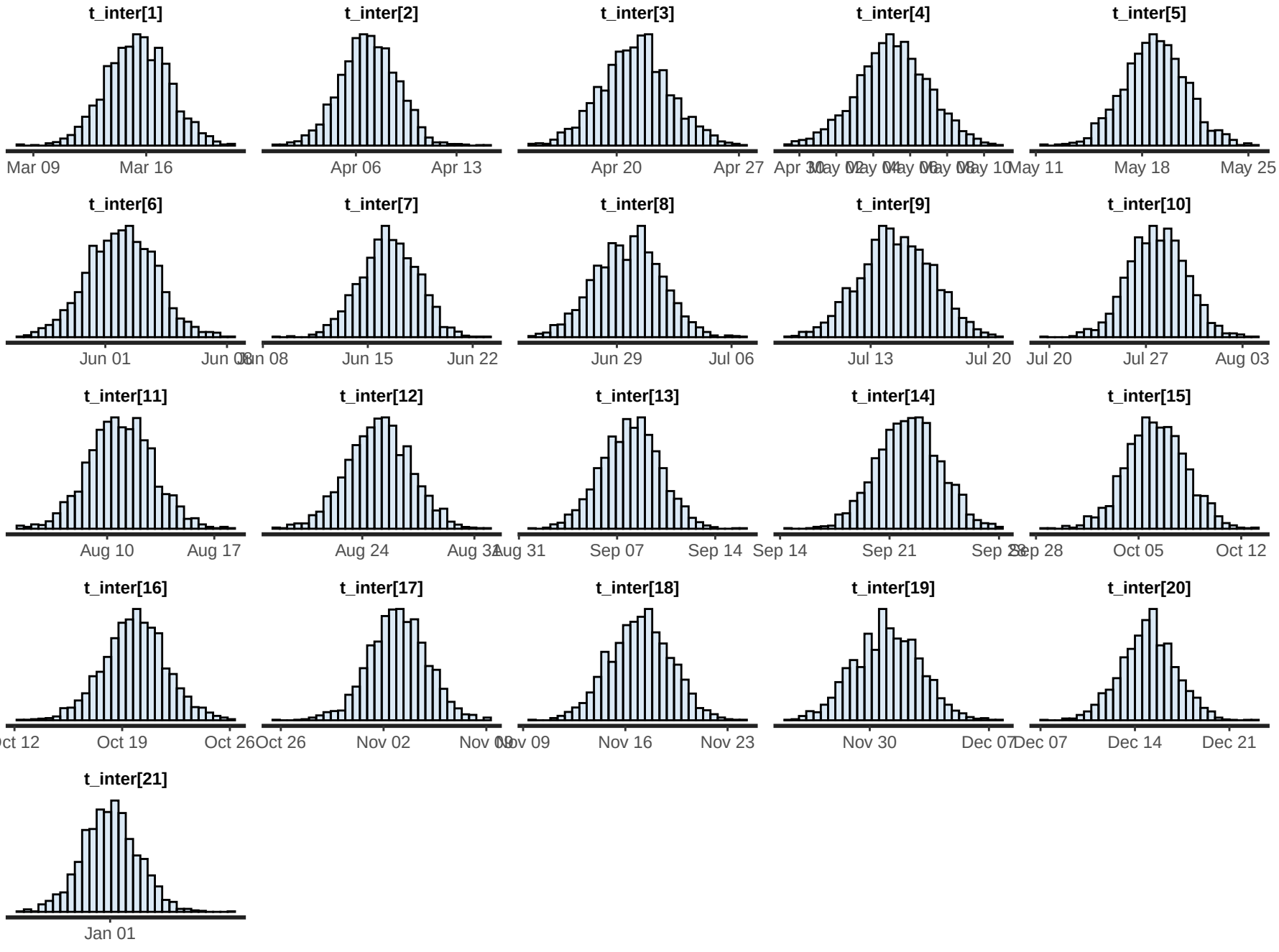
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Mar 09
Mar 16
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Apr 06
Apr 13
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Apr 20
Apr 27
t_inter[4]
Apr 30
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May 04
May 06
May 08
May 10
t_inter[5]
May 11
May 18
May 25
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Jun 01
Jun 08
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Jun 08
Jun 15
Jun 22
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Jun 29
Jul 06
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Jul 27
Aug 03
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Aug 10
Aug 17
t_inter[12]
Aug 24
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Aug 31
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Sep 14
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Sep 14
Sep 21
Sep 28
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Oct 12
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Oct 19
Oct 26
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Nov 02
Nov 09
t_inter[18]
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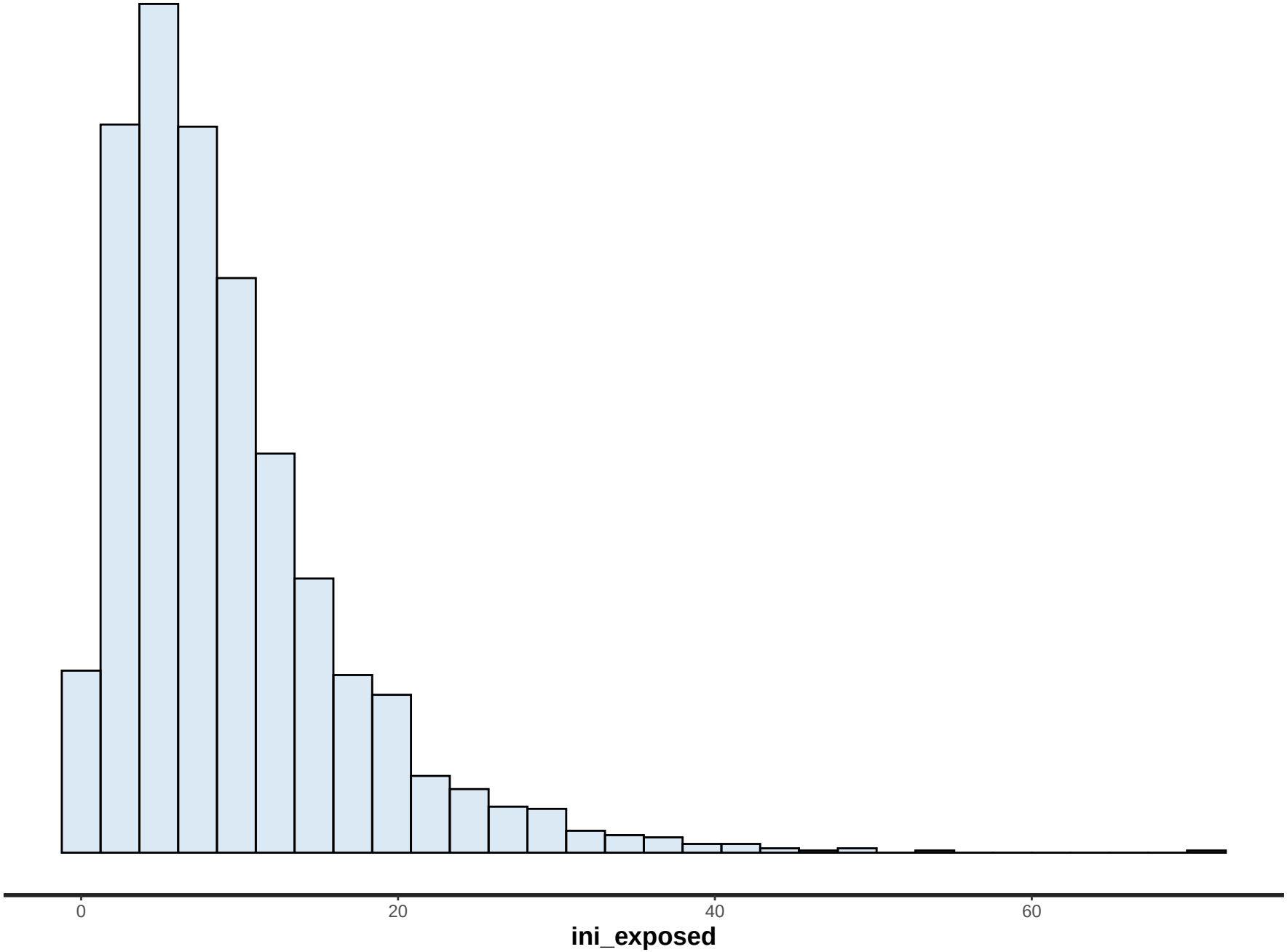
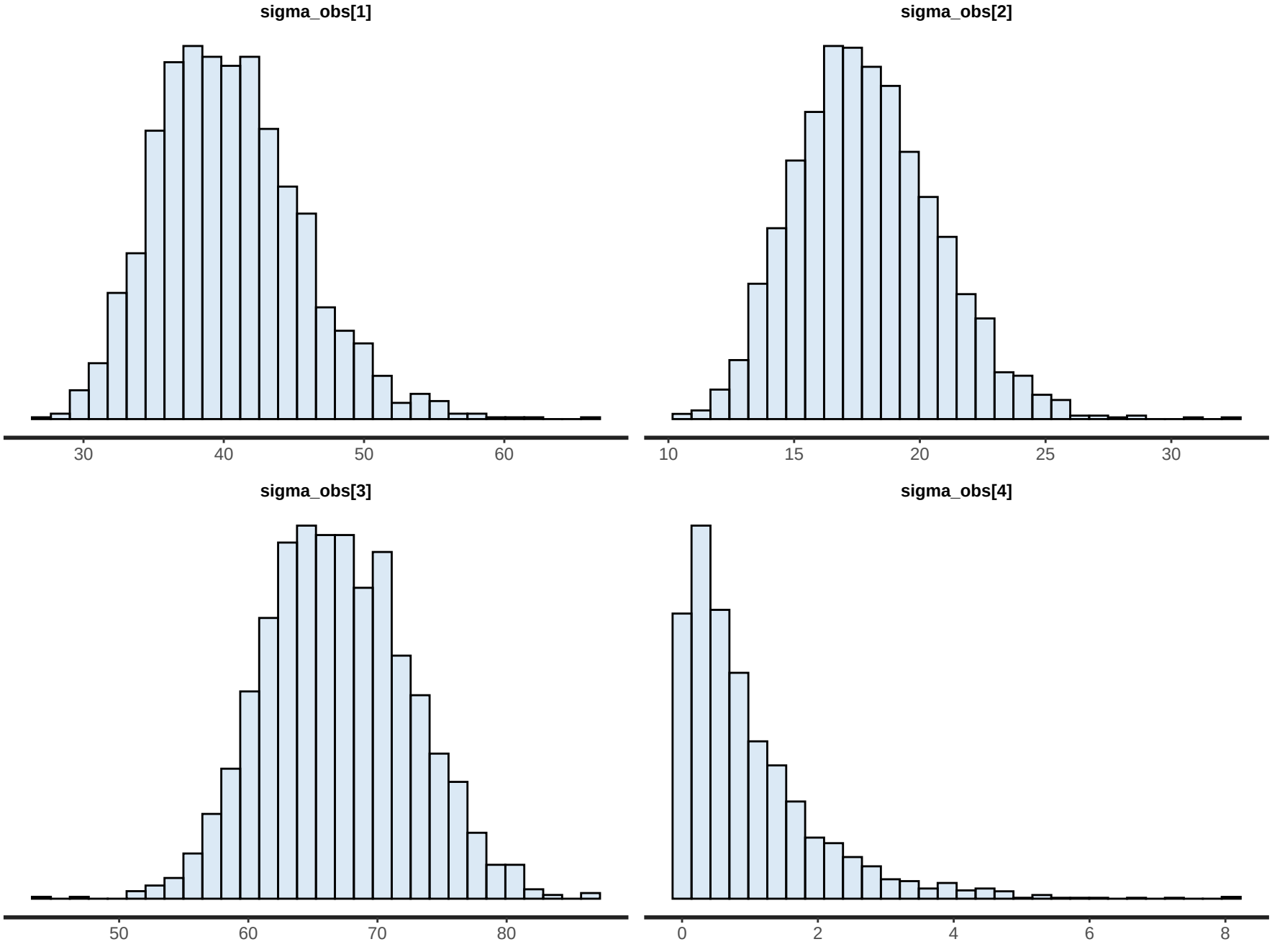
Nov 30
Dec 07
t_inter[20]
Dec 07
Dec 14
Dec 21
t_inter[21]
Jan 01


0
20
40
60
ini_exposed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sigma_obs[3]
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80
sigma_obs[4]
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2
4
6
8