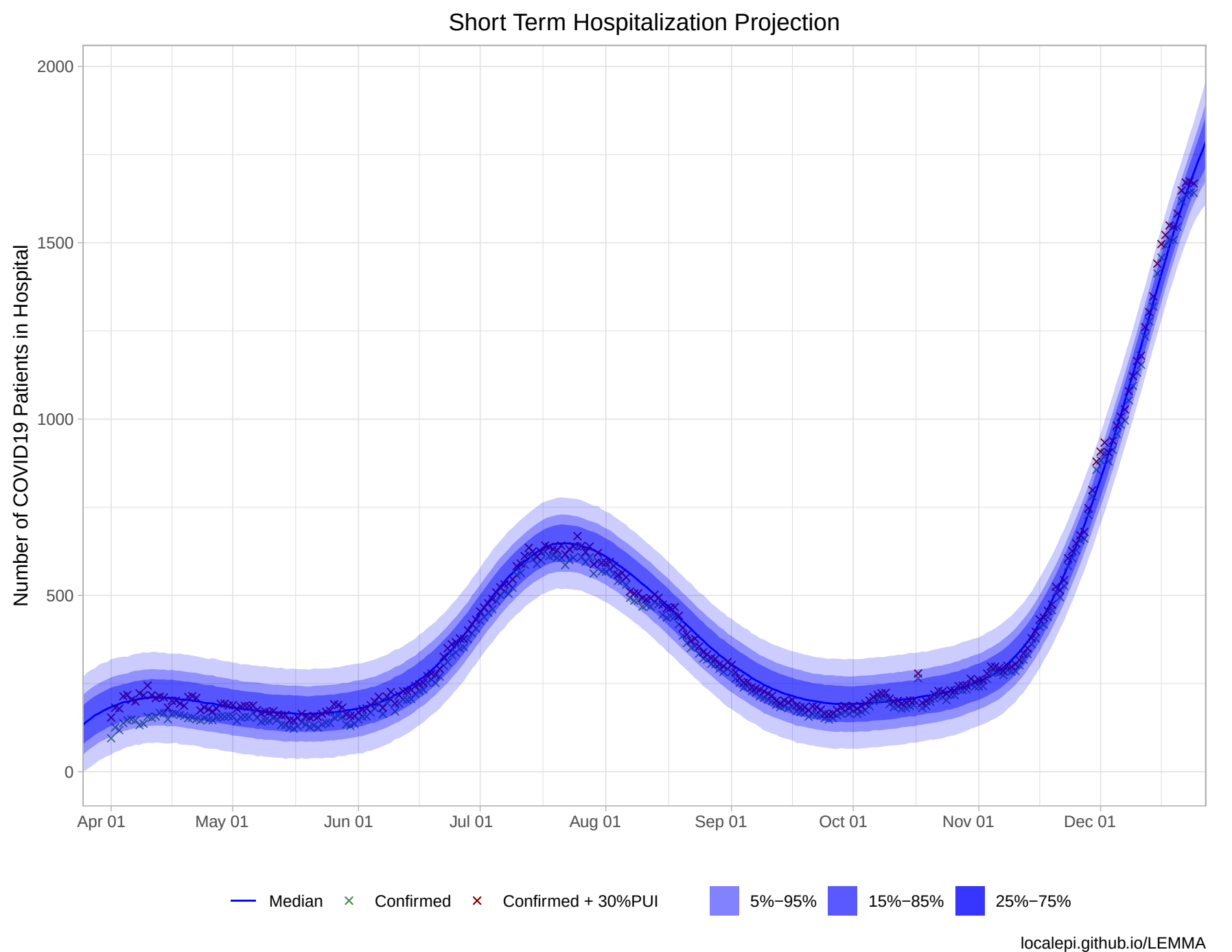
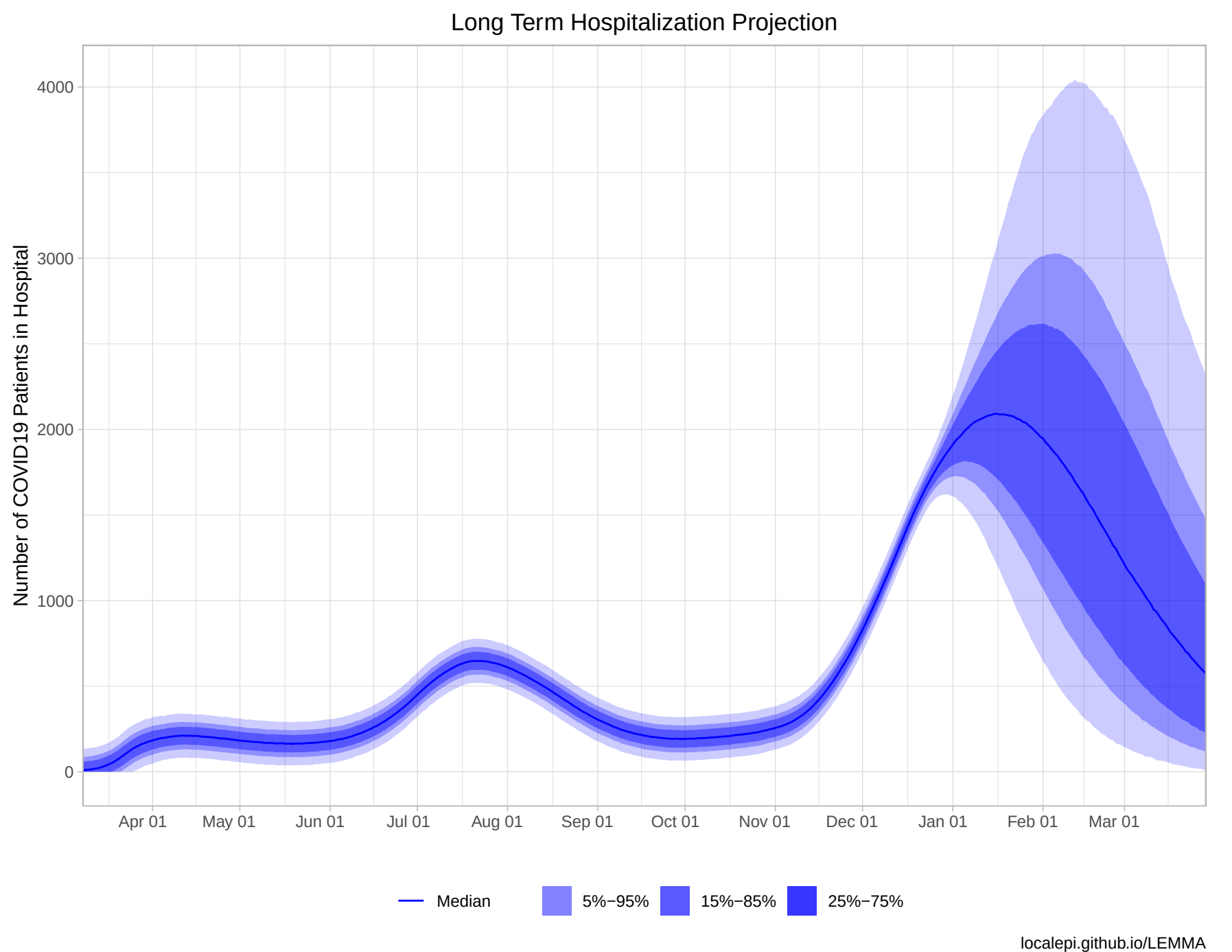
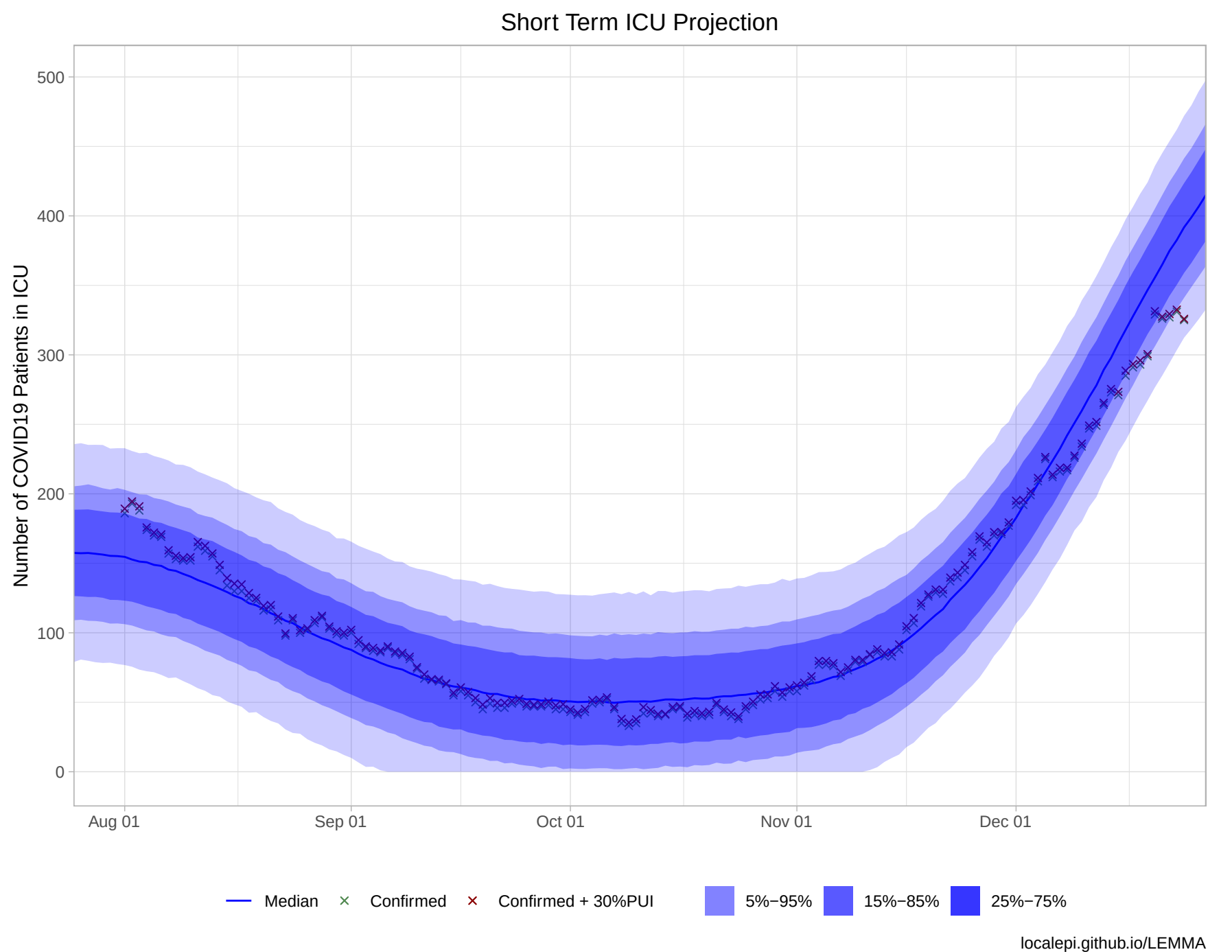
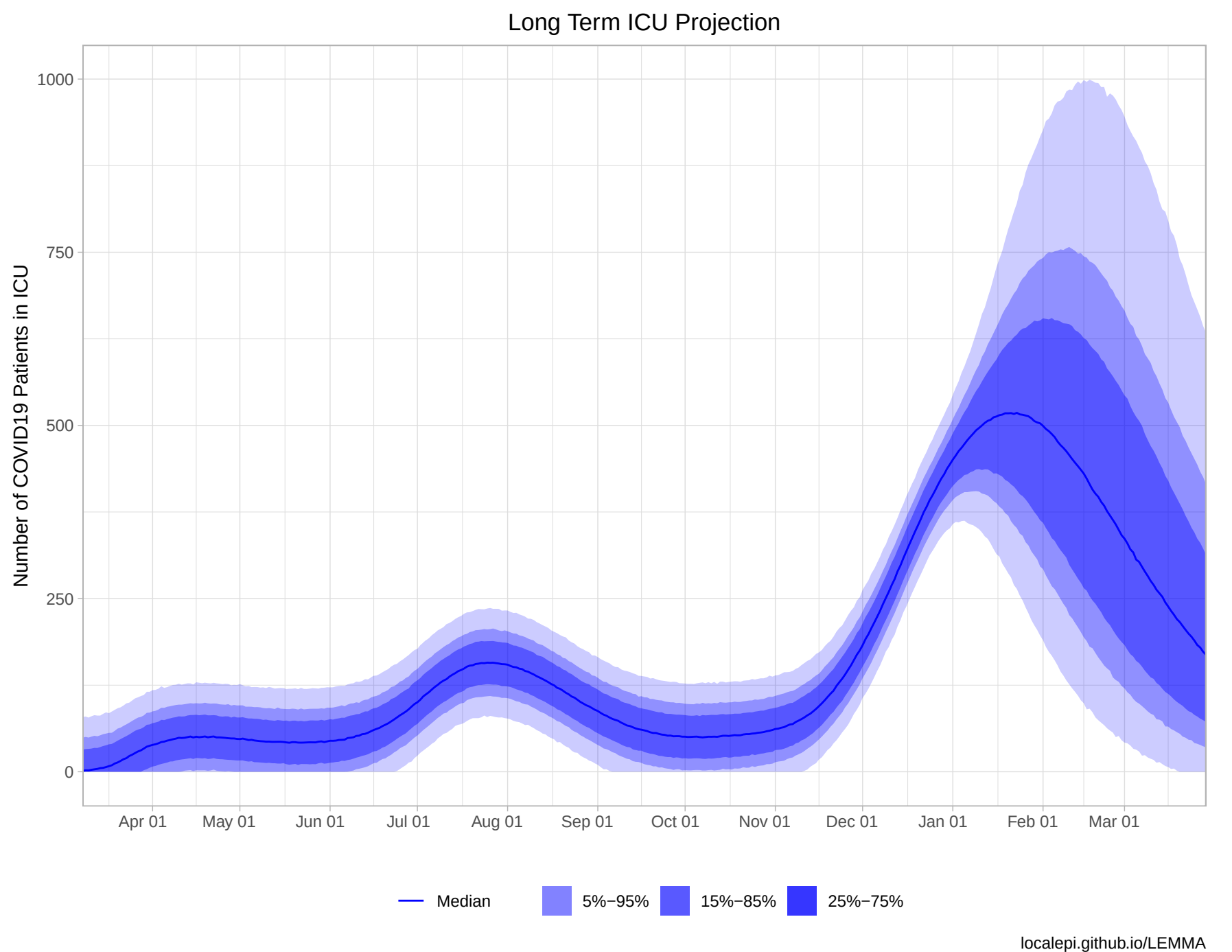
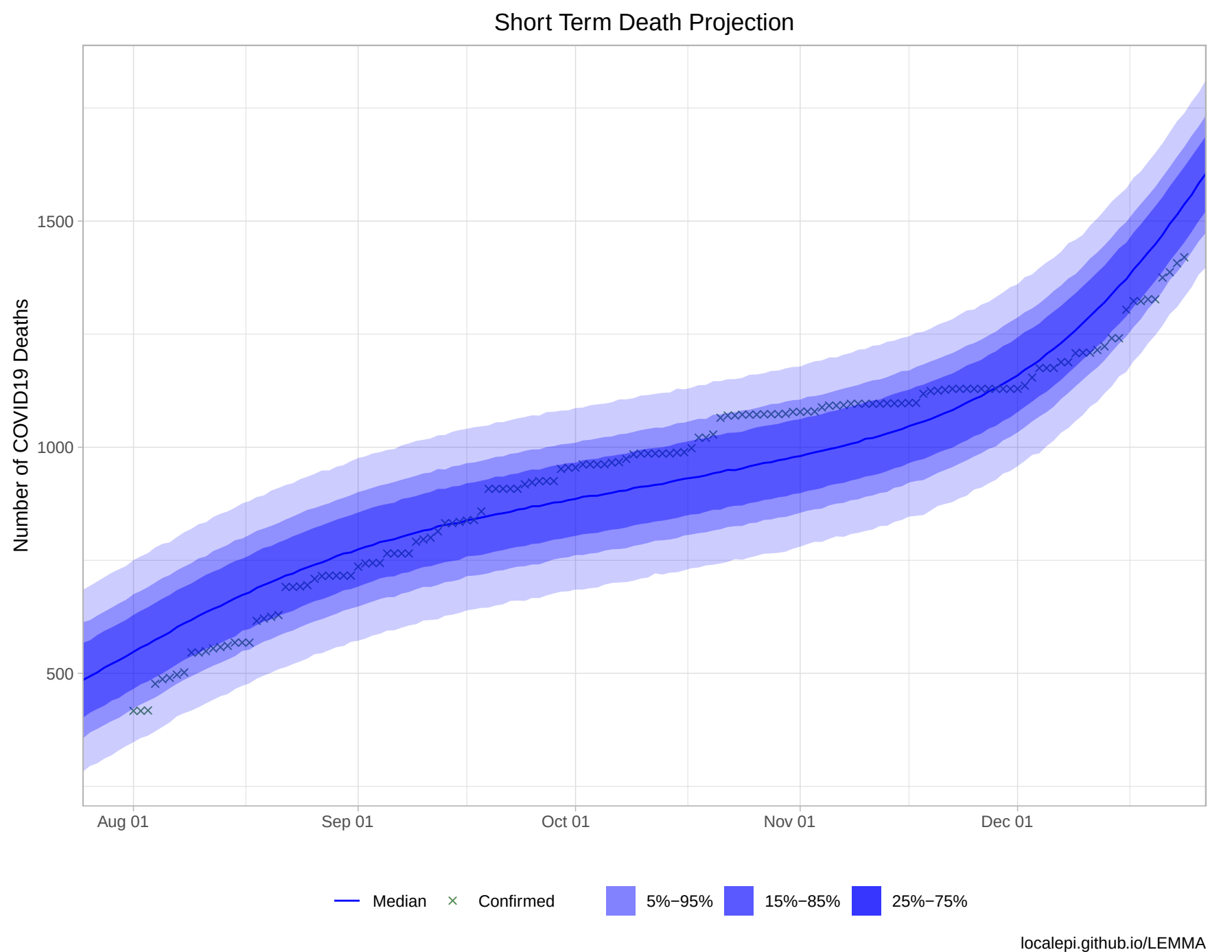
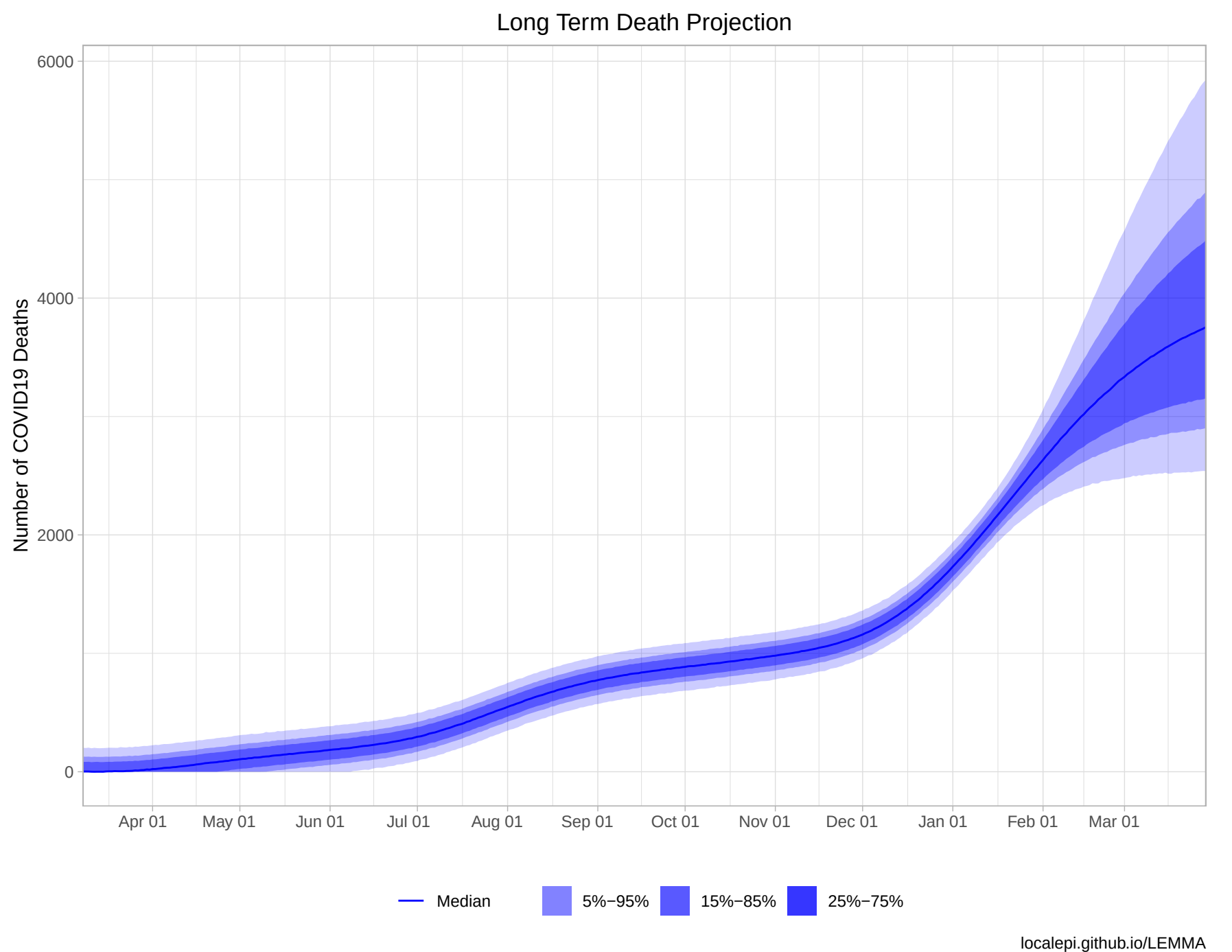

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
2000
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

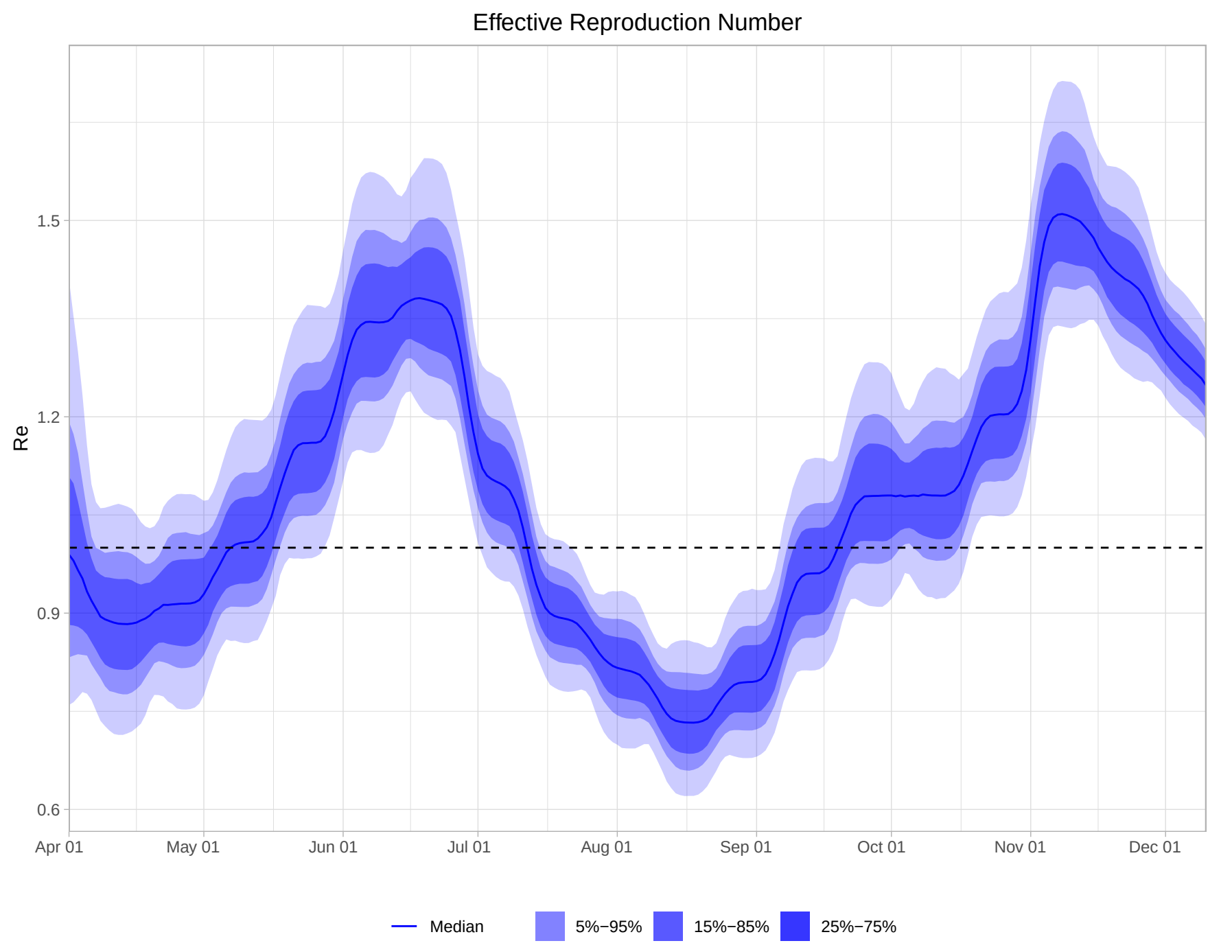

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
4000
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


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
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

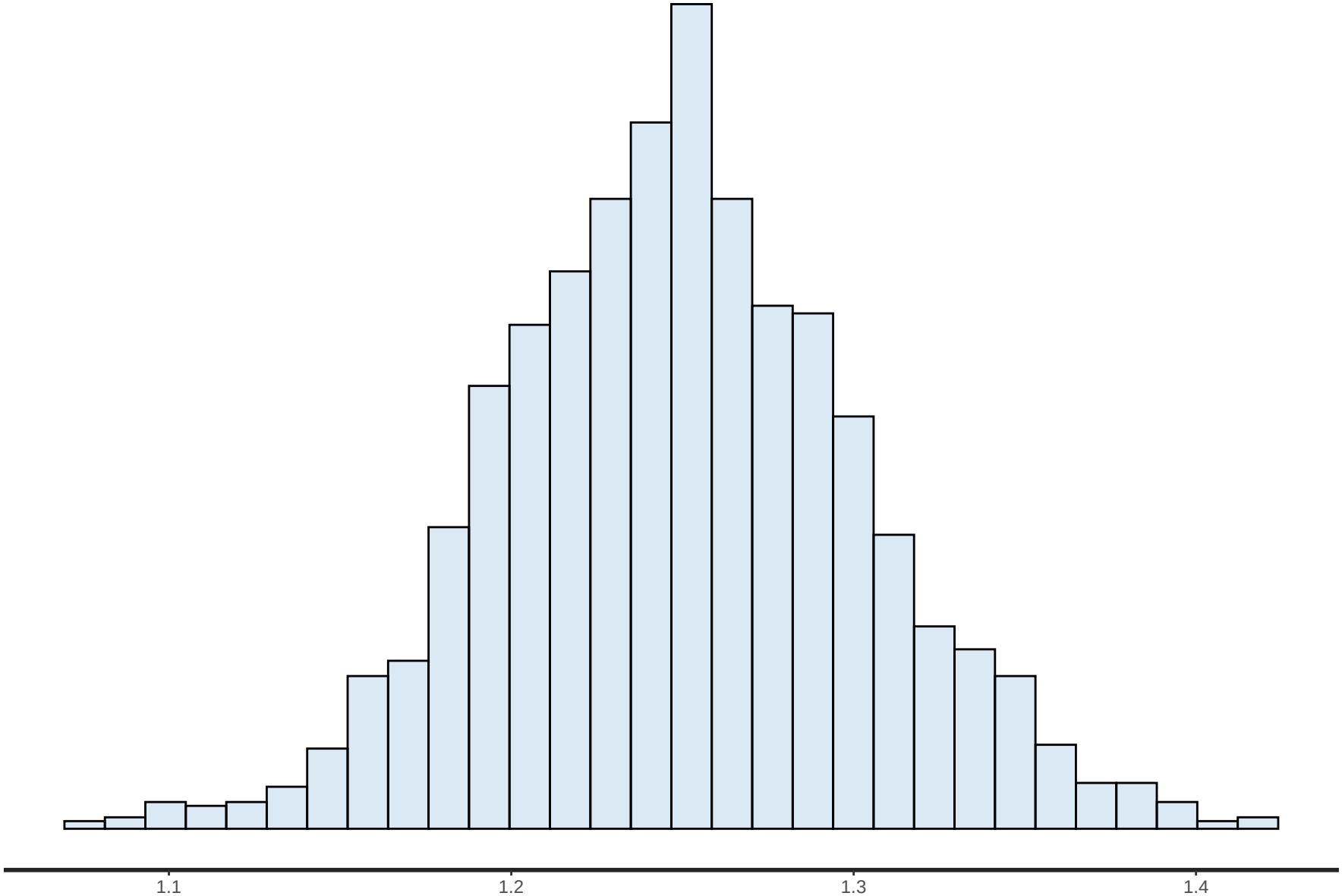

Short Term Death Projection
Number of COVID19 Deaths
1500
1000
500
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

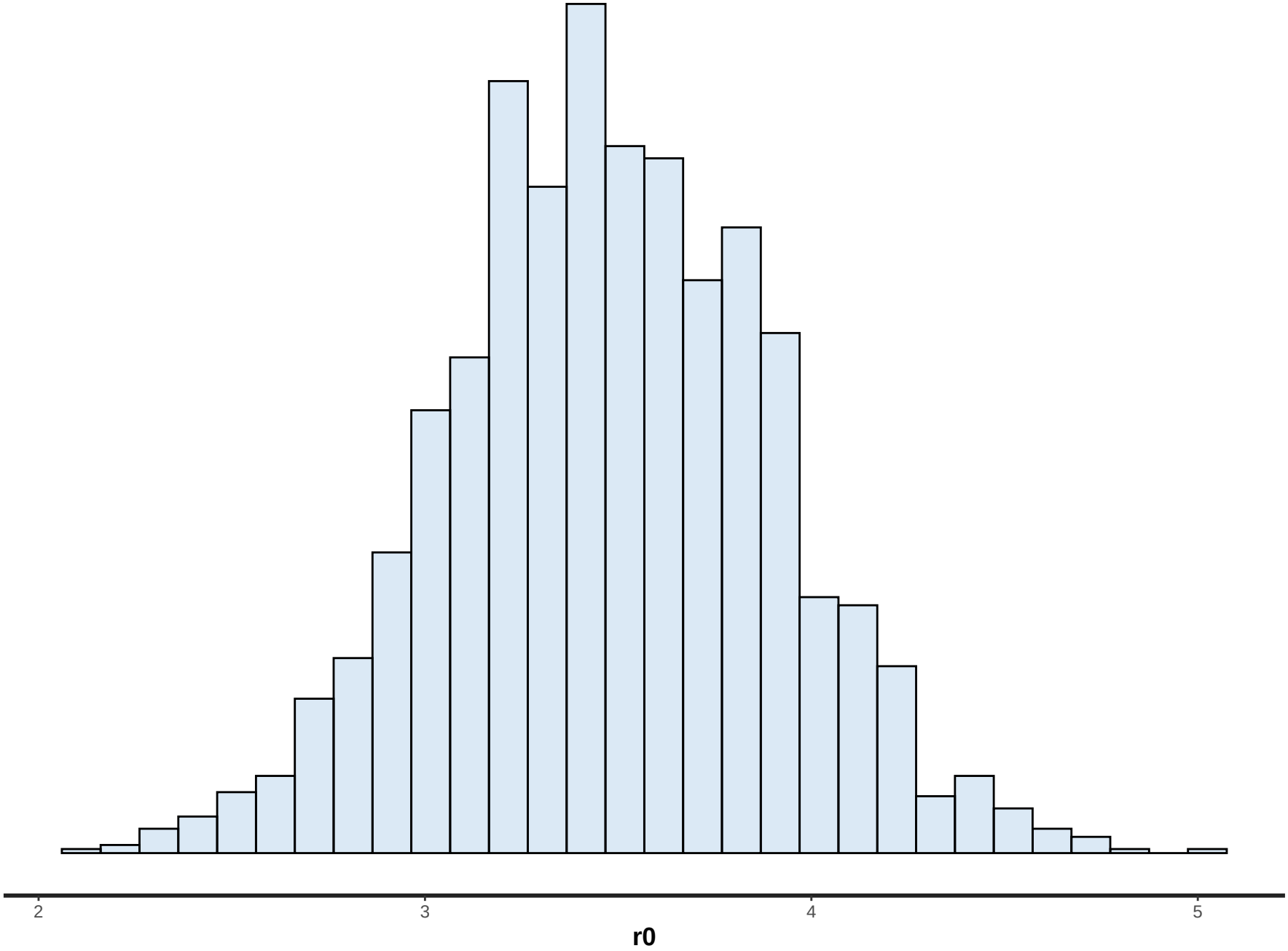

Long Term Death Projection
Number of COVID19 Deaths
6000
4000
2000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

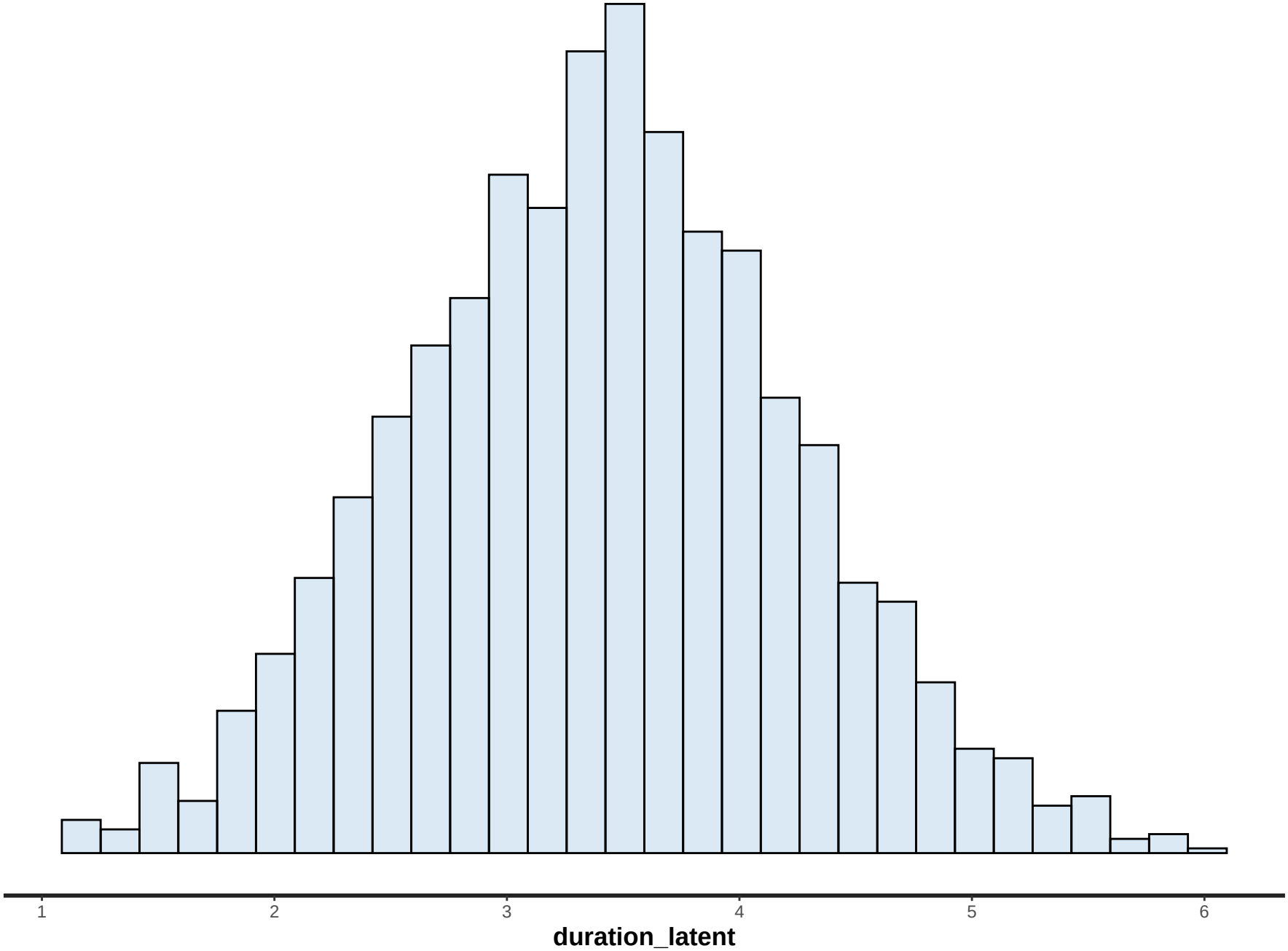

Effective Reproduction Number
Re
1.5
1.2
0.9
0.6
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

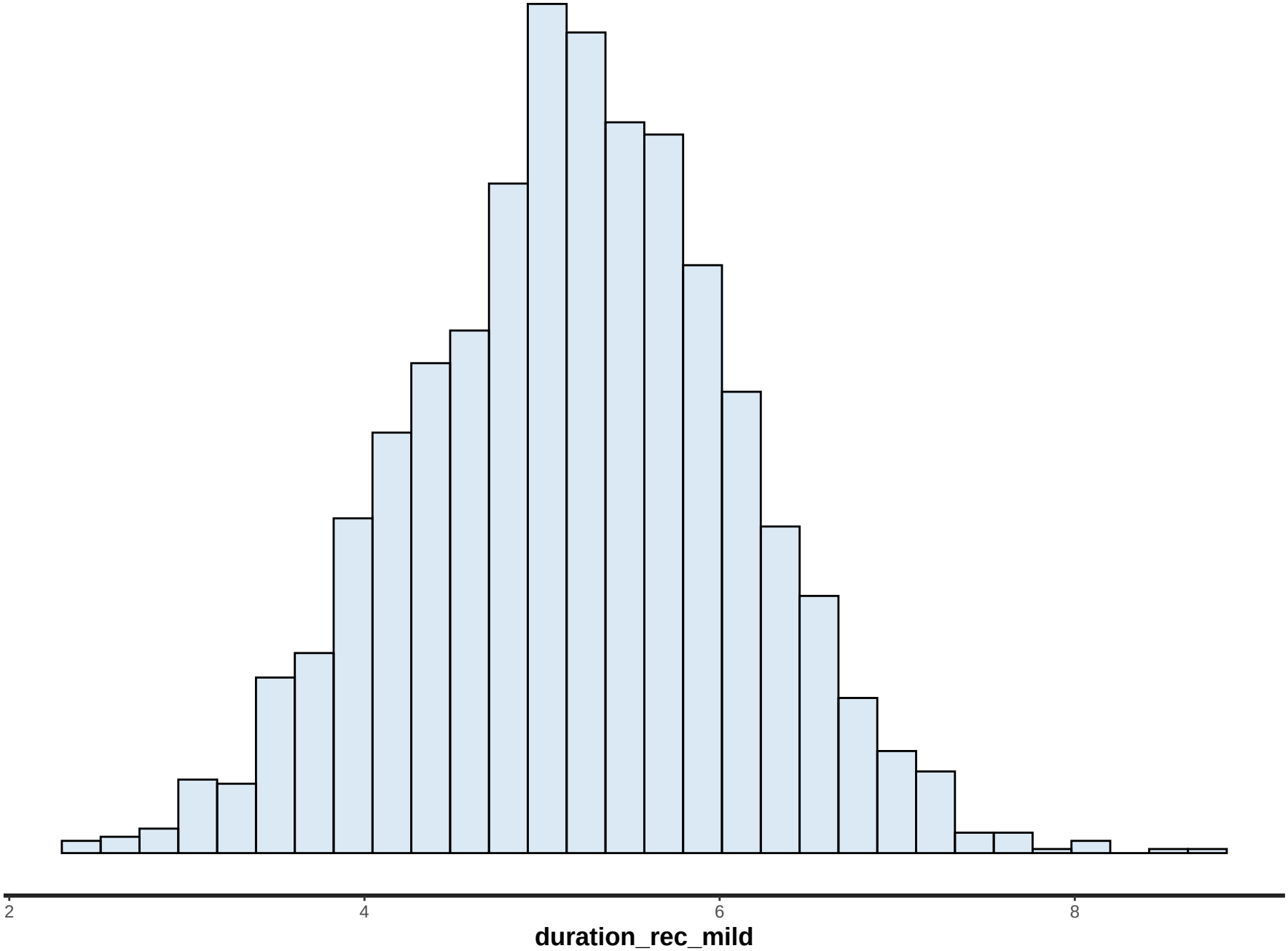
Rt as of 2020−12−10

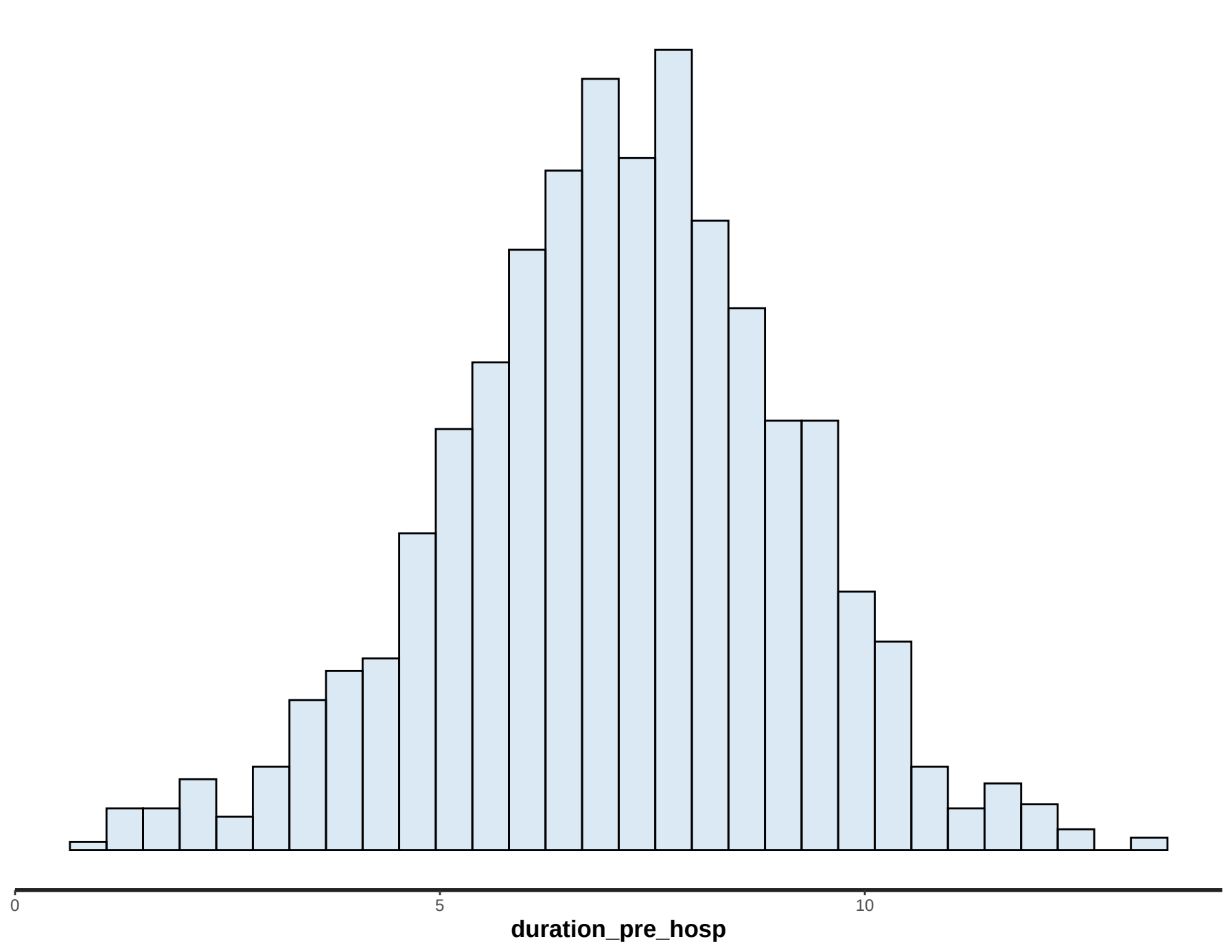
5%	10%	25%	50%	75%	90%	95%
1.16	1.19	1.21	1.25	1.28	1.32	1.34

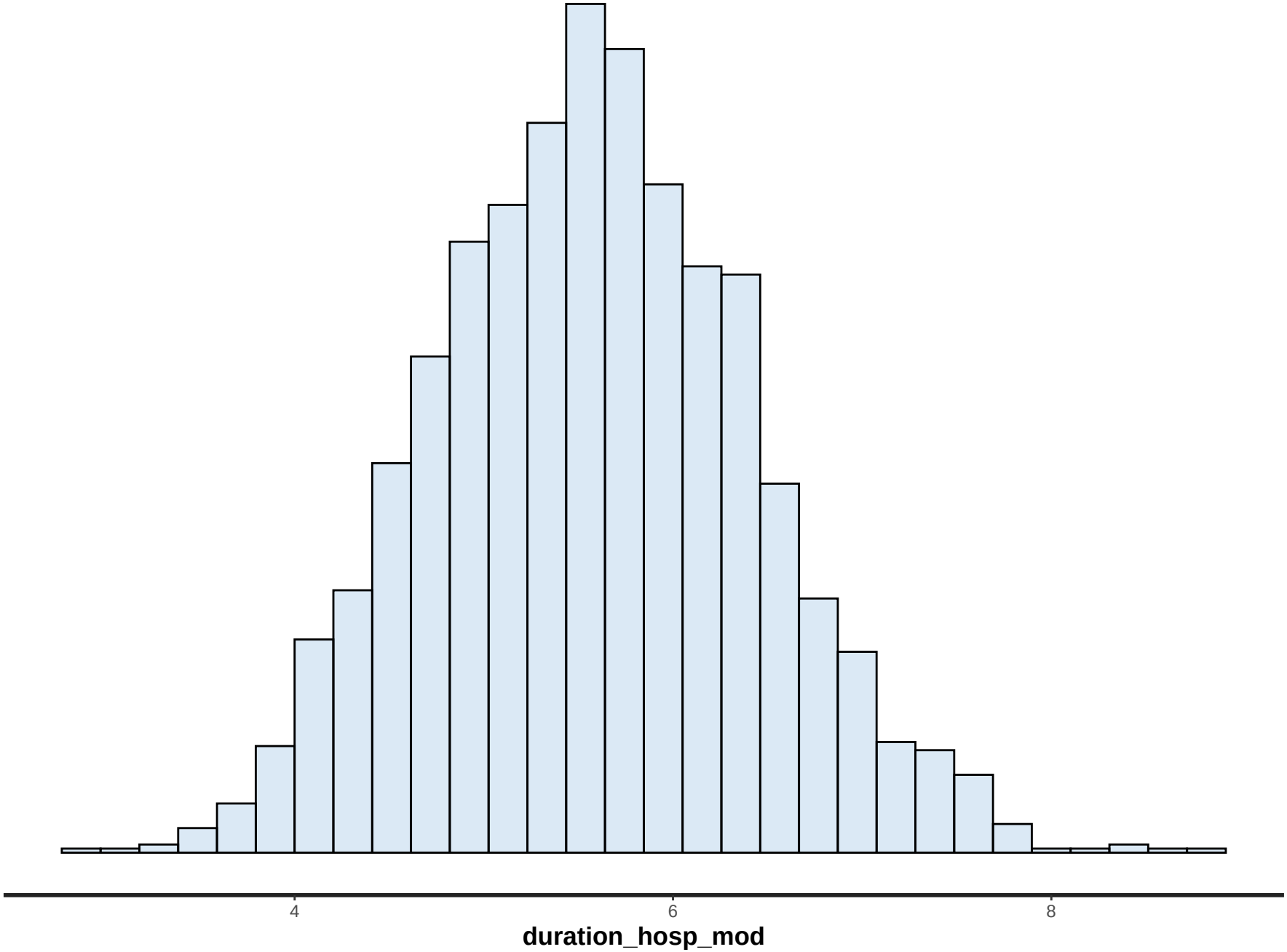


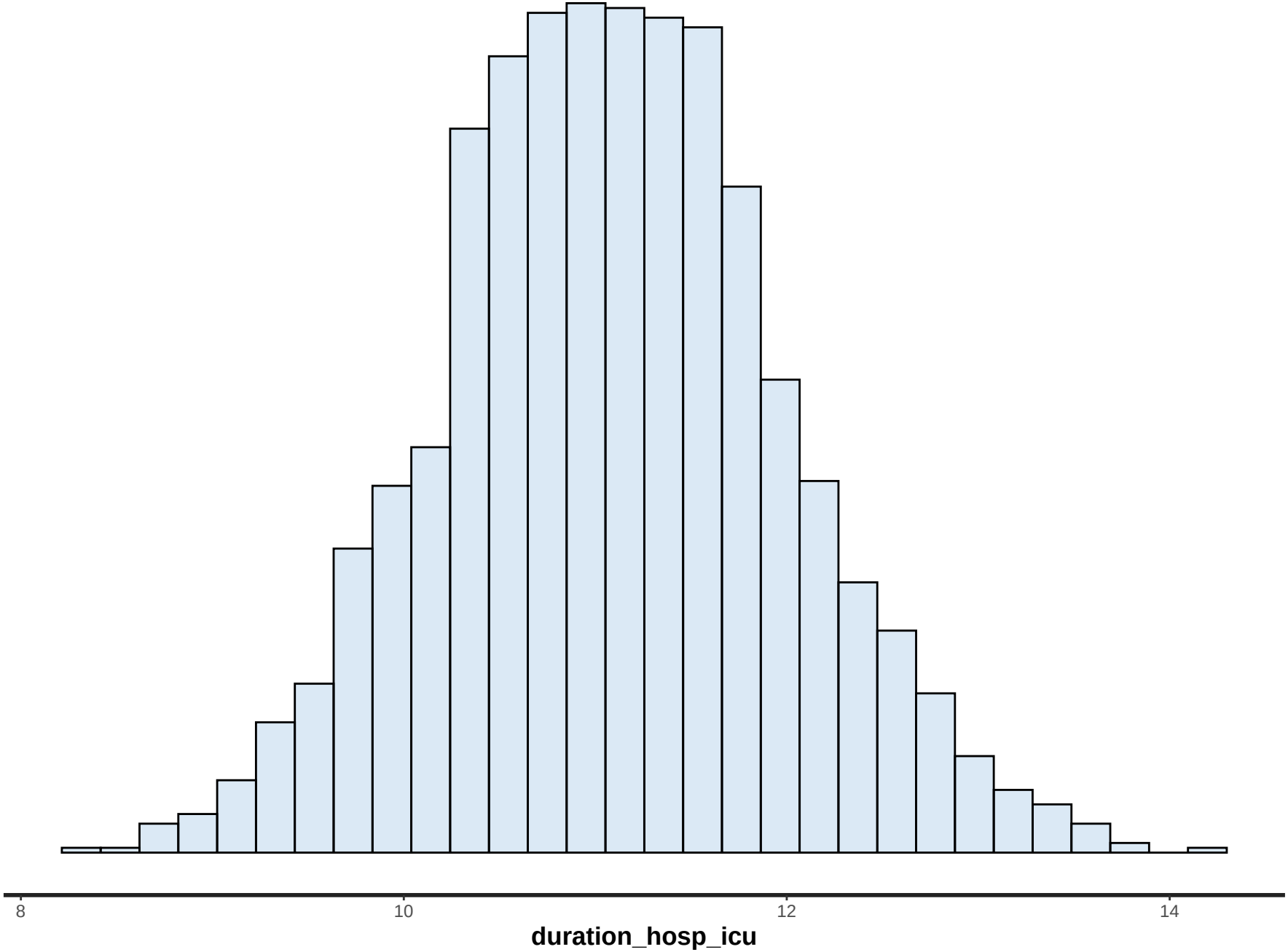

2
3
4
5
r0

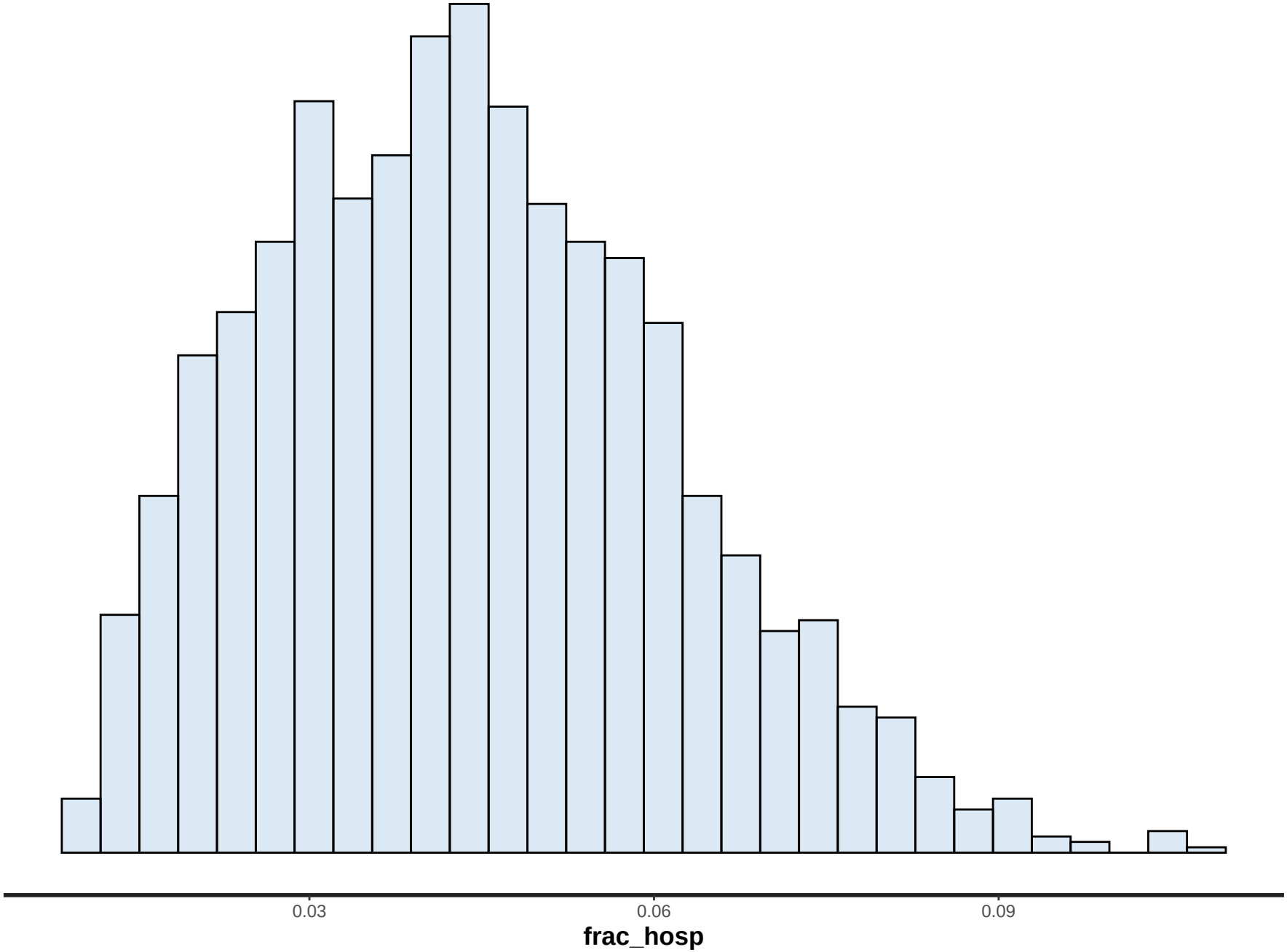

1
2
3
4
5
6
duration_latent


2
4
6
8
duration_rec_mild


0
5
10
duration_pre_hosp


4
6
8
duration_hosp_mod


8
10
12
14
duration_hosp_icu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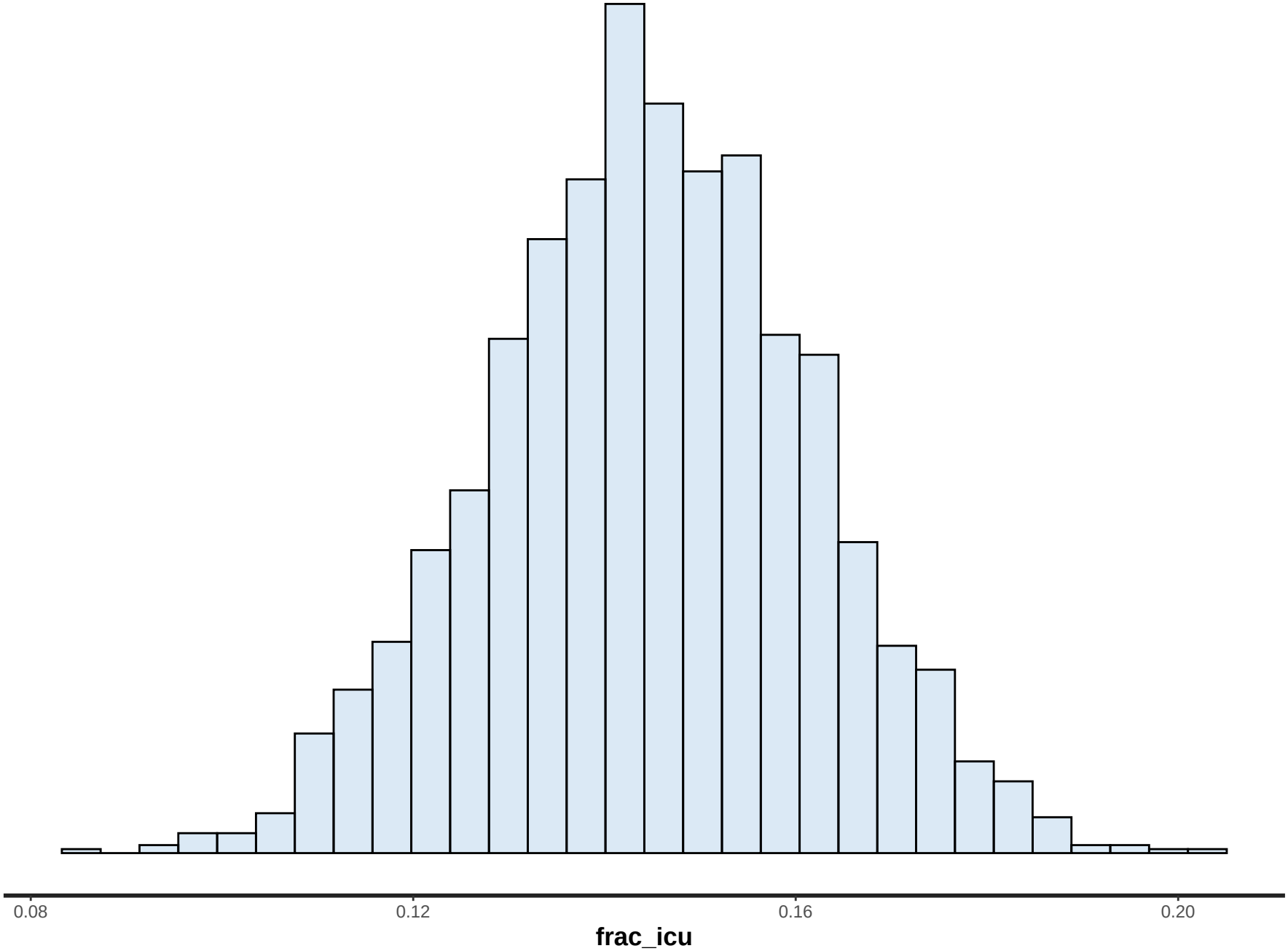
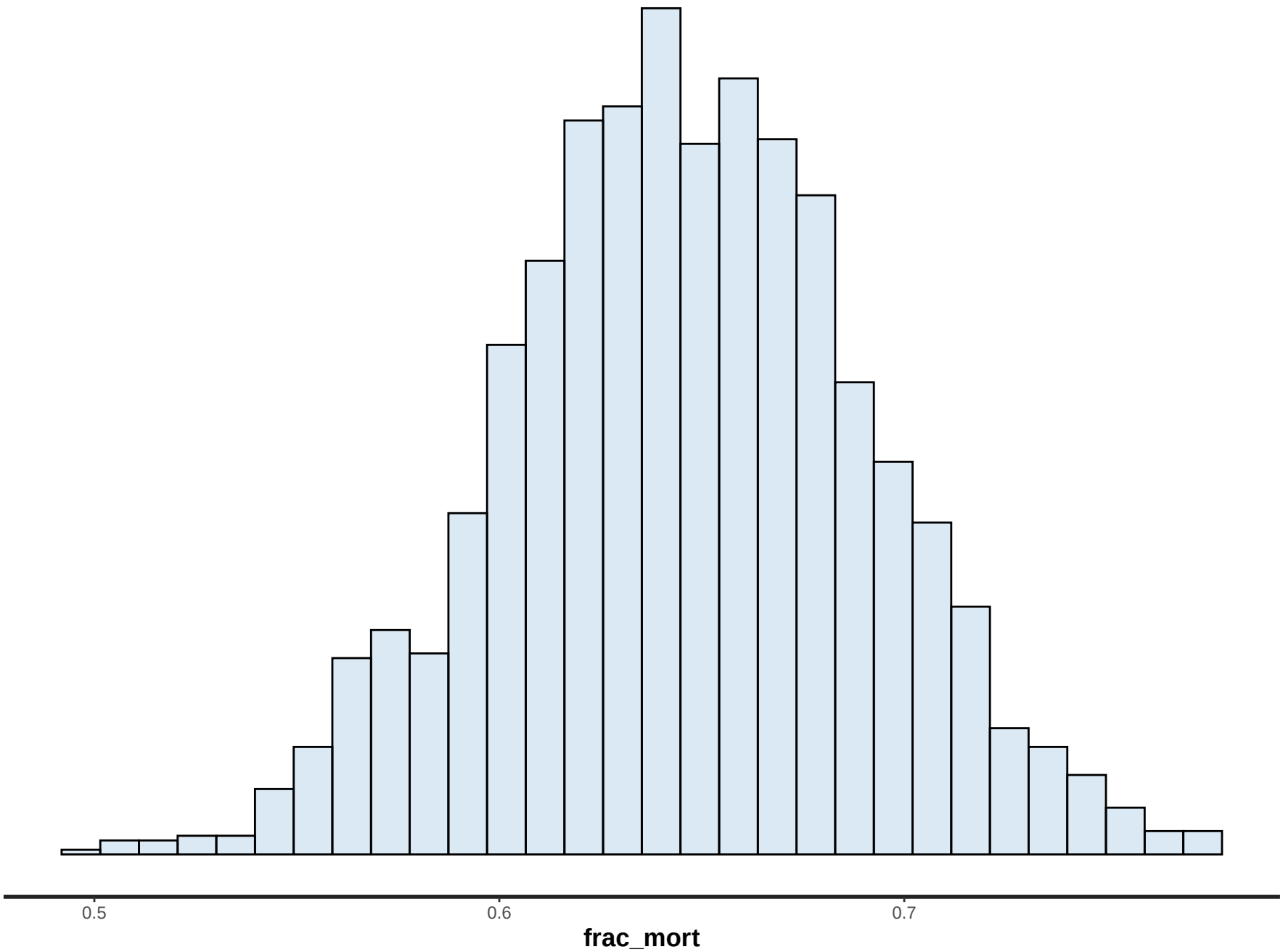
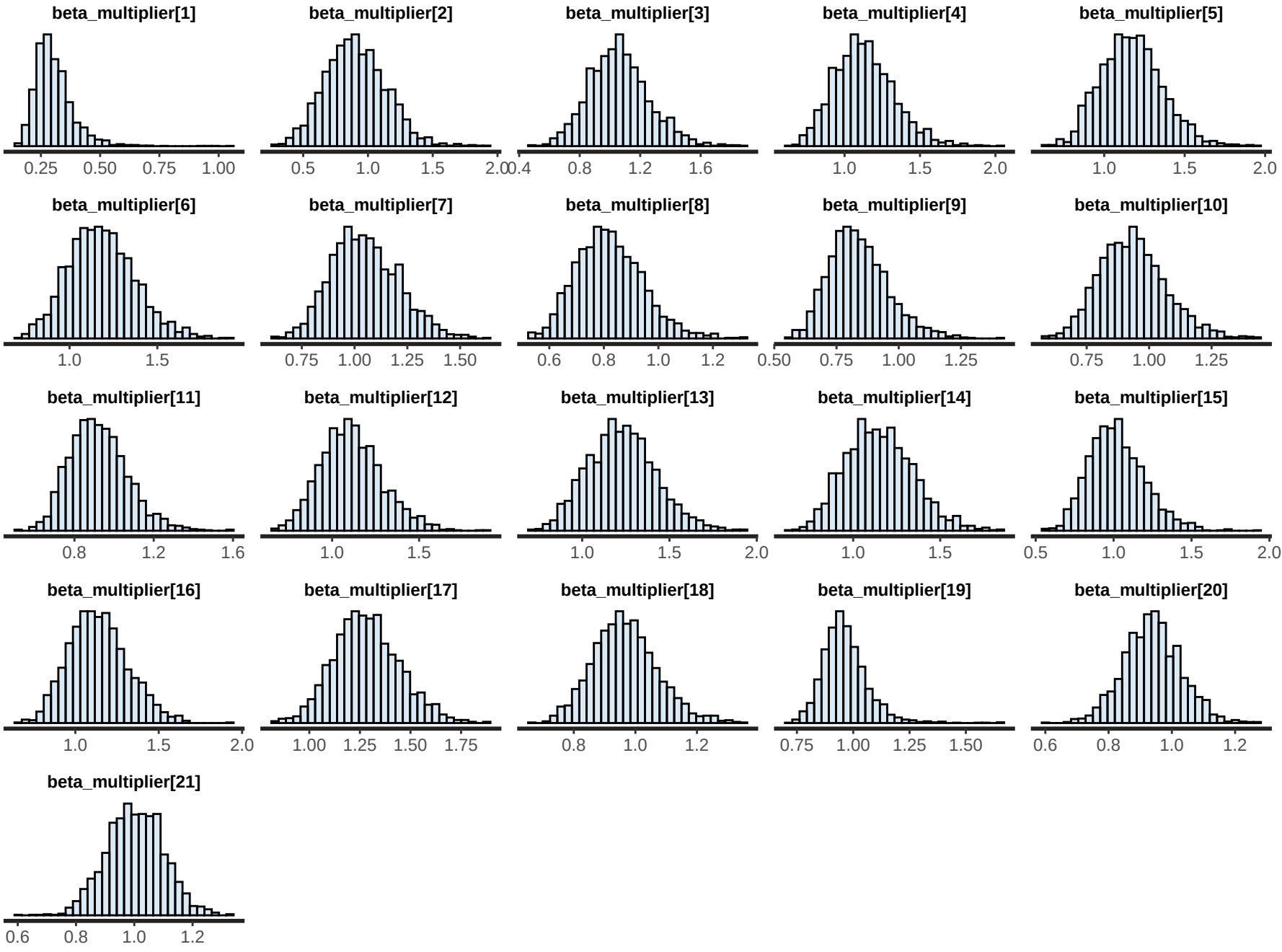
0.06
0.09
frac_hosp


0.08
0.12
0.16
0.20
frac_icu


0.5
0.6
0.7
frac_mort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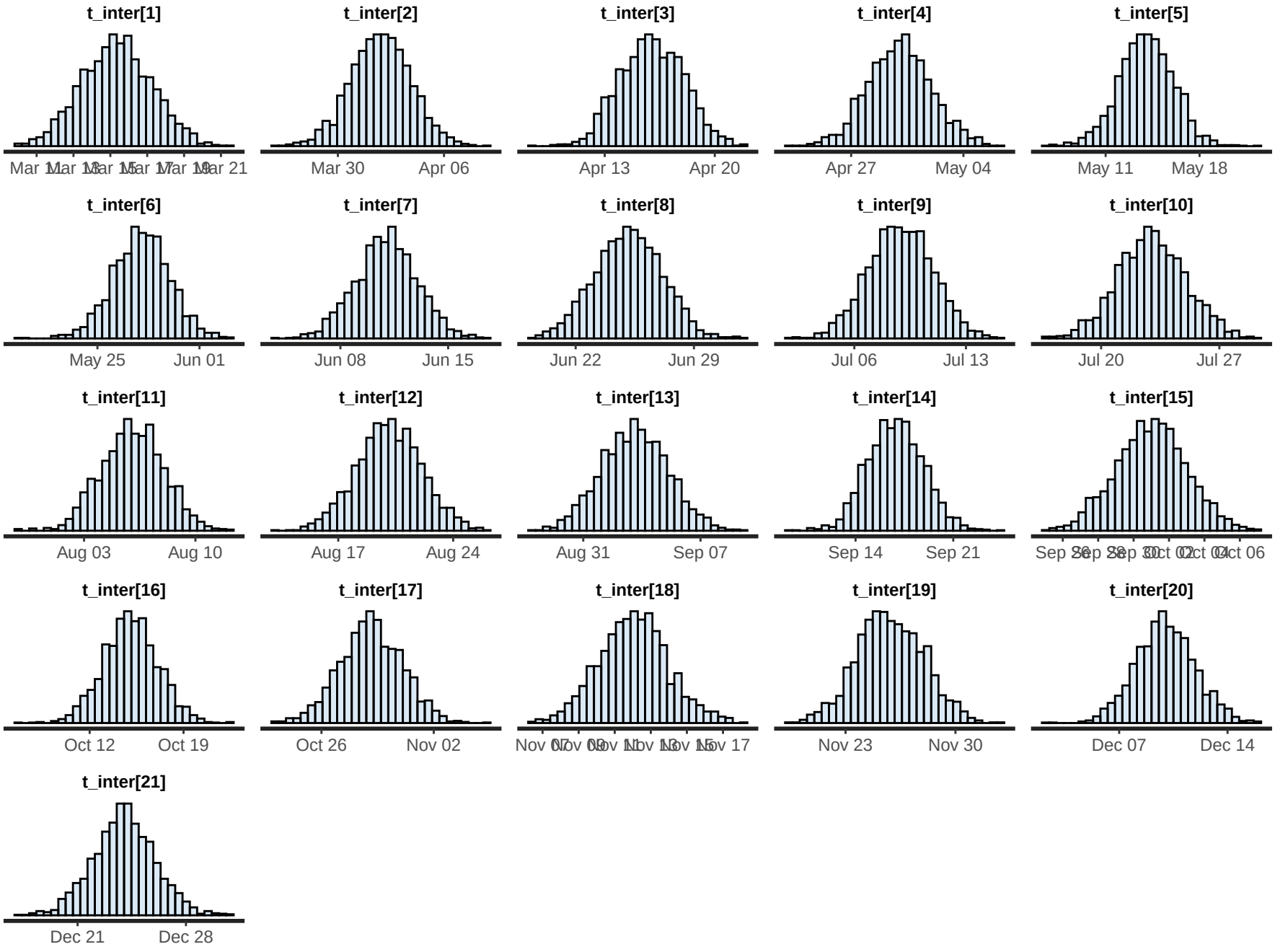
0.25 0.50 0.75 1.00
beta_multiplier[2]
0.5 1.0 1.5 2.0
beta_multiplier[3]
0.4 0.8 1.2 1.6
beta_multiplier[4]
1.0 1.5 2.0
beta_multiplier[5]
1.0 1.5 2.0
beta_multiplier[6]
1.0 1.5
beta_multiplier[7]
0.75 1.00 1.25 1.50
beta_multiplier[8]
0.6 0.8 1.0 1.2
beta_multiplier[9]
0.50 0.75 1.00 1.25
beta_multiplier[10]
0.75 1.00 1.25
beta_multiplier[11]
0.8 1.2 1.6
beta_multiplier[12]
1.0 1.5
beta_multiplier[13]
1.0 1.5 2.0
beta_multiplier[14]
1.0 1.5
beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
1.0 1.5 2.0
beta_multiplier[17]
1.00 1.25 1.50 1.75
beta_multiplier[18]
0.8 1.0 1.2
beta_multiplier[19]
0.75 1.00 1.25 1.50
beta_multiplier[20]
0.6 0.8 1.0 1.2
beta_multiplier[21]
0.6 0.8 1.0 1.2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Mar 13
Mar 15
Mar 17
Mar 19
Mar 21
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Apr 13
Apr 20
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Apr 27
May 04
t_inter[5]
May 11
May 18
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May 25
Jun 01
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Jun 08
Jun 15
t_inter[8]
Jun 22
Jun 29
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Jul 06
Jul 13
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Nov 09
Nov 11
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Dec 07
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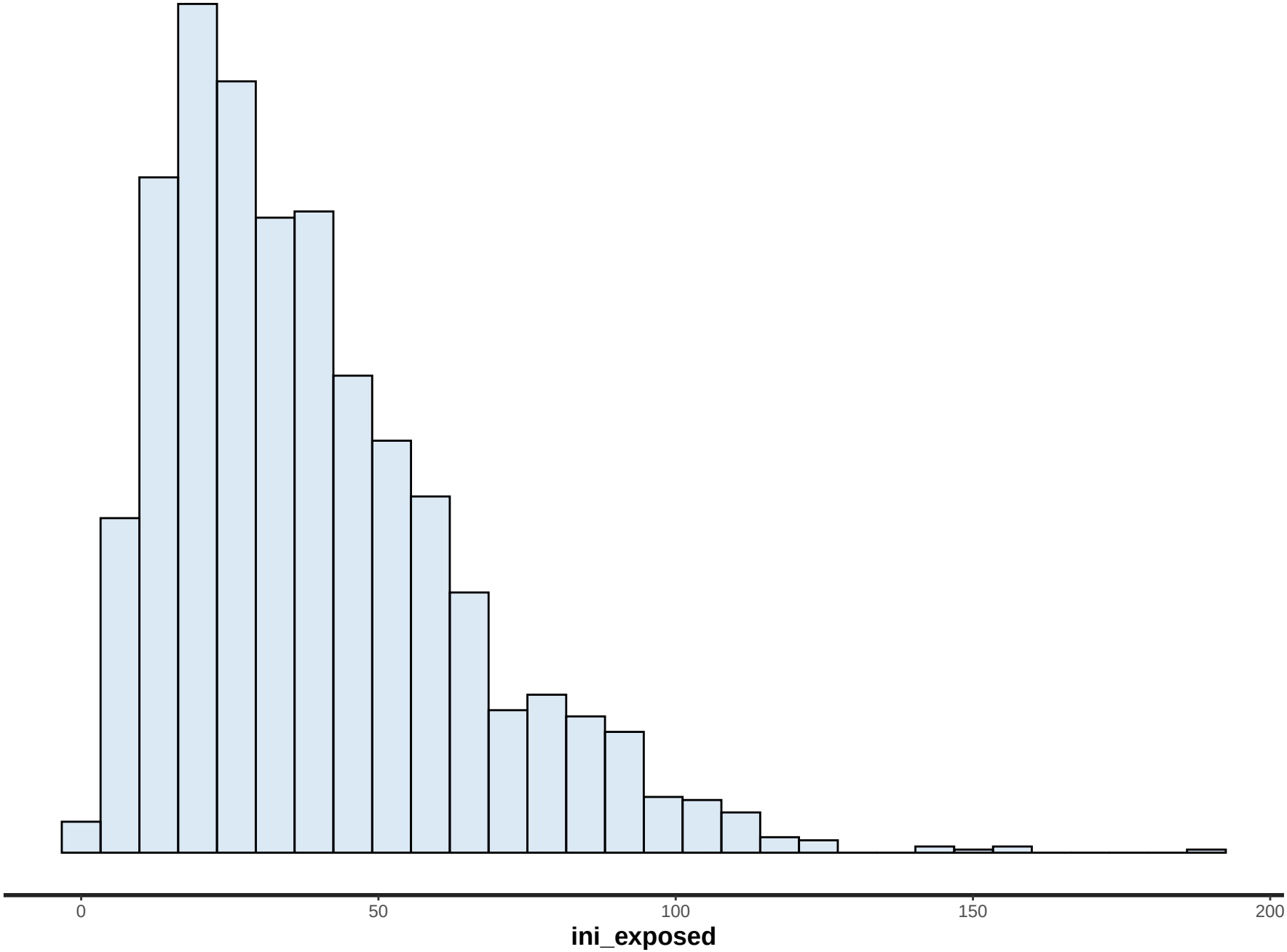
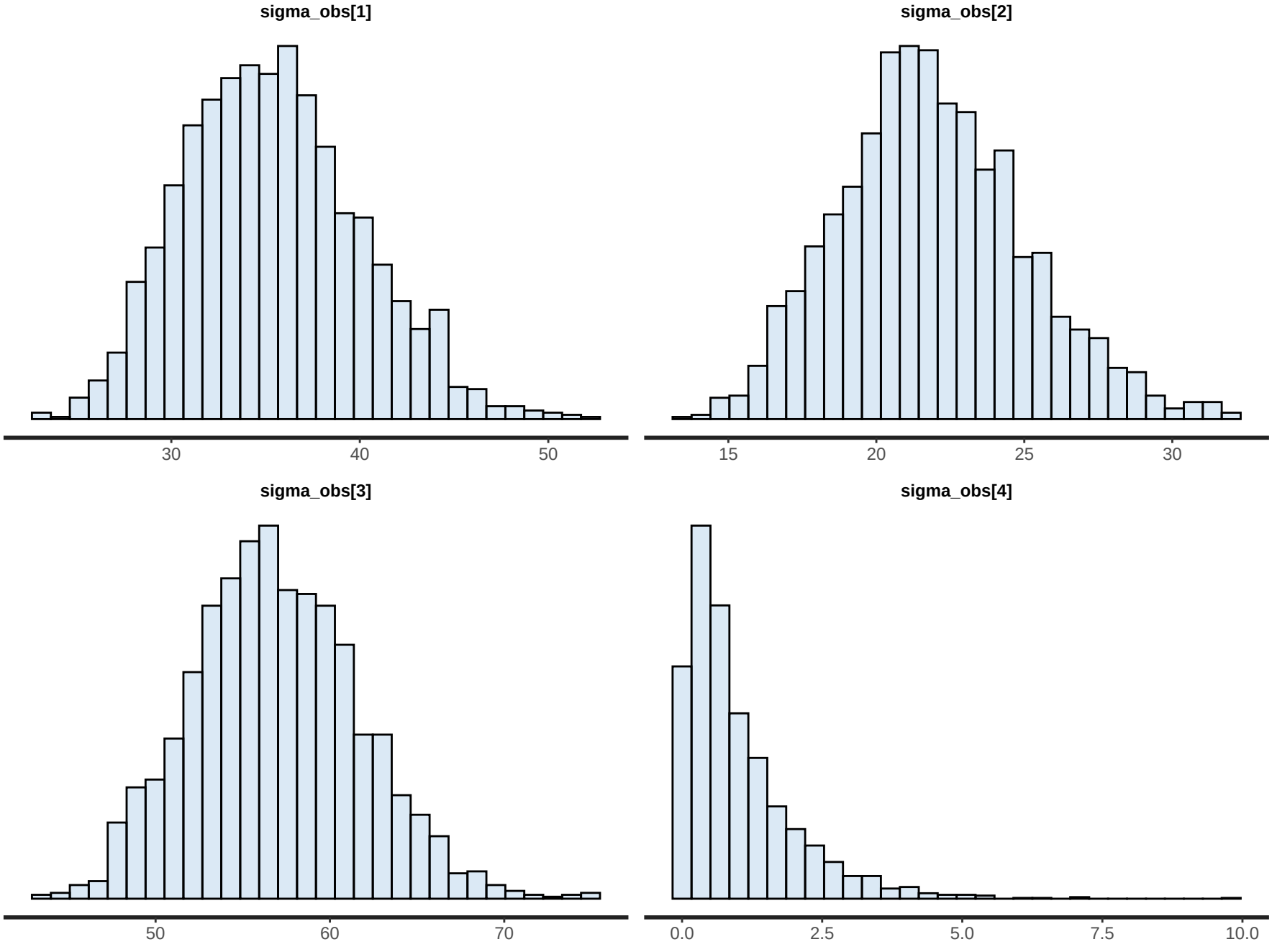
Dec 21
Dec 28


0
50
100
150
200
ini_exposed


sigma_obs[1]
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40
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60
70
sigma_obs[4]
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5.0
7.5
10.0