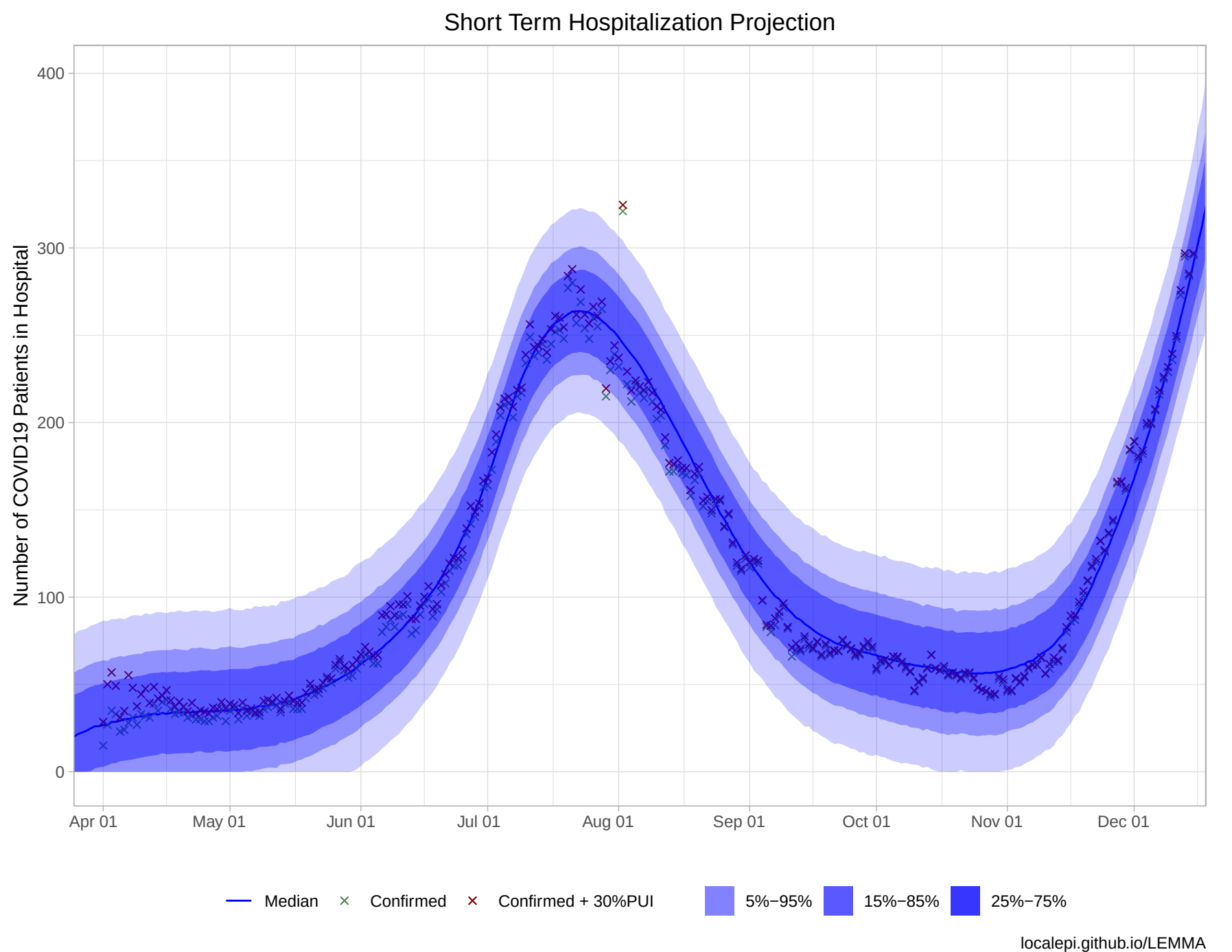
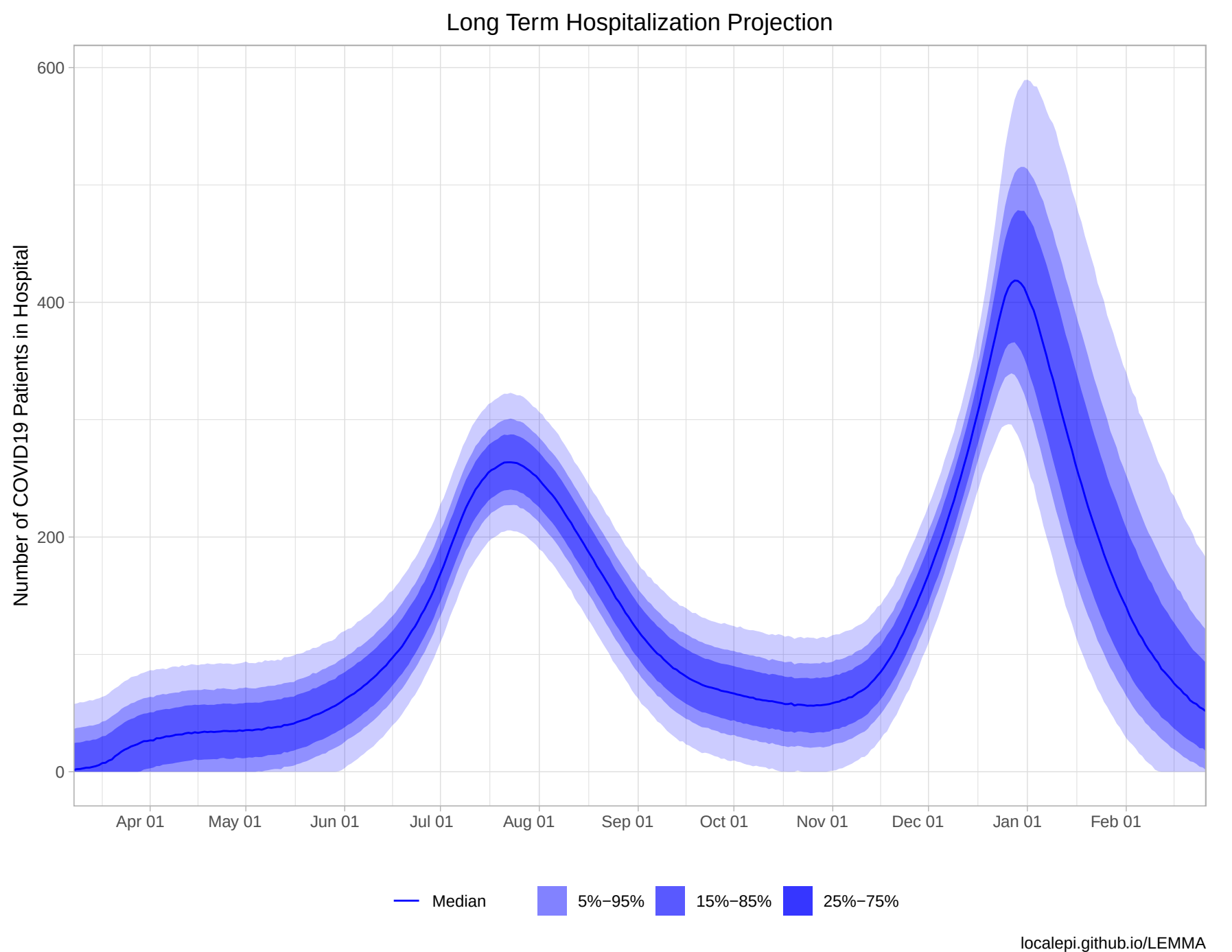
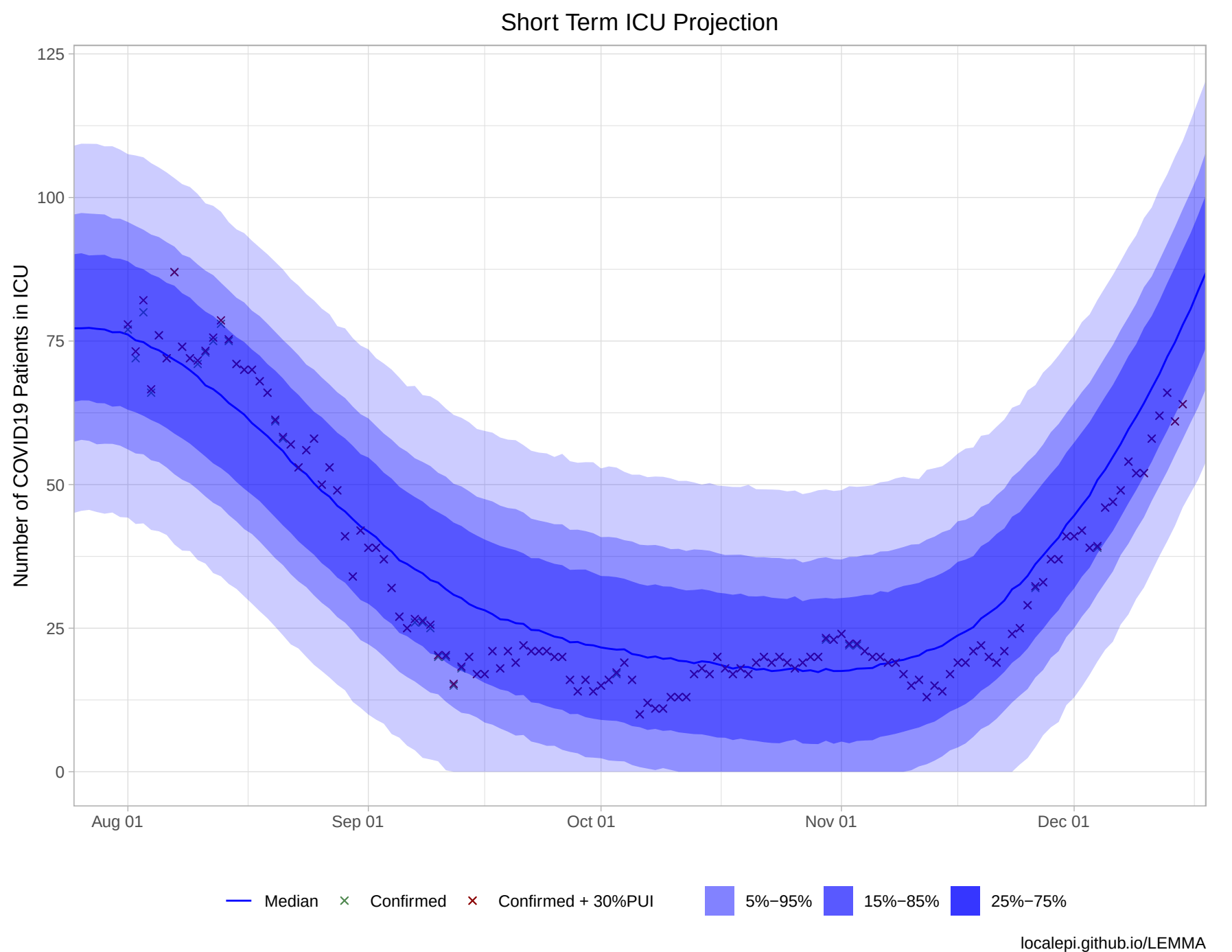
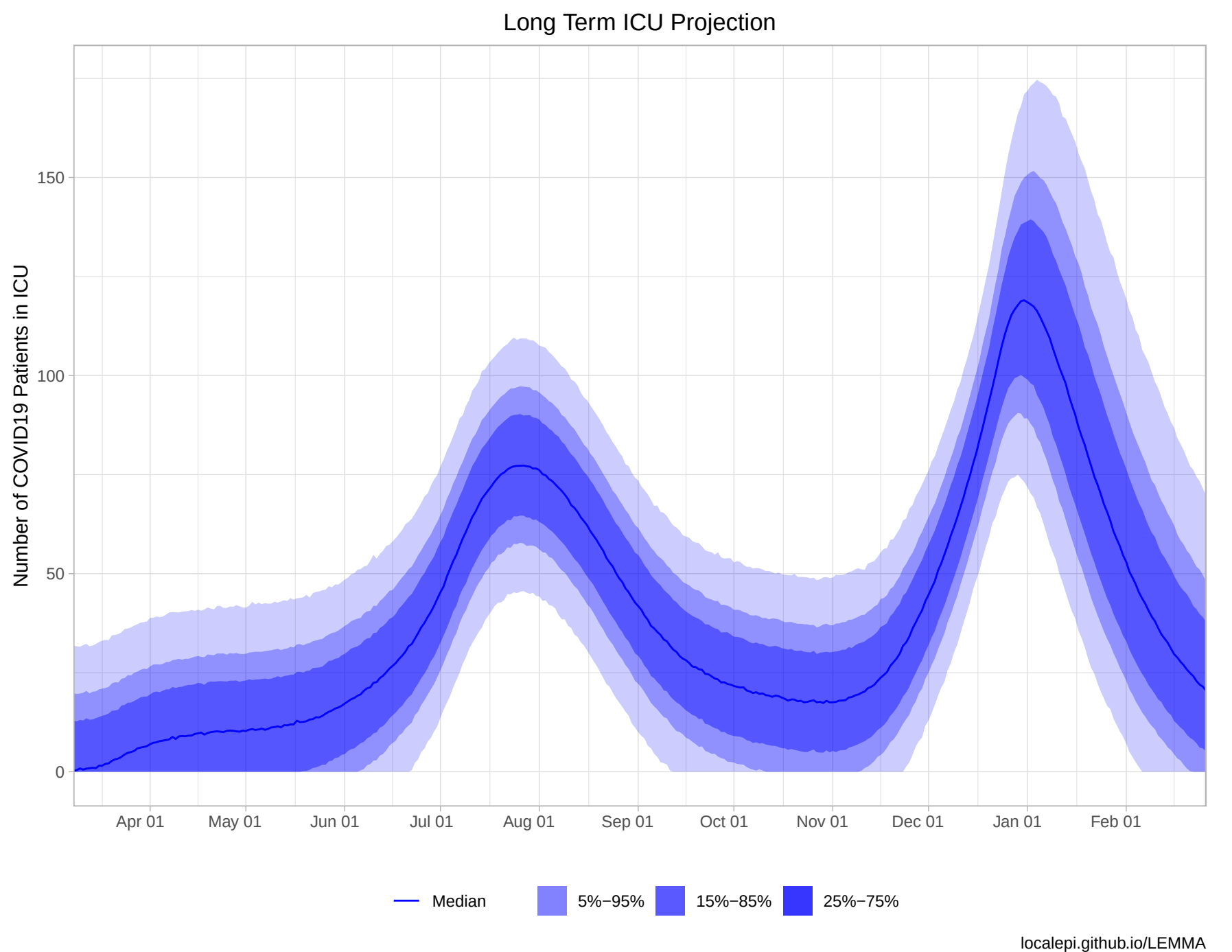
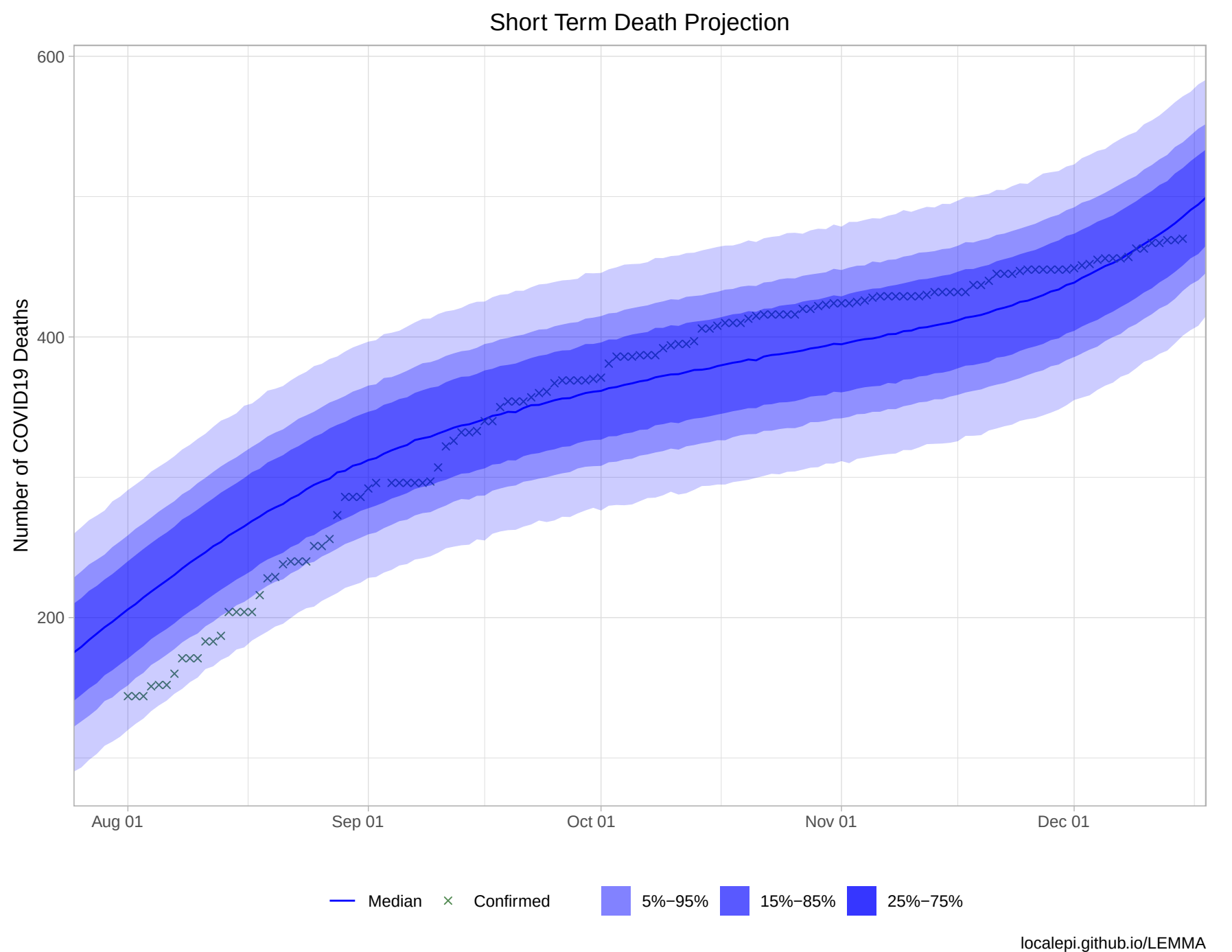
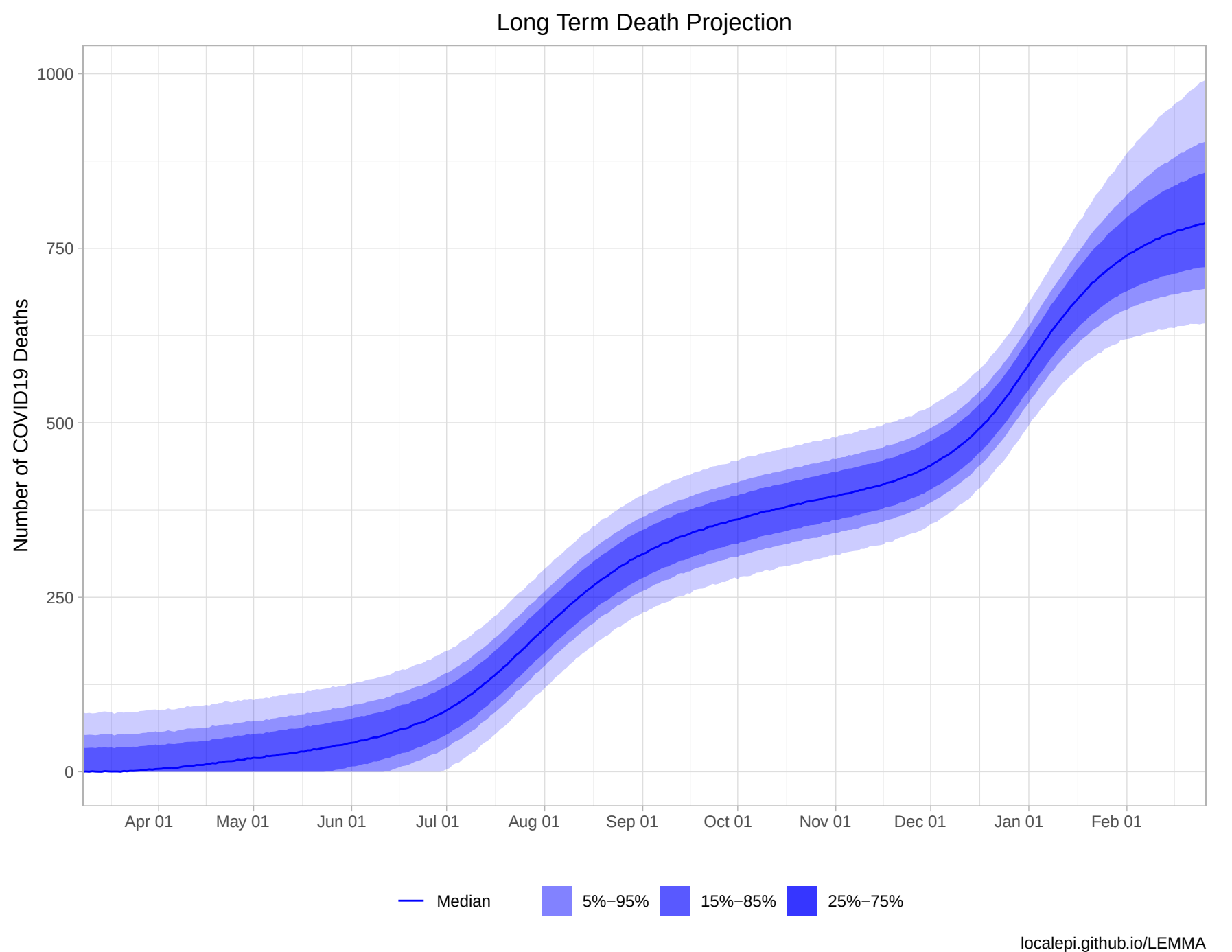

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
400
300
200
100
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

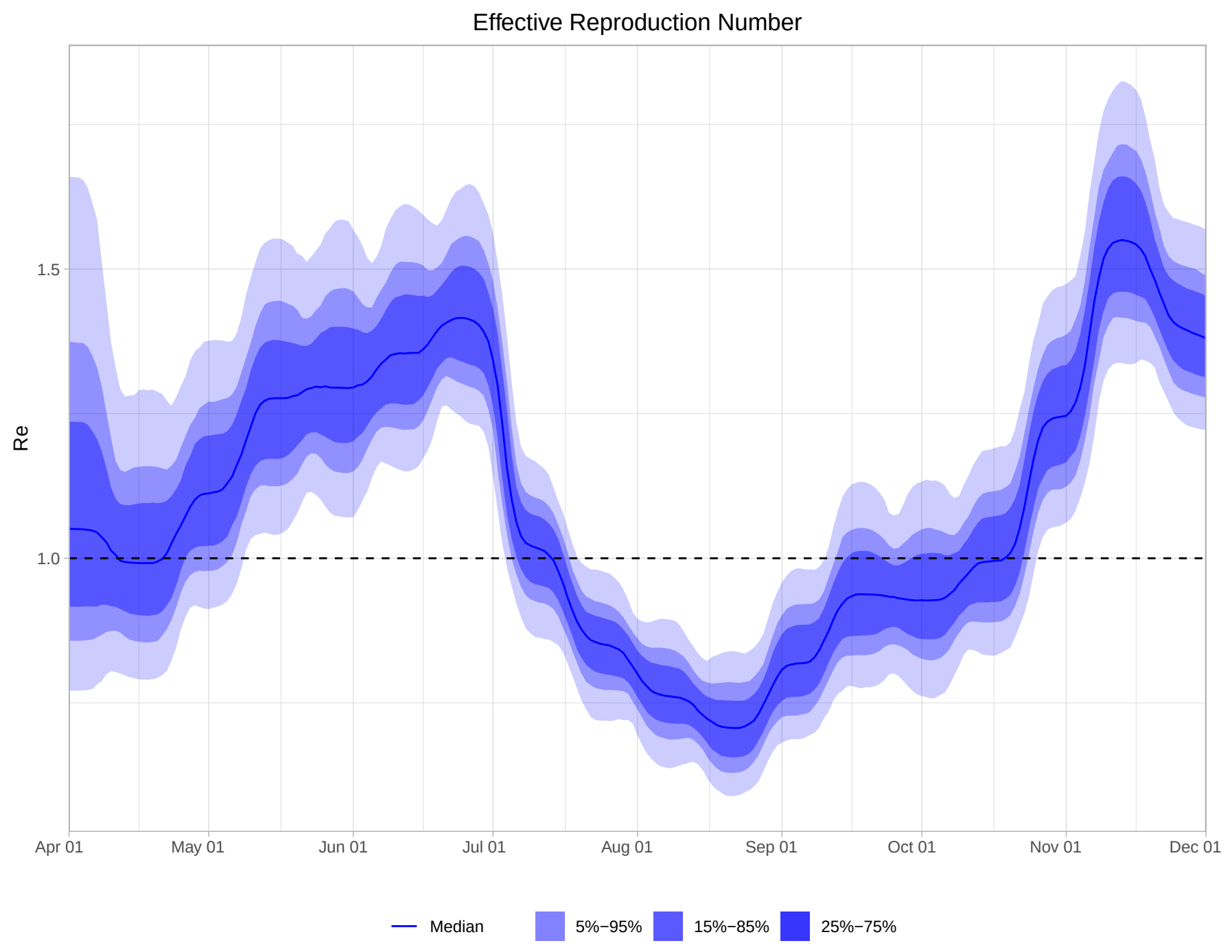

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
600
400
200
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
125
100
75
50
25
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
150
100
50
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

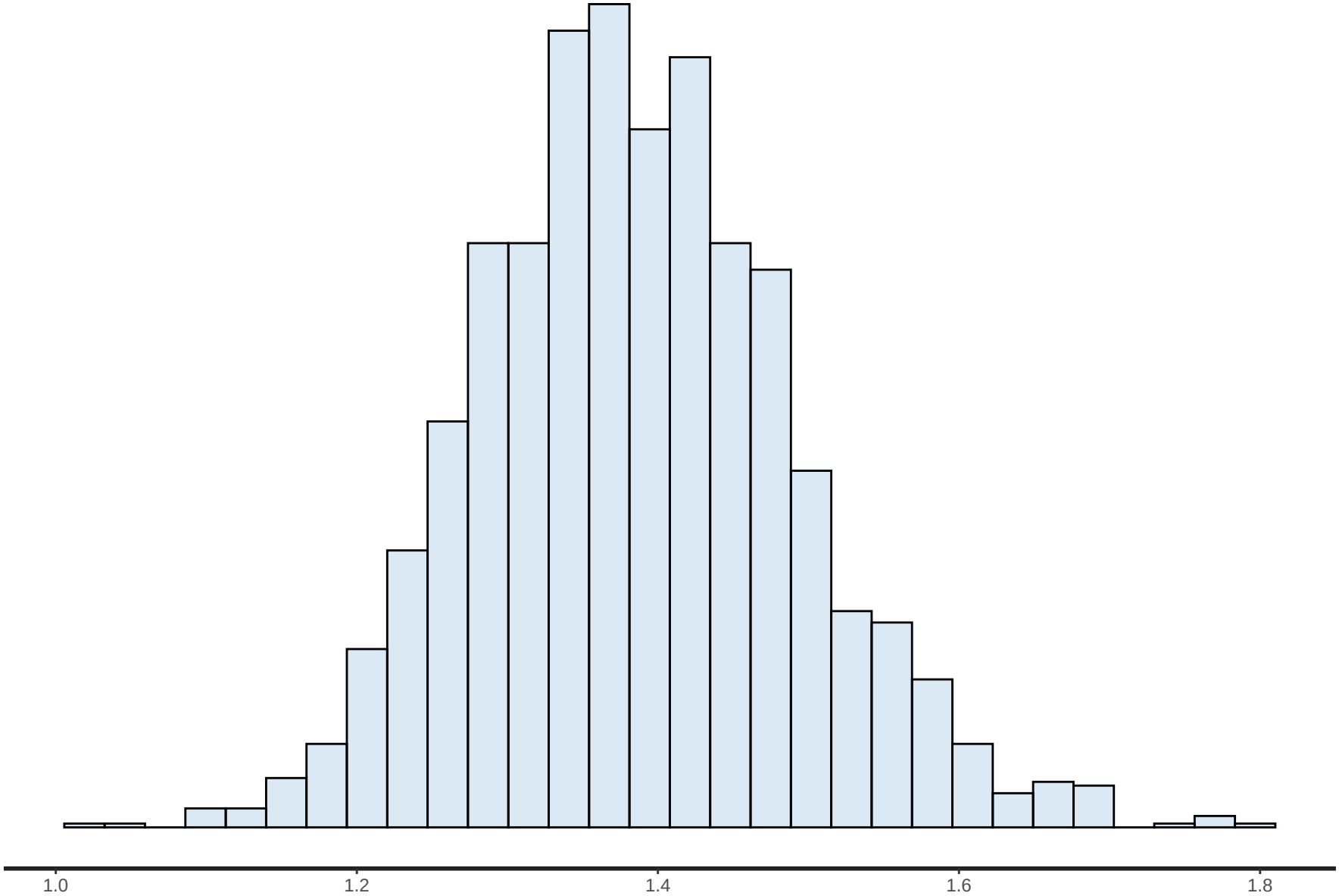

Short Term Death Projection
Number of COVID19 Deaths
600
400
200
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

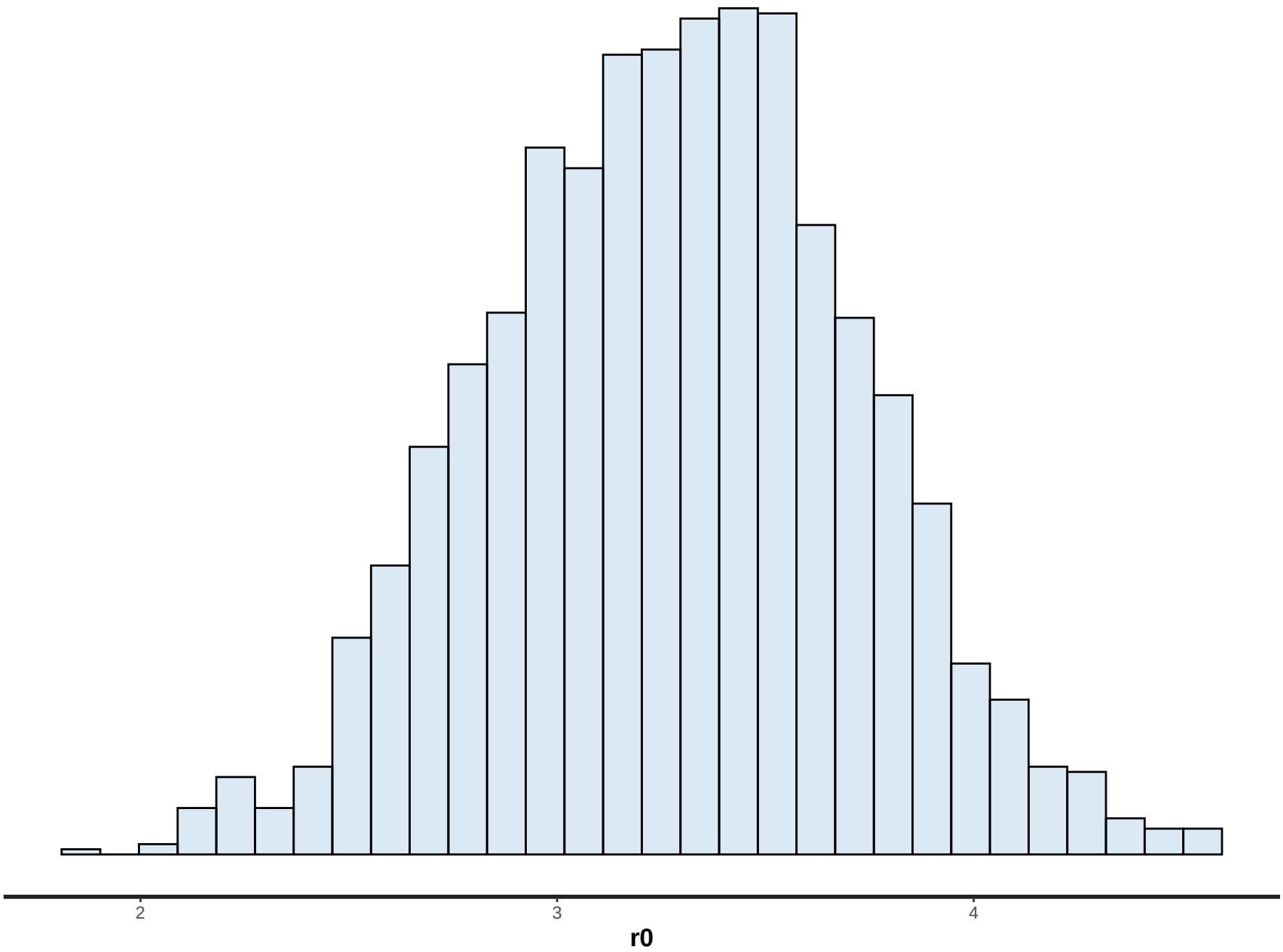

Long Term Death Projection
Number of COVID19 Deaths
1000
750
500
250
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

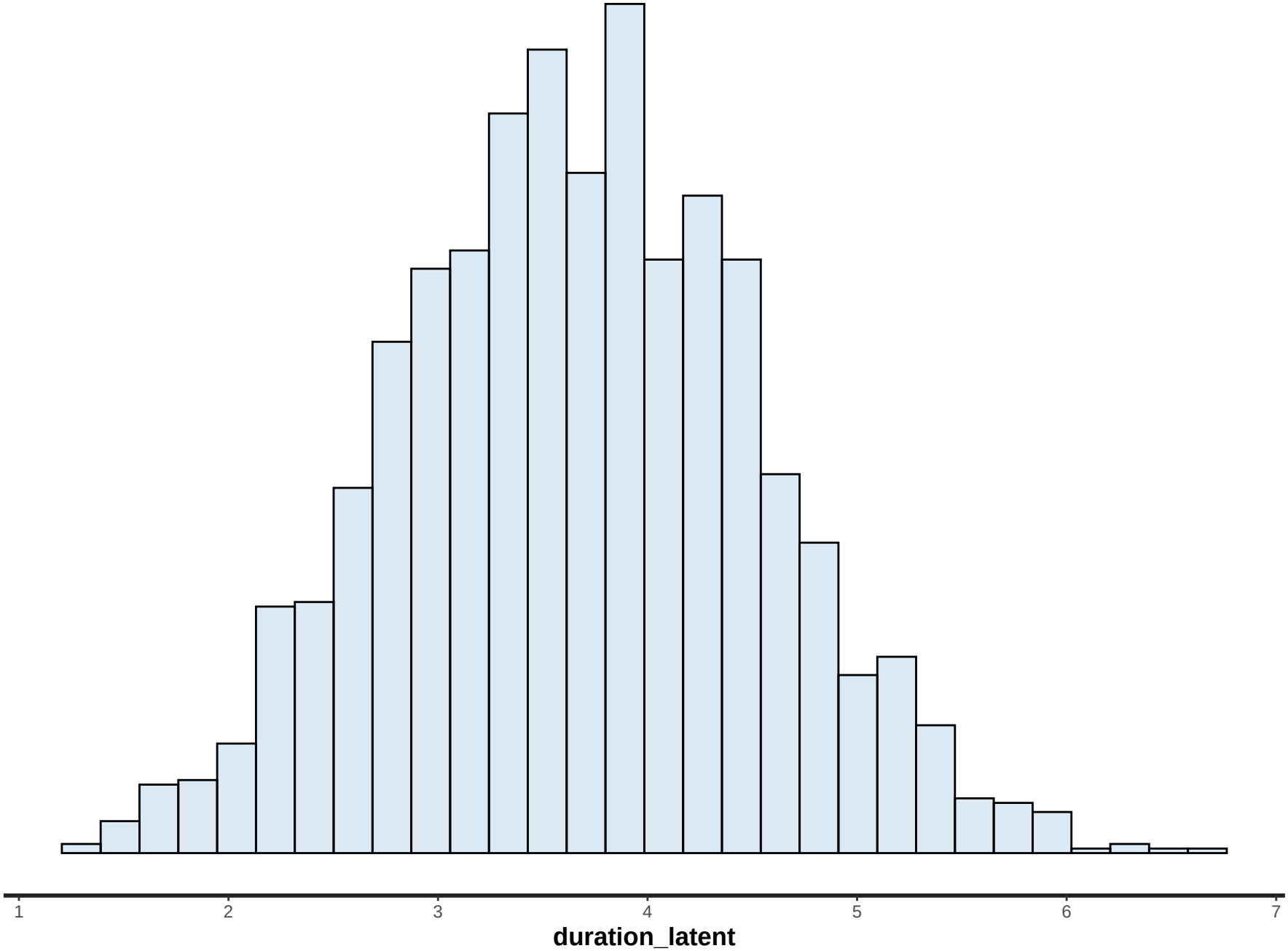

Effective Reproduction Number
Re
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

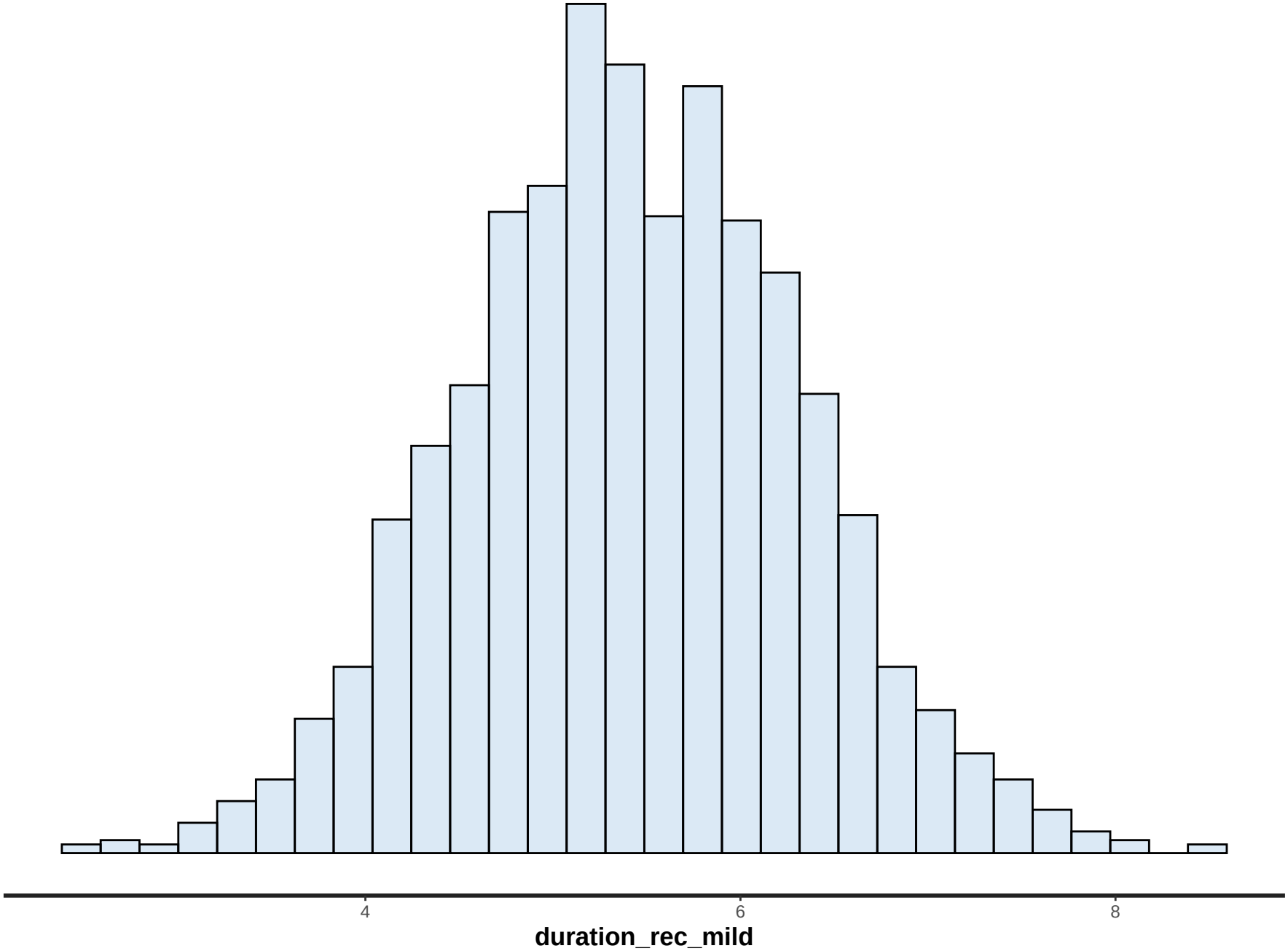
Rt as of 2020−12−01

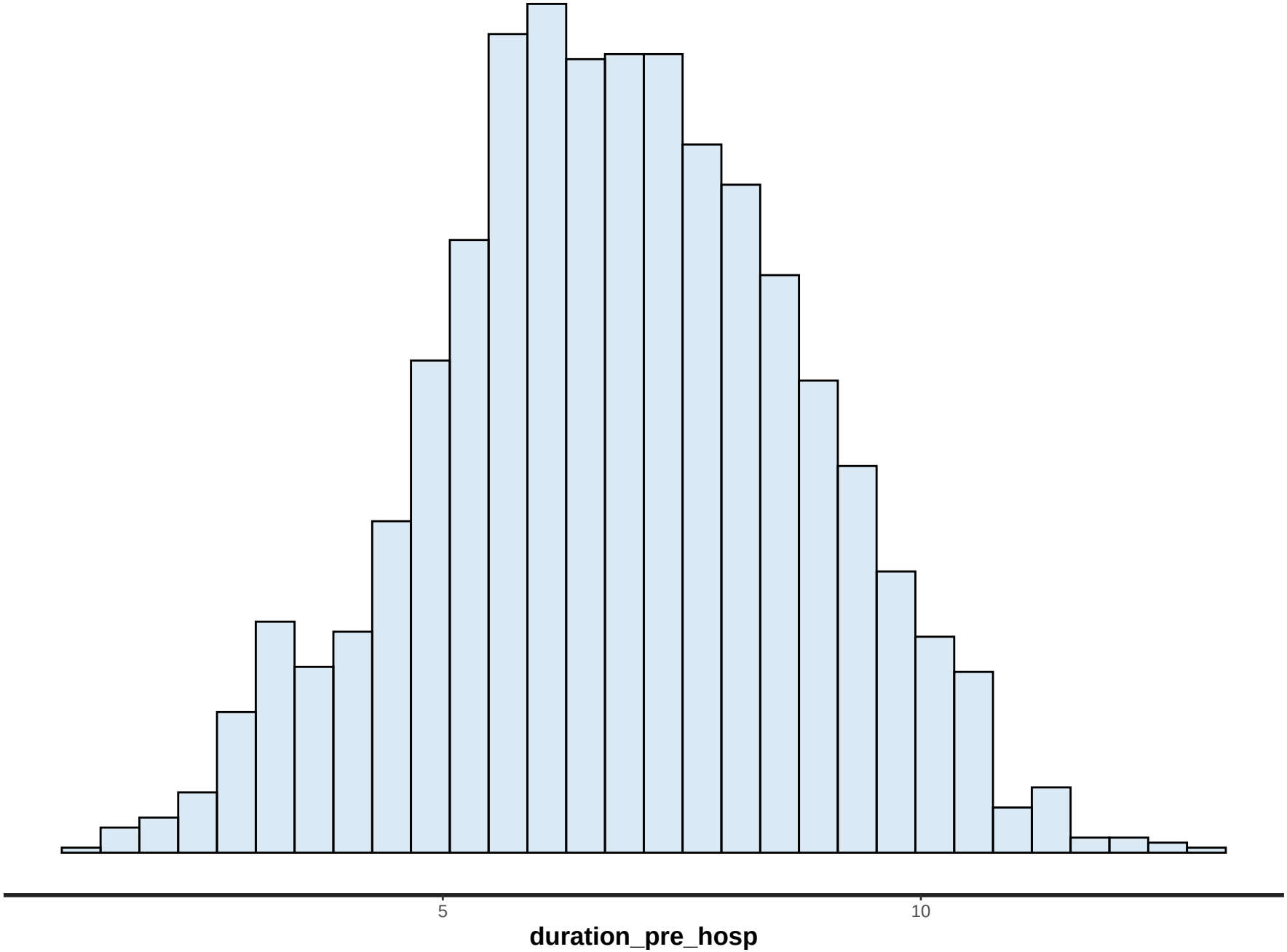
5%	10%	25%	50%	75%	90%	95%
1.22	1.26	1.31	1.38	1.45	1.52	1.57

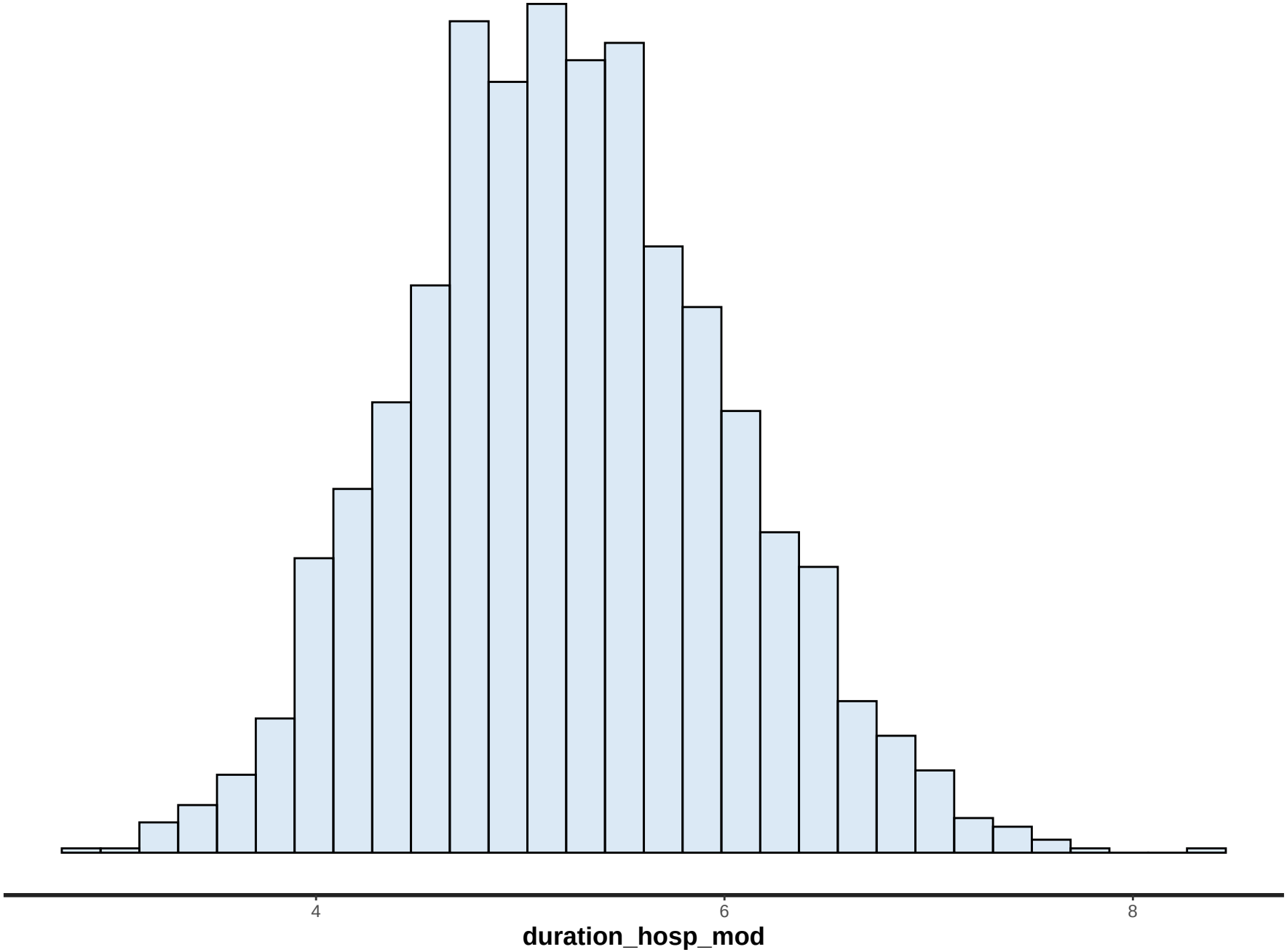


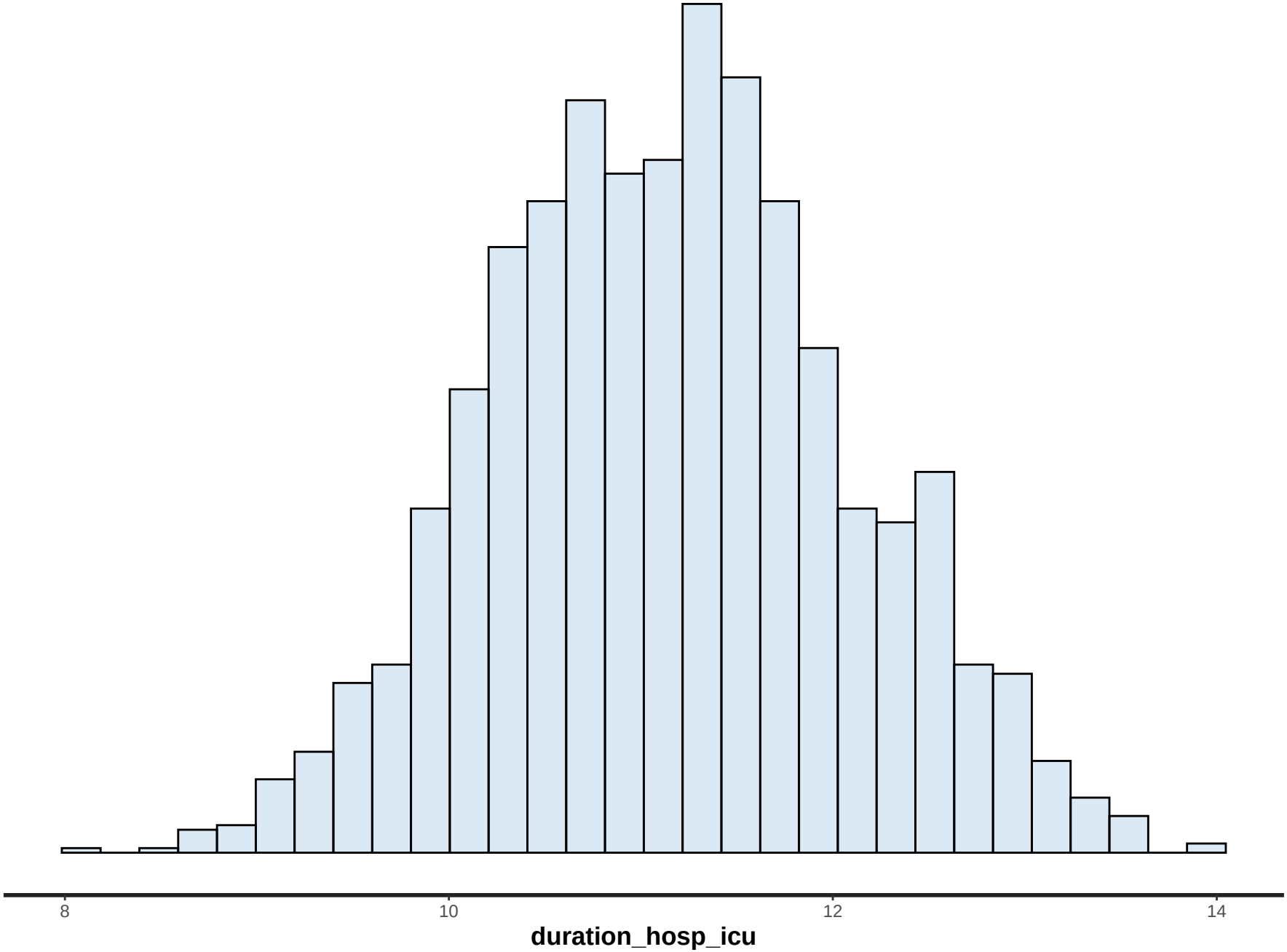

2
3
4
r0

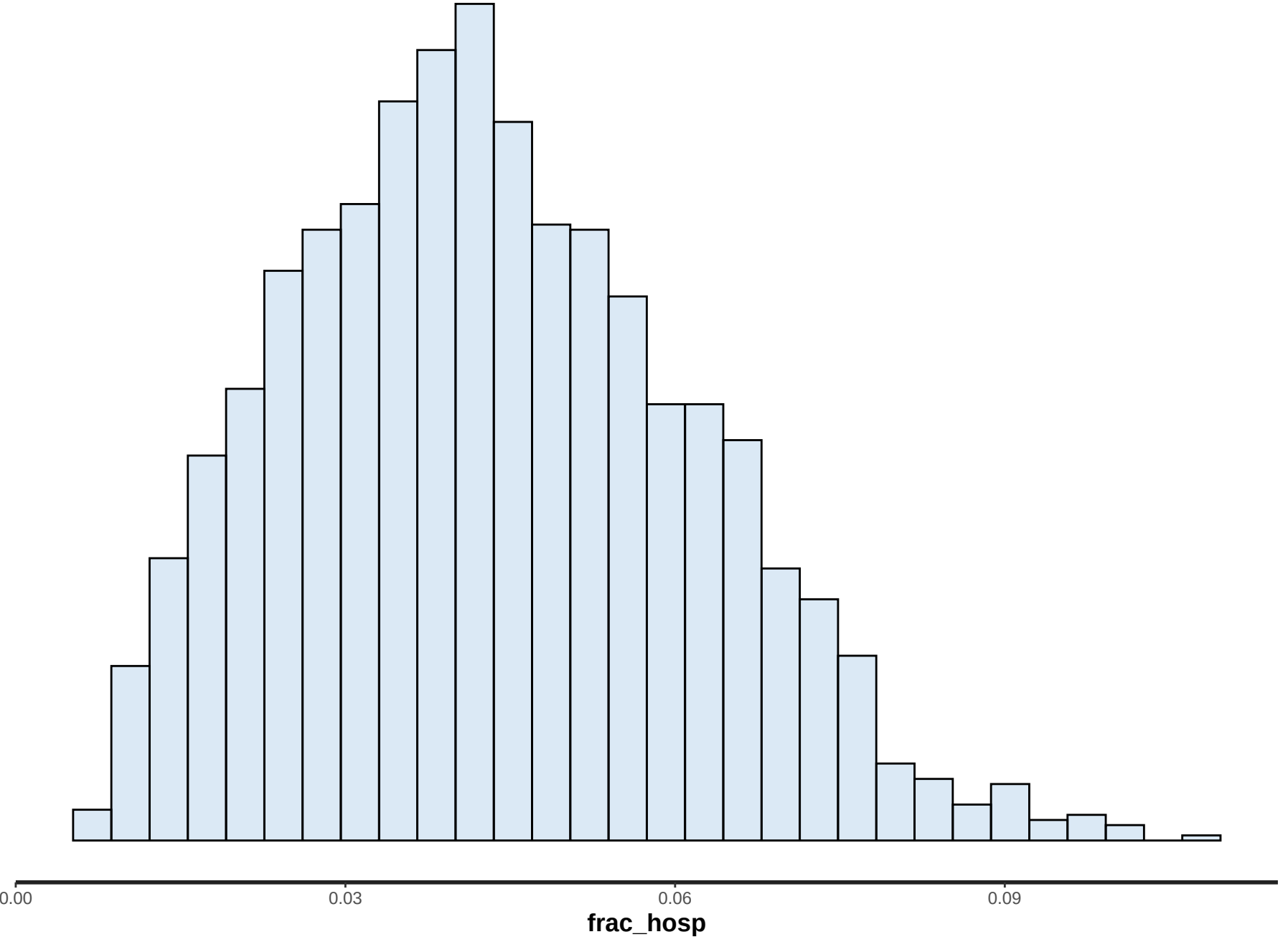

1
2
3
4
5
6
7
duration_latent

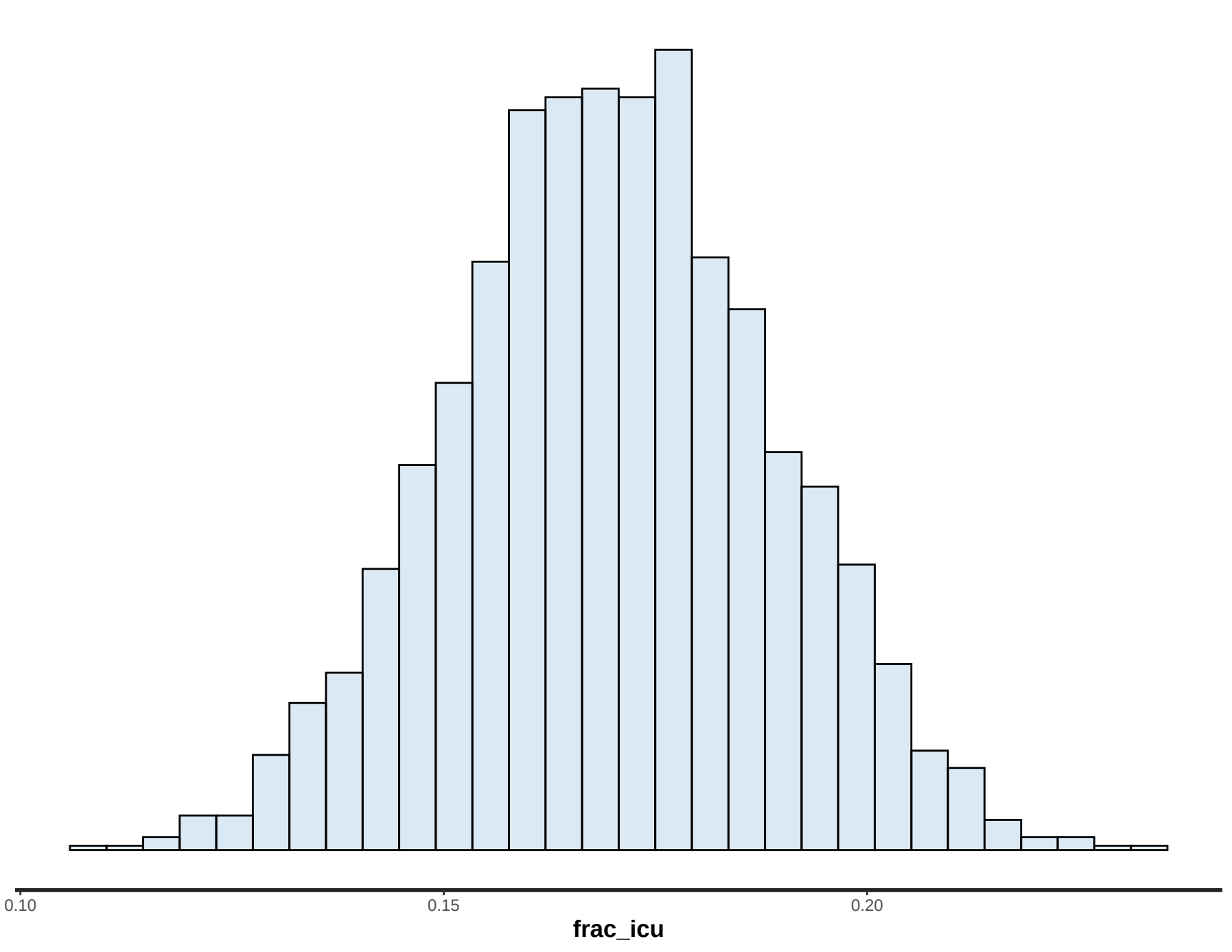

4
6
8
duration_rec_mild

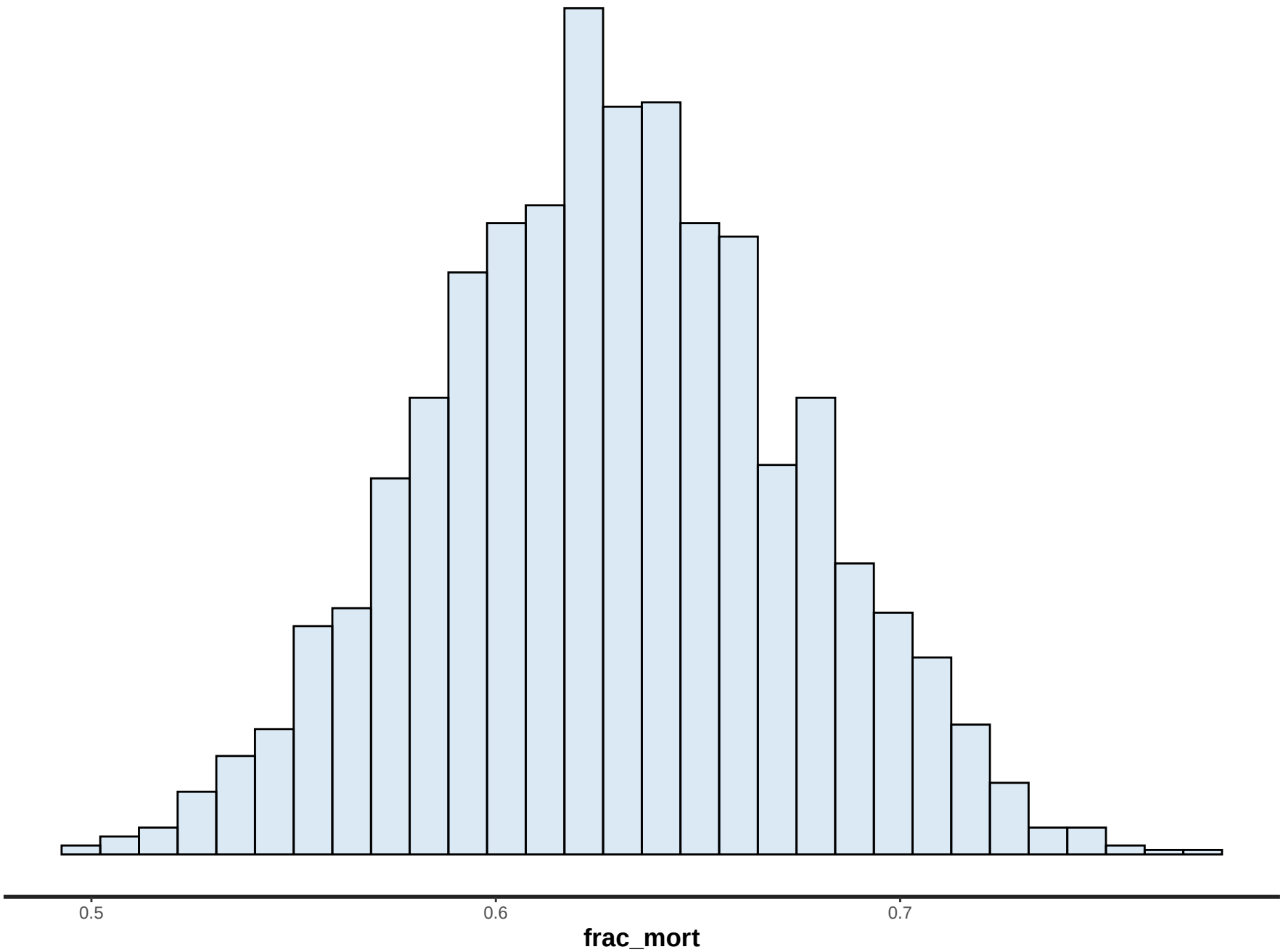

5
10
duration_pre_hosp

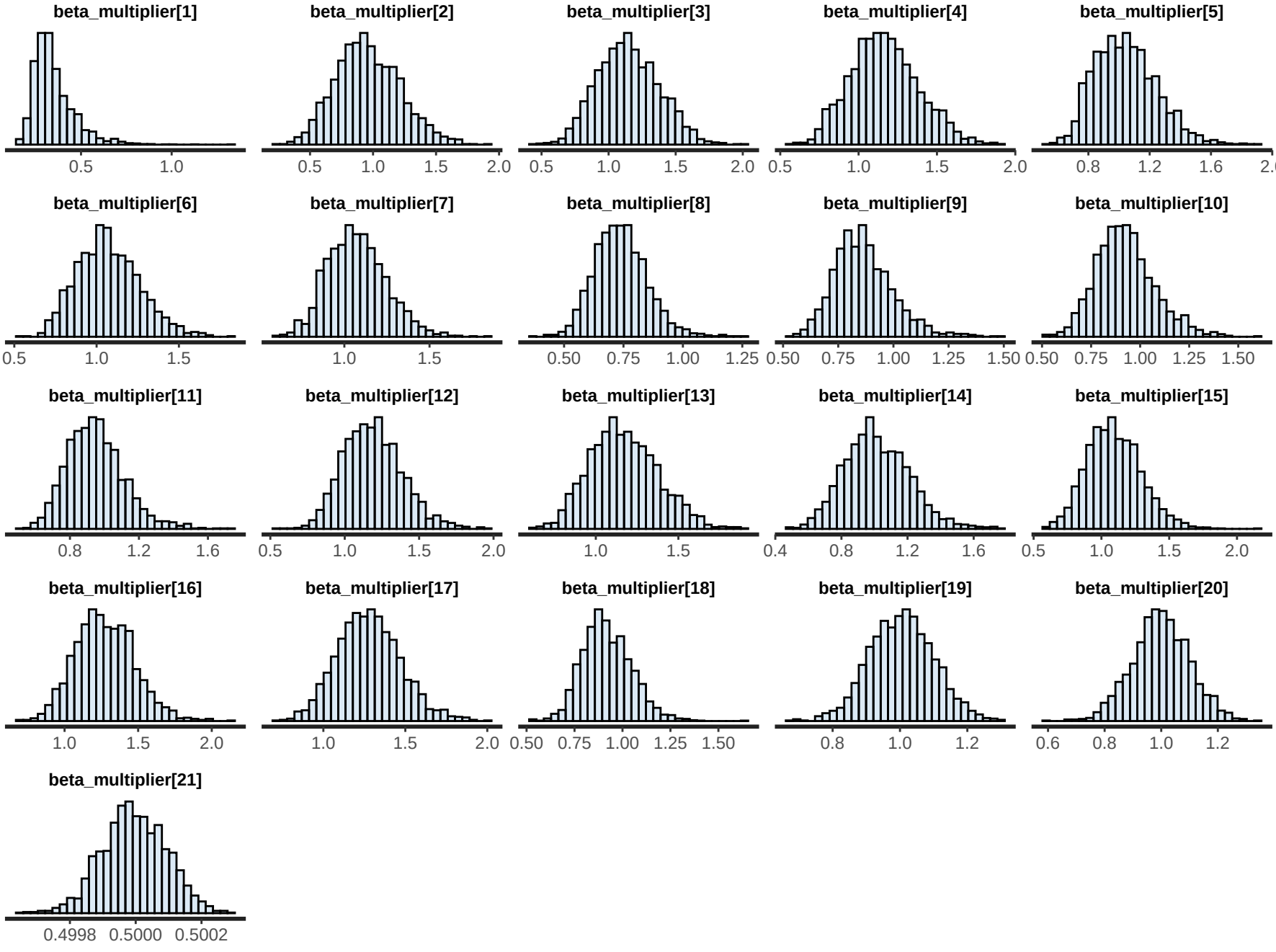

4
6
8
duration_hosp_mod


8
10
12
14
duration_hosp_icu


0.00
0.03
0.06
0.09
frac_hosp


0.10
0.15
0.20
frac_icu


0.5
0.6
0.7
frac_mort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beta_multiplier[2]
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1.0
1.5
2.0
beta_multiplier[3]
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1.0
1.5
2.0
beta_multiplier[4]
0.5
1.0
1.5
2.0
beta_multiplier[5]
0.8
1.2
1.6
2.0
beta_multiplier[6]
0.5
1.0
1.5
beta_multiplier[7]
1.0
1.5
beta_multiplier[8]
0.50
0.75
1.00
1.25
beta_multiplier[9]
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0.75
1.00
1.25
1.50
beta_multiplier[10]
0.50
0.75
1.00
1.25
1.50
beta_multiplier[11]
0.8
1.2
1.6
beta_multiplier[12]
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1.0
1.5
2.0
beta_multiplier[13]
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1.5
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]
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1.5
2.0
beta_multiplier[17]
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1.5
2.0
beta_multiplier[18]
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0.75
1.00
1.25
1.50
beta_multiplier[19]
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1.0
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0.8
1.0
1.2
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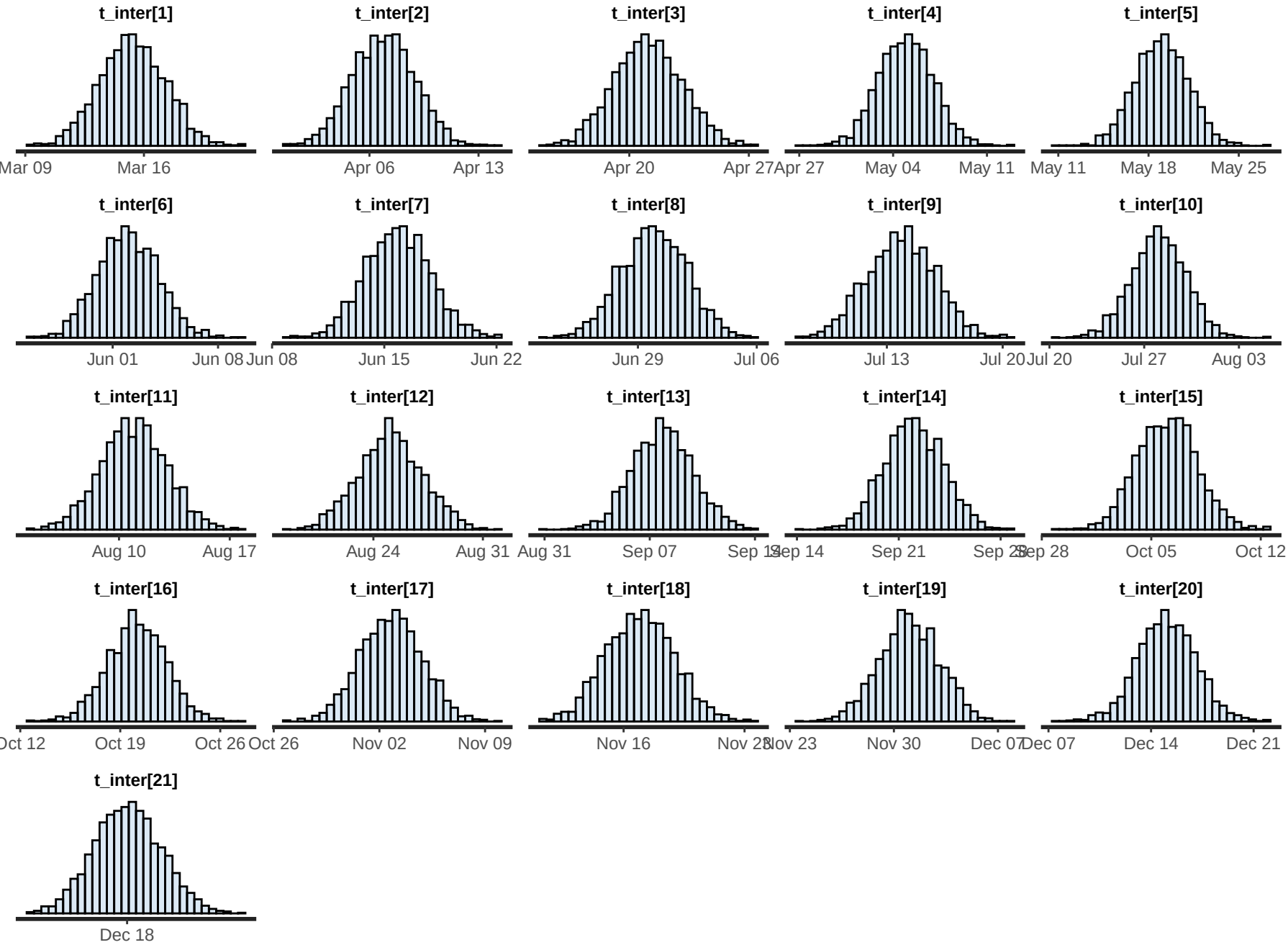
0.5002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Mar 09
Mar 16
t_inter[2]
Apr 06
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Apr 27
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Apr 27
May 04
May 11
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May 11
May 18
May 25
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Jun 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 13
Jul 20
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Jul 20
Jul 27
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Oct 19
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Oct 26
Nov 02
Nov 09
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Nov 23
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Dec 07
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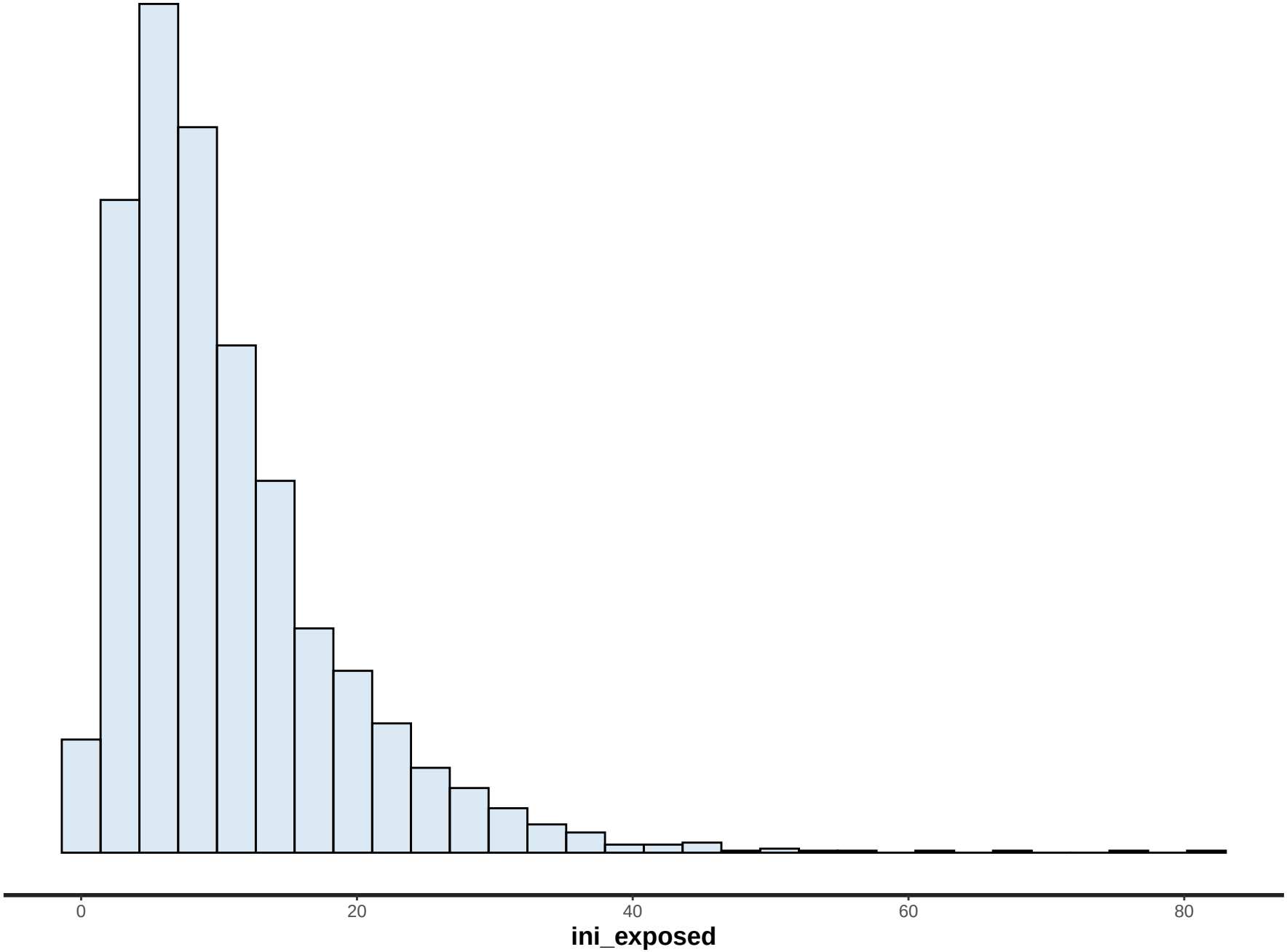
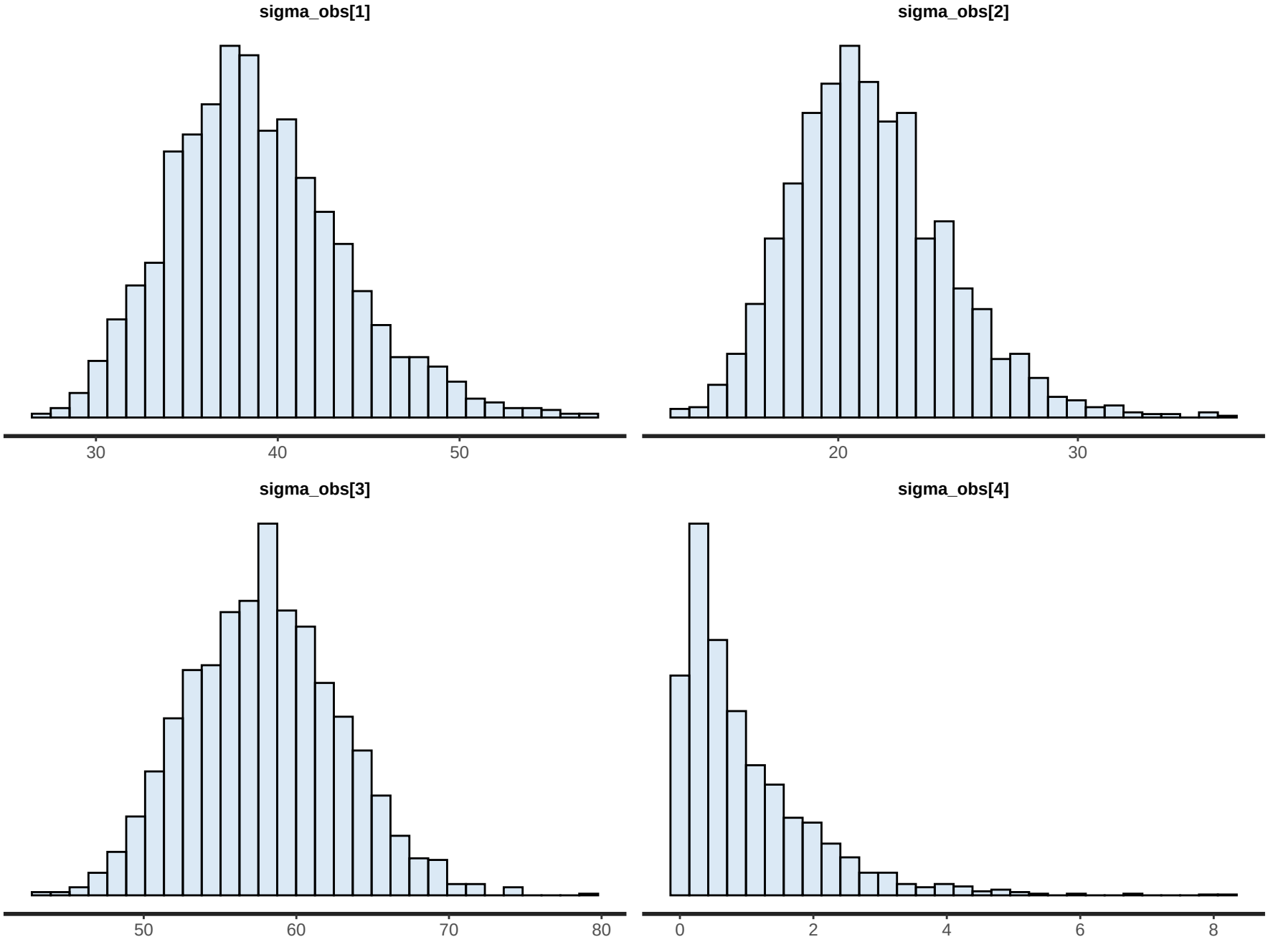
Dec 21
t_inter[21]
Dec 18


0
20
40
60
80
ini_exposed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70
80
sigma_obs[4]
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8