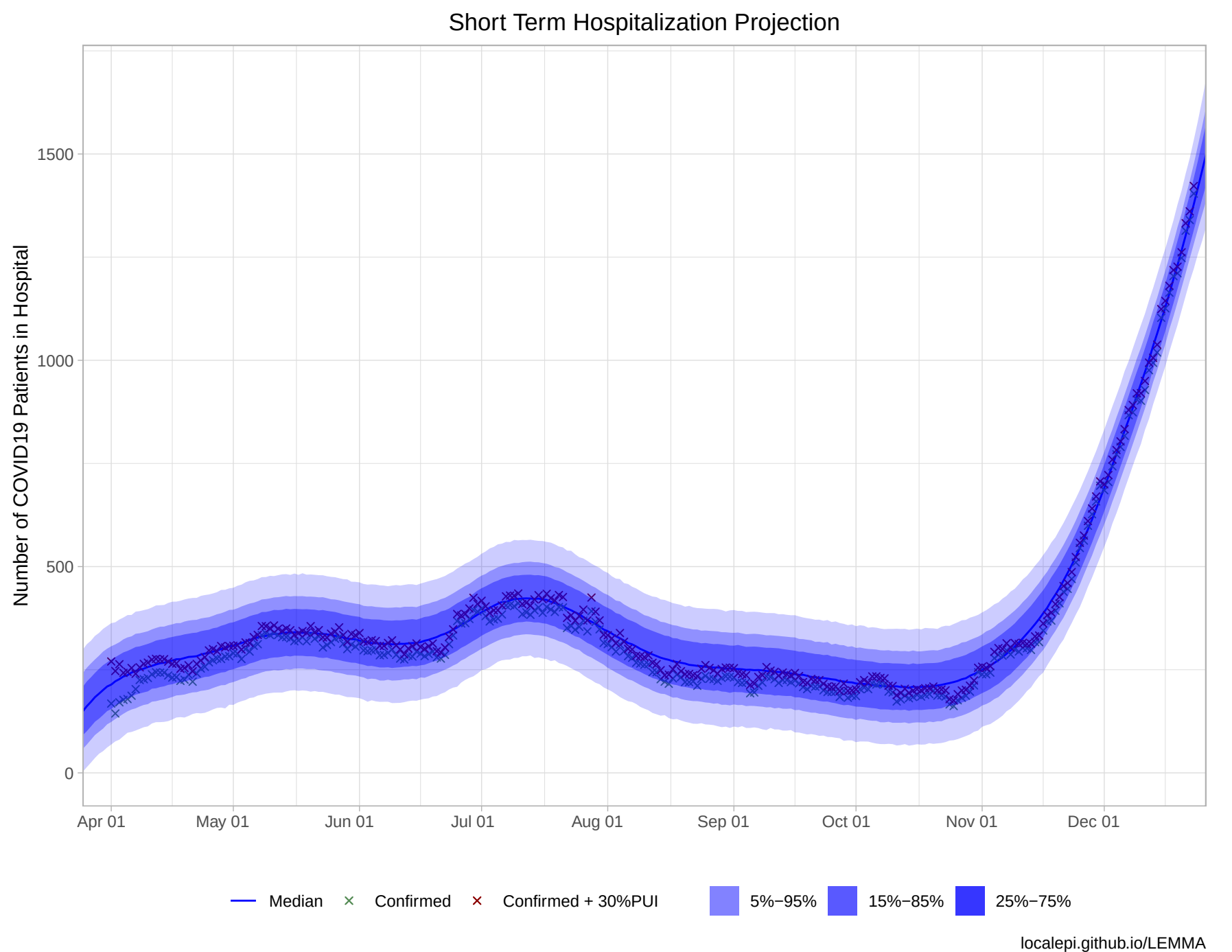
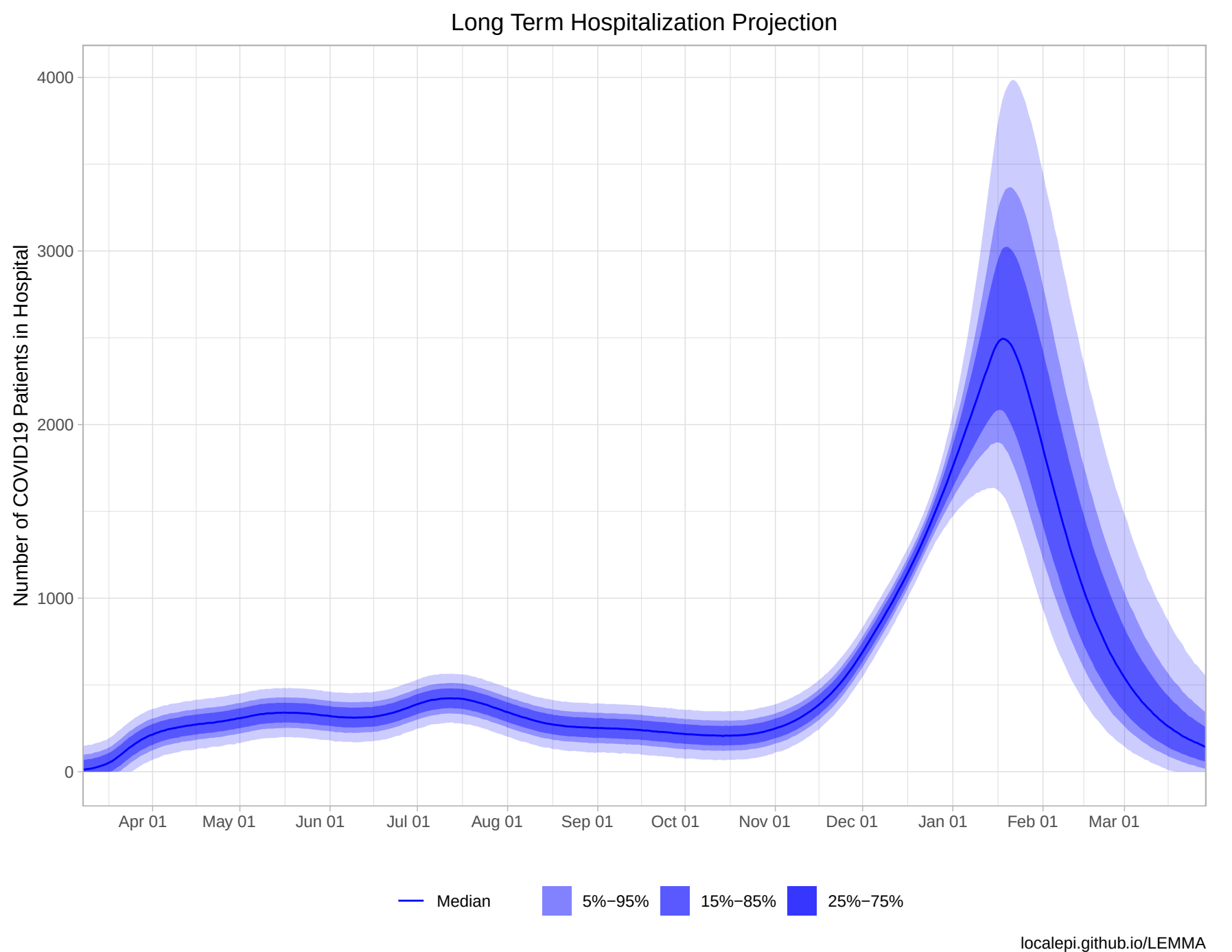
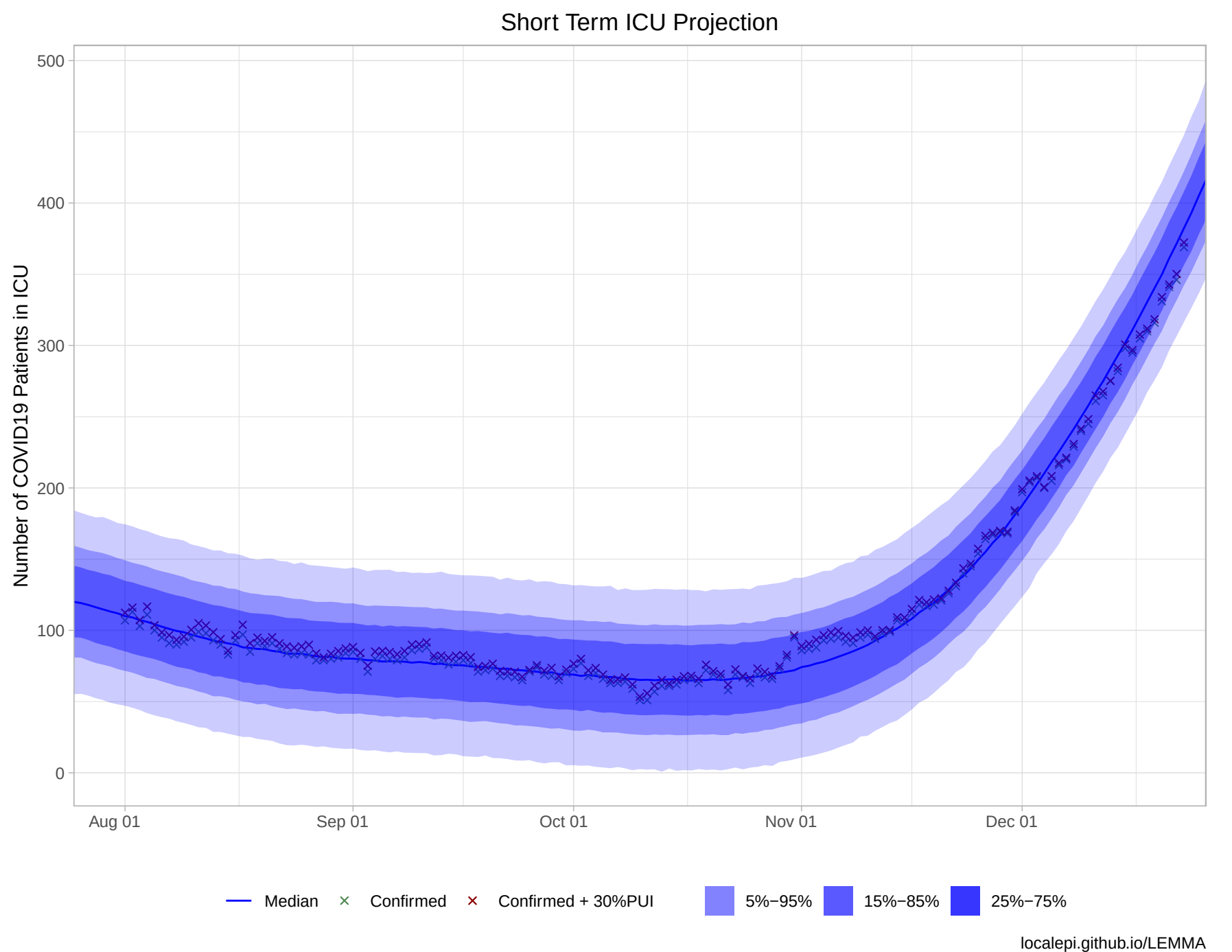
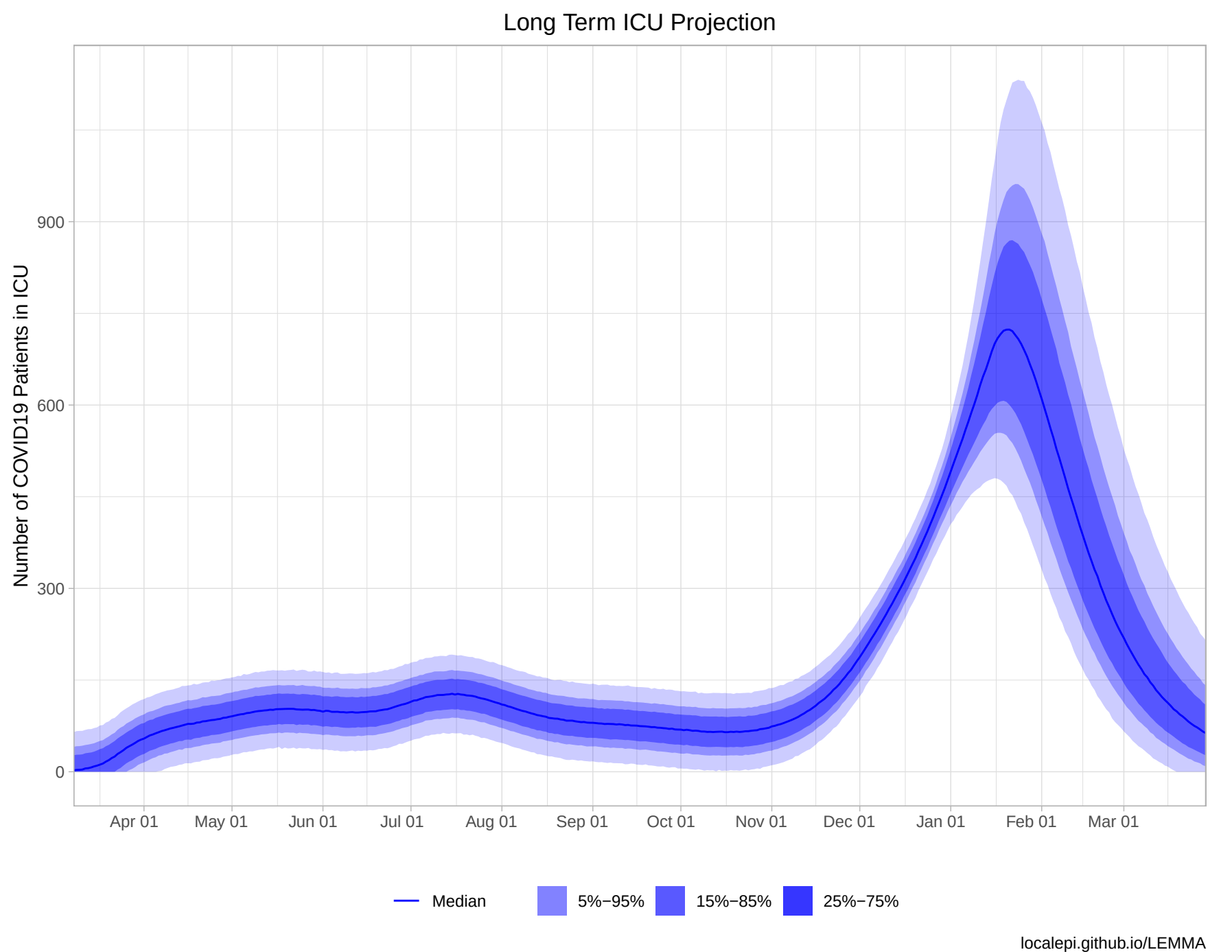
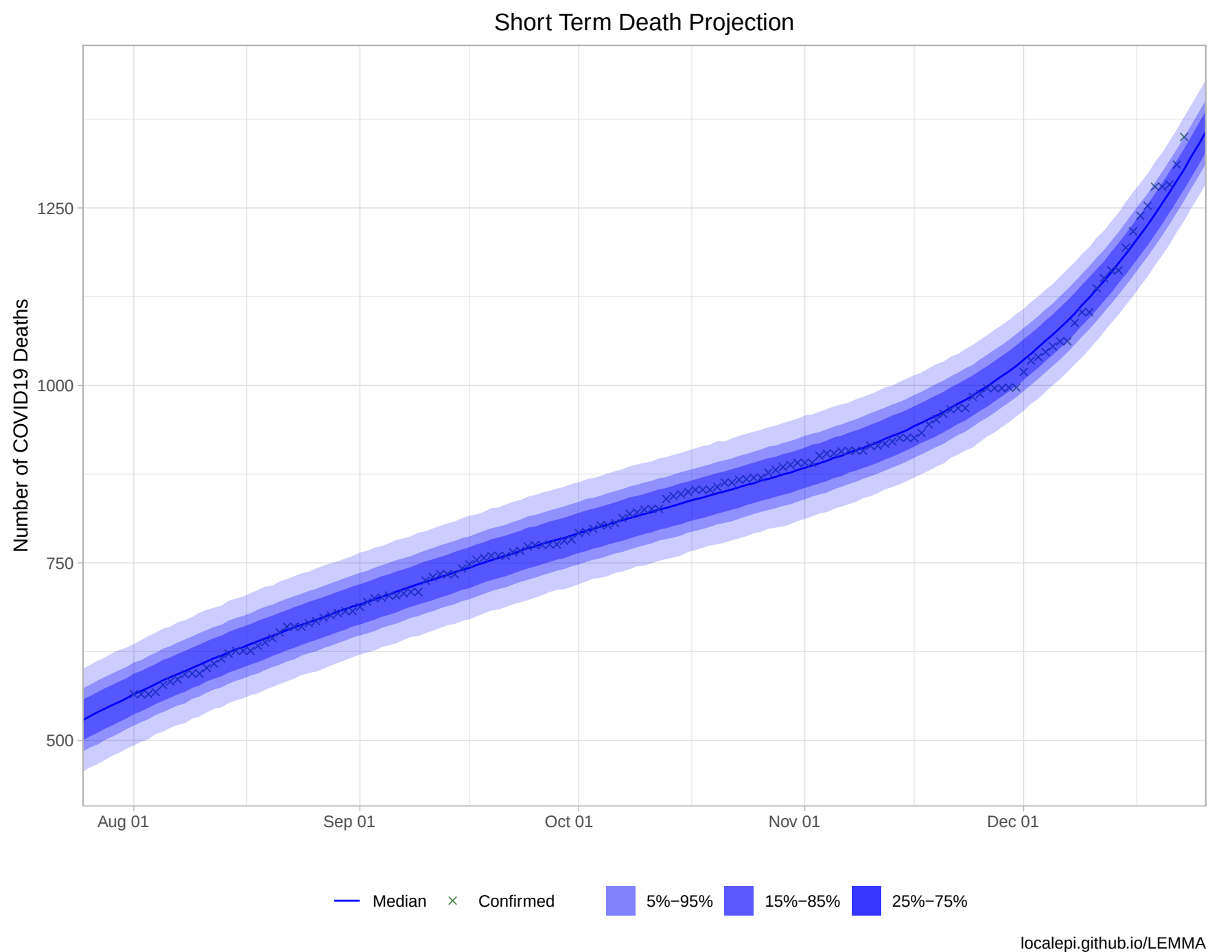
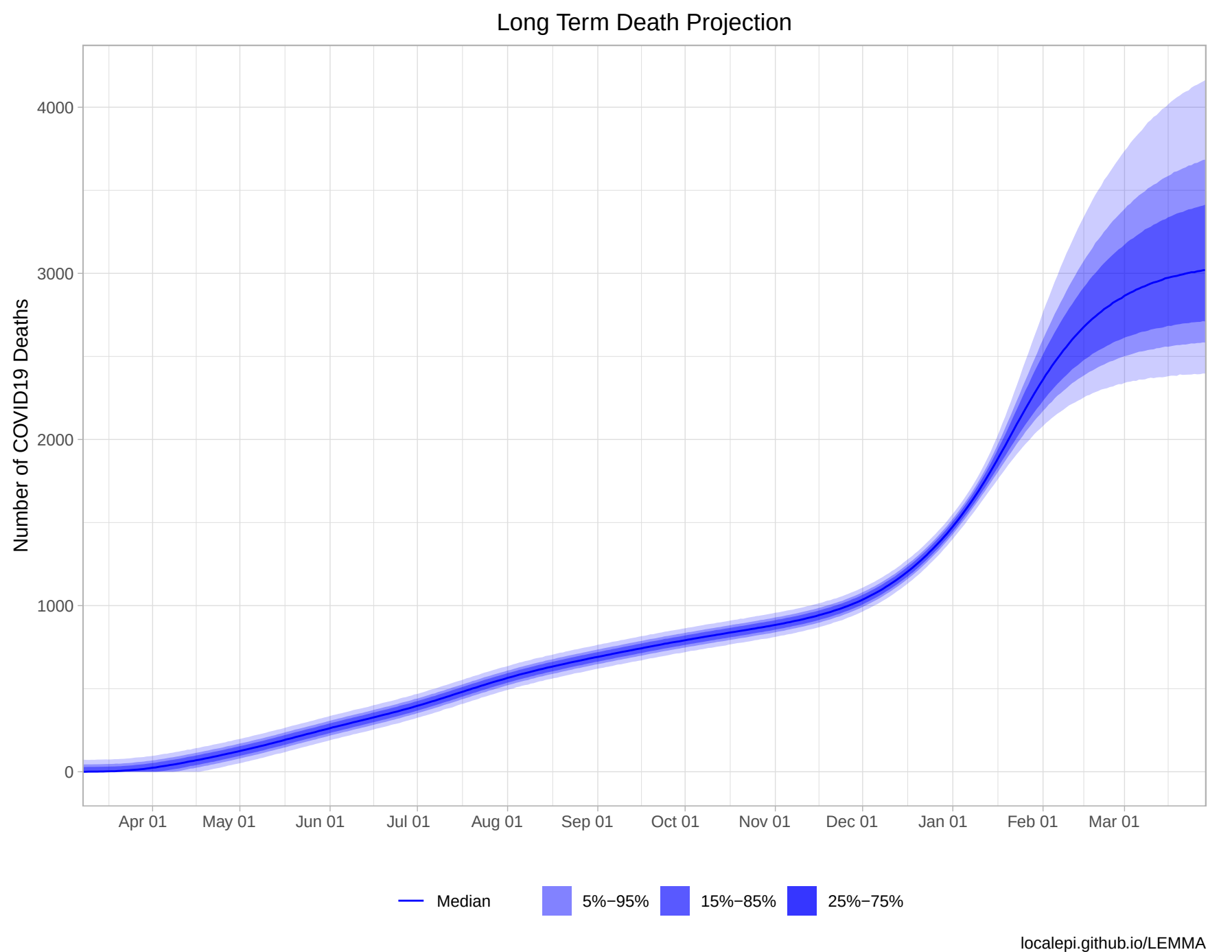

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

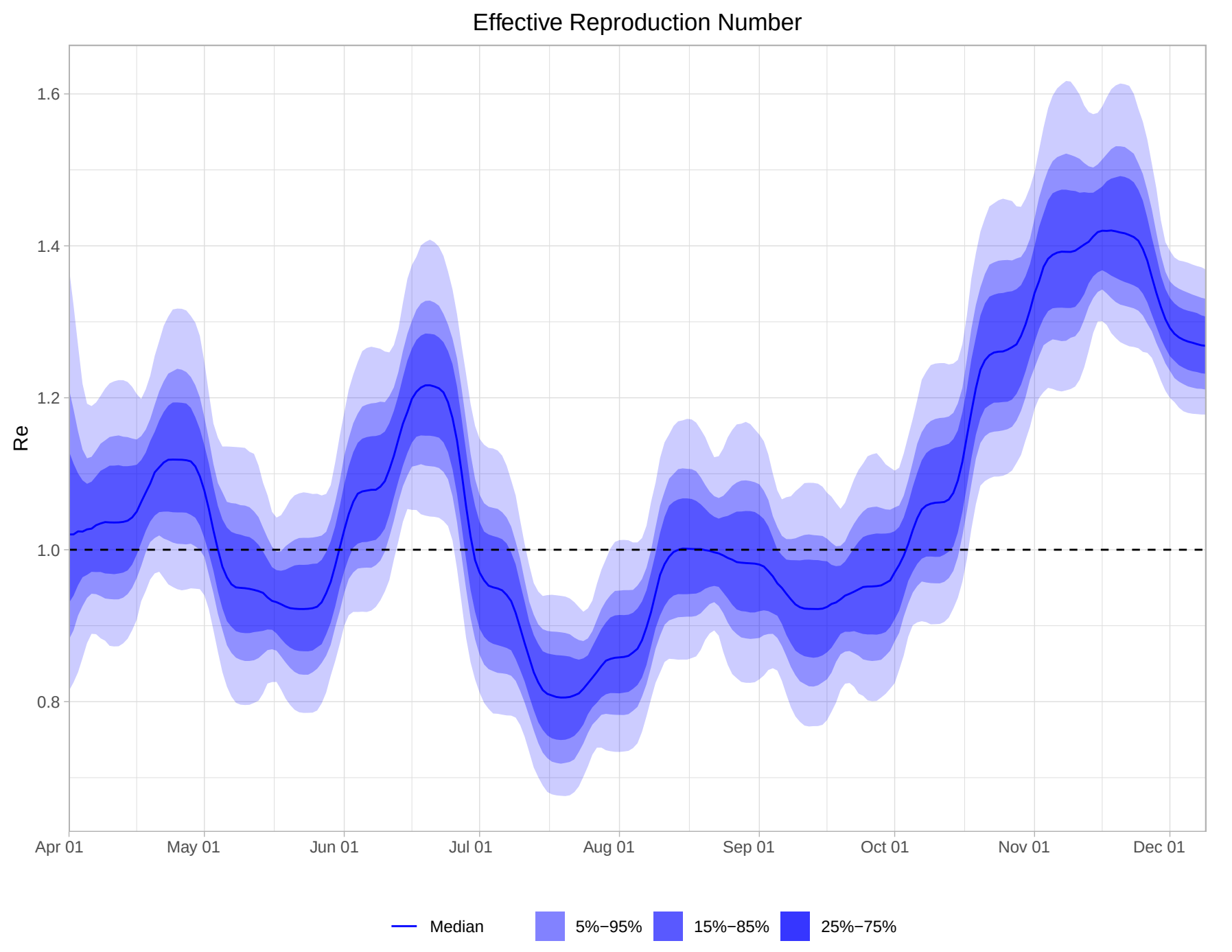

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
4000
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


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
900
600
300
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

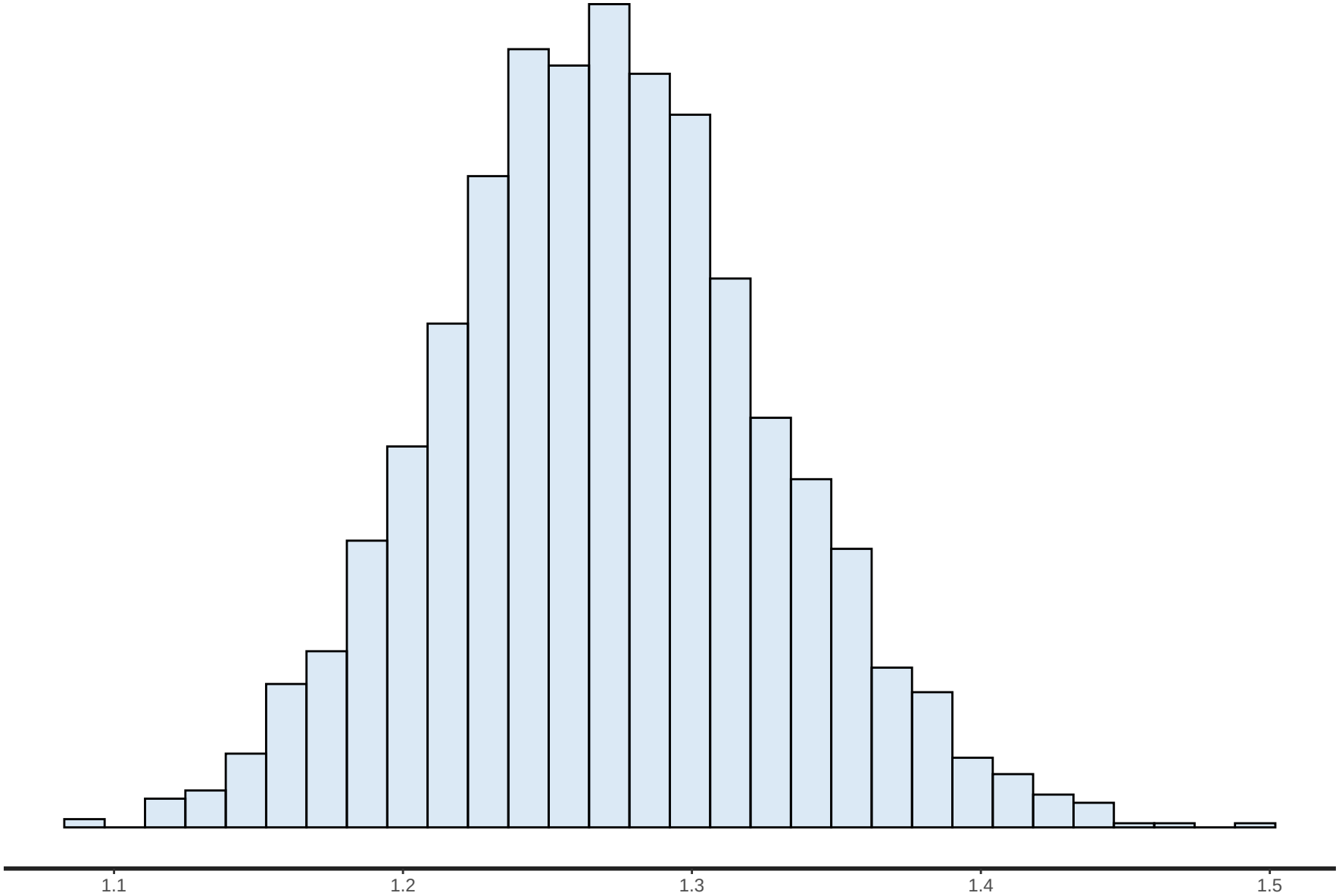

Short Term Death Projection
Number of COVID19 Deaths
1250
1000
750
500
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

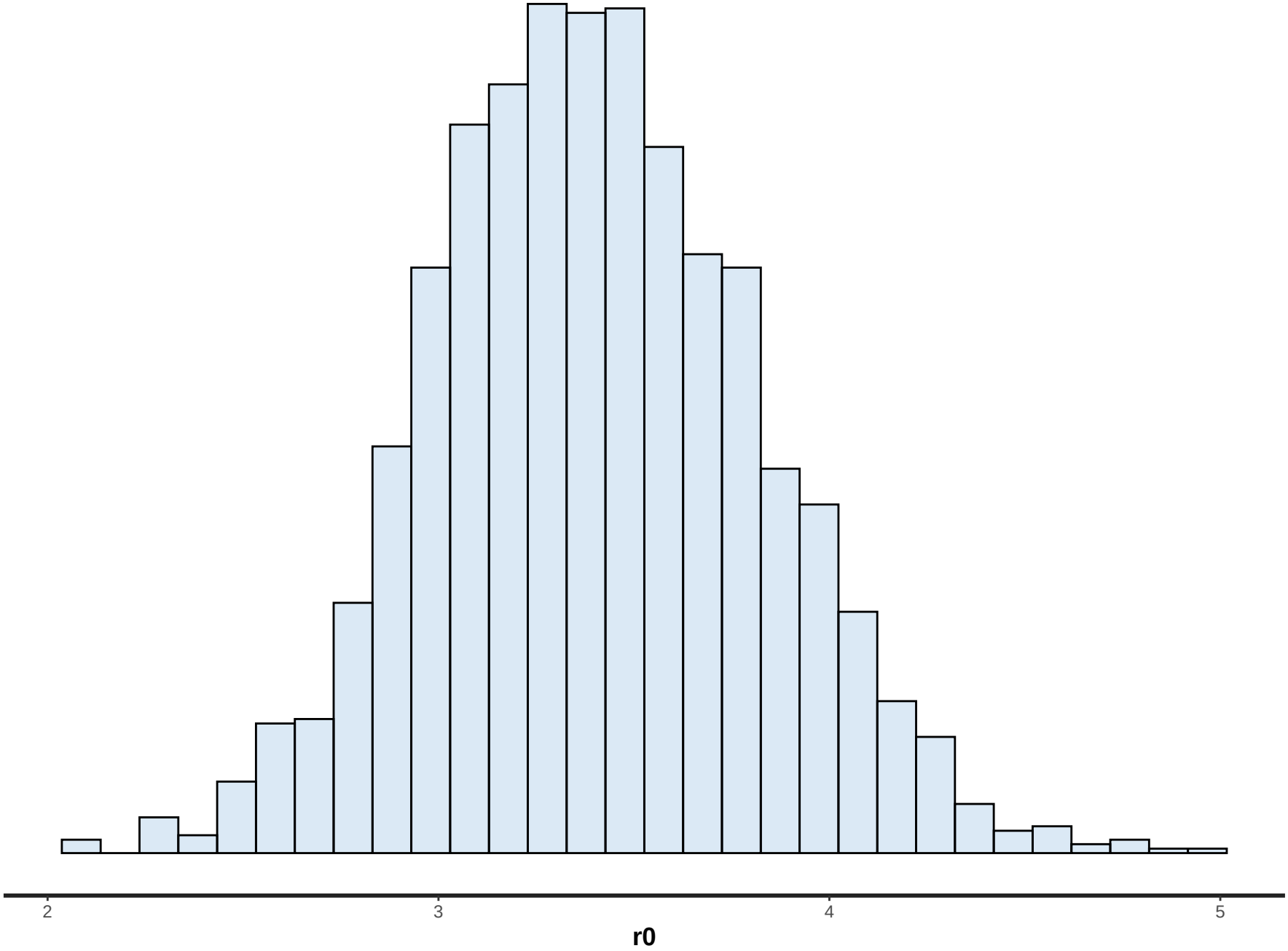

Long Term Death Projection
Number of COVID19 Deaths
4000
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

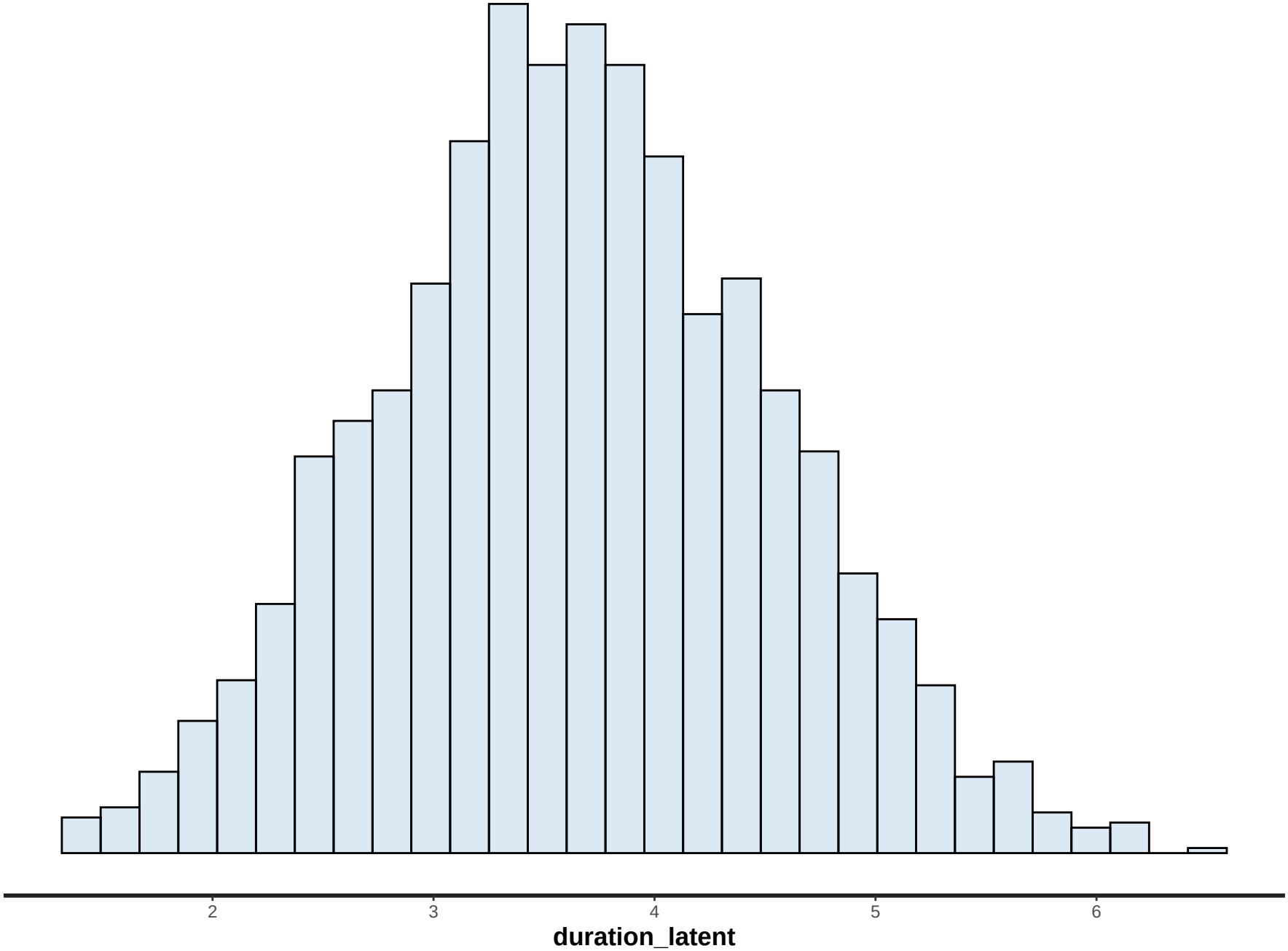

Effective Reproduction Number
Re
1.6
1.4
1.2
1.0
0.8
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

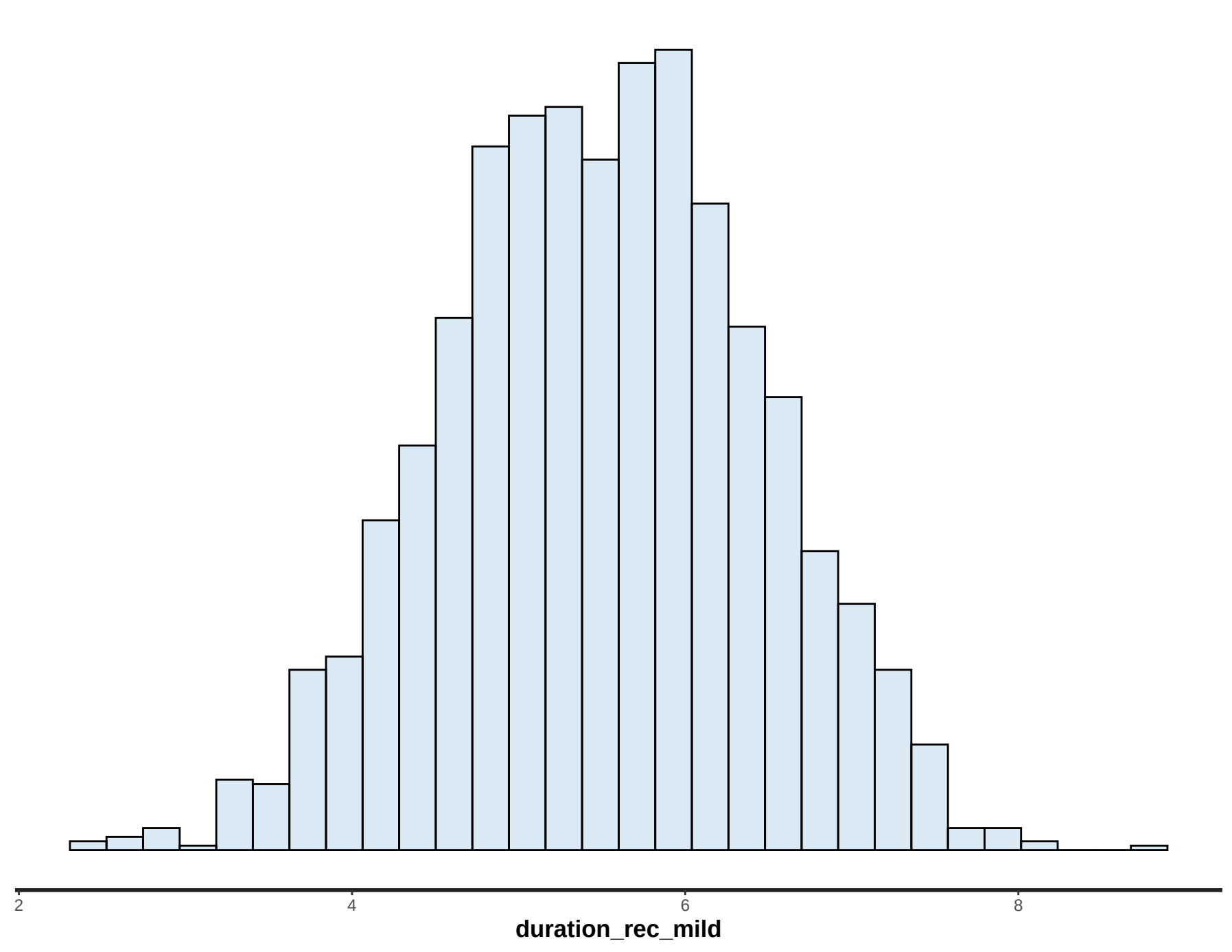
Rt as of 2020−12−09

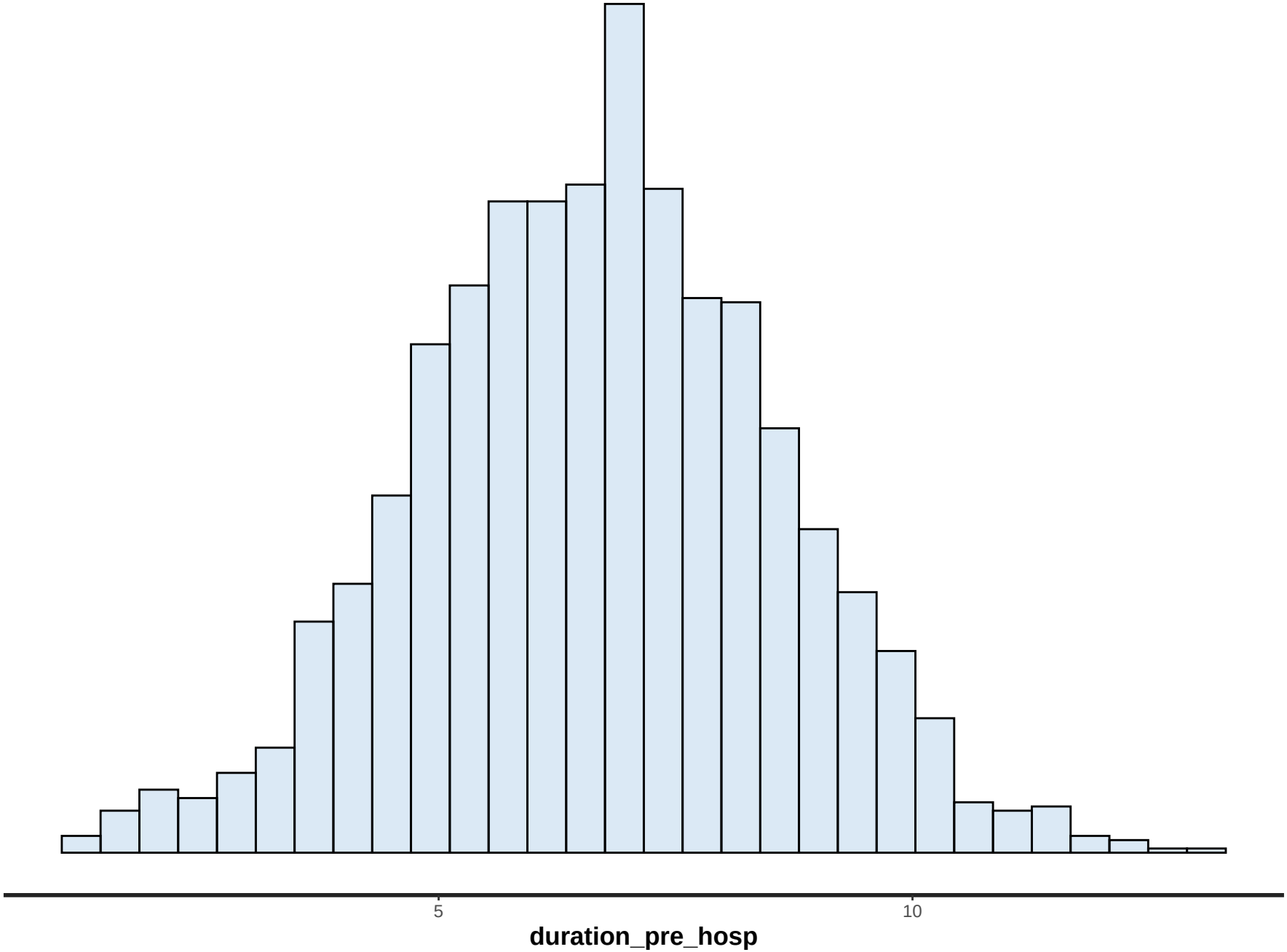
5%	10%	25%	50%	75%	90%	95%
1.18	1.20	1.23	1.27	1.31	1.34	1.37

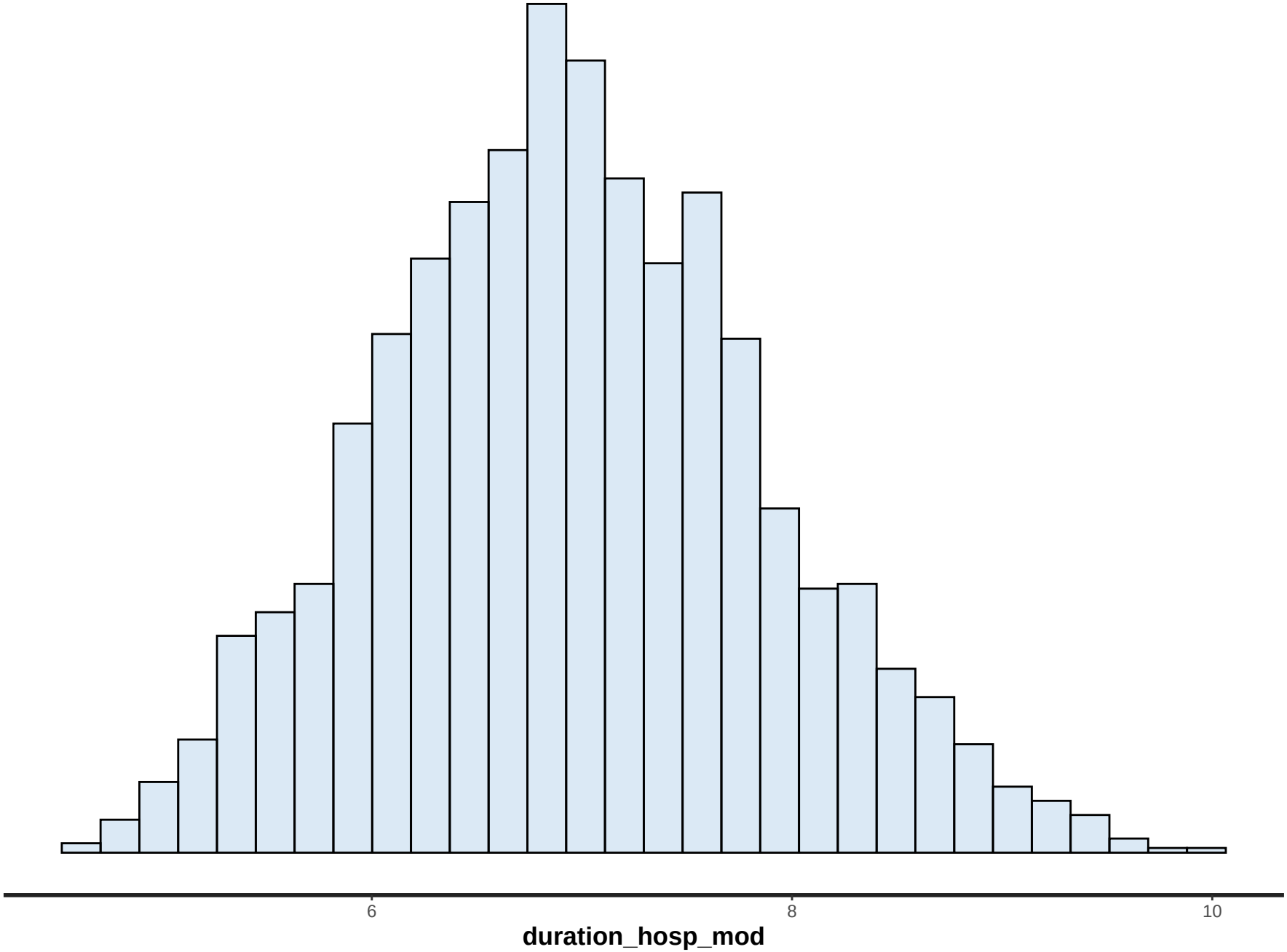


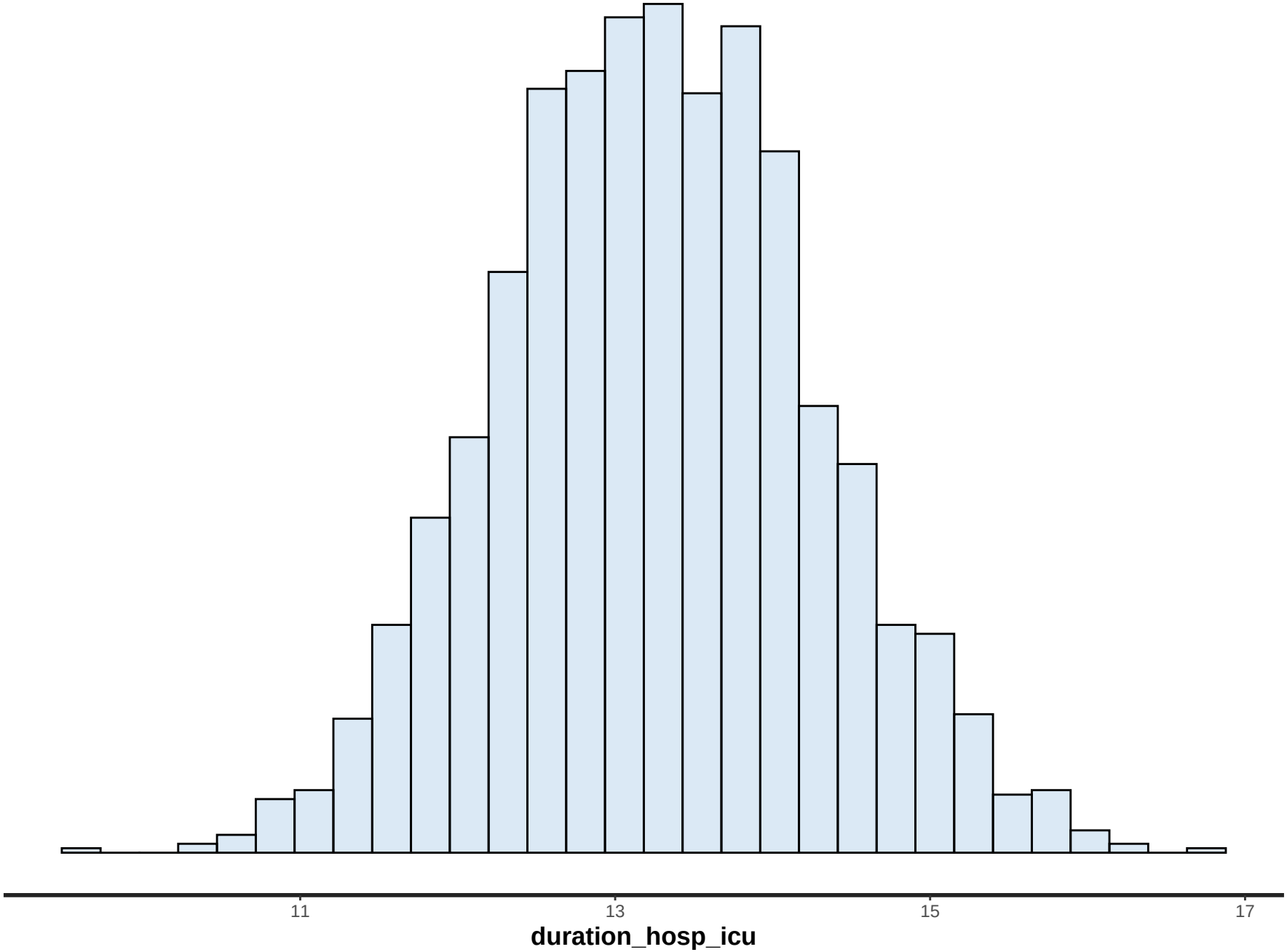

2
3
4
5
r0

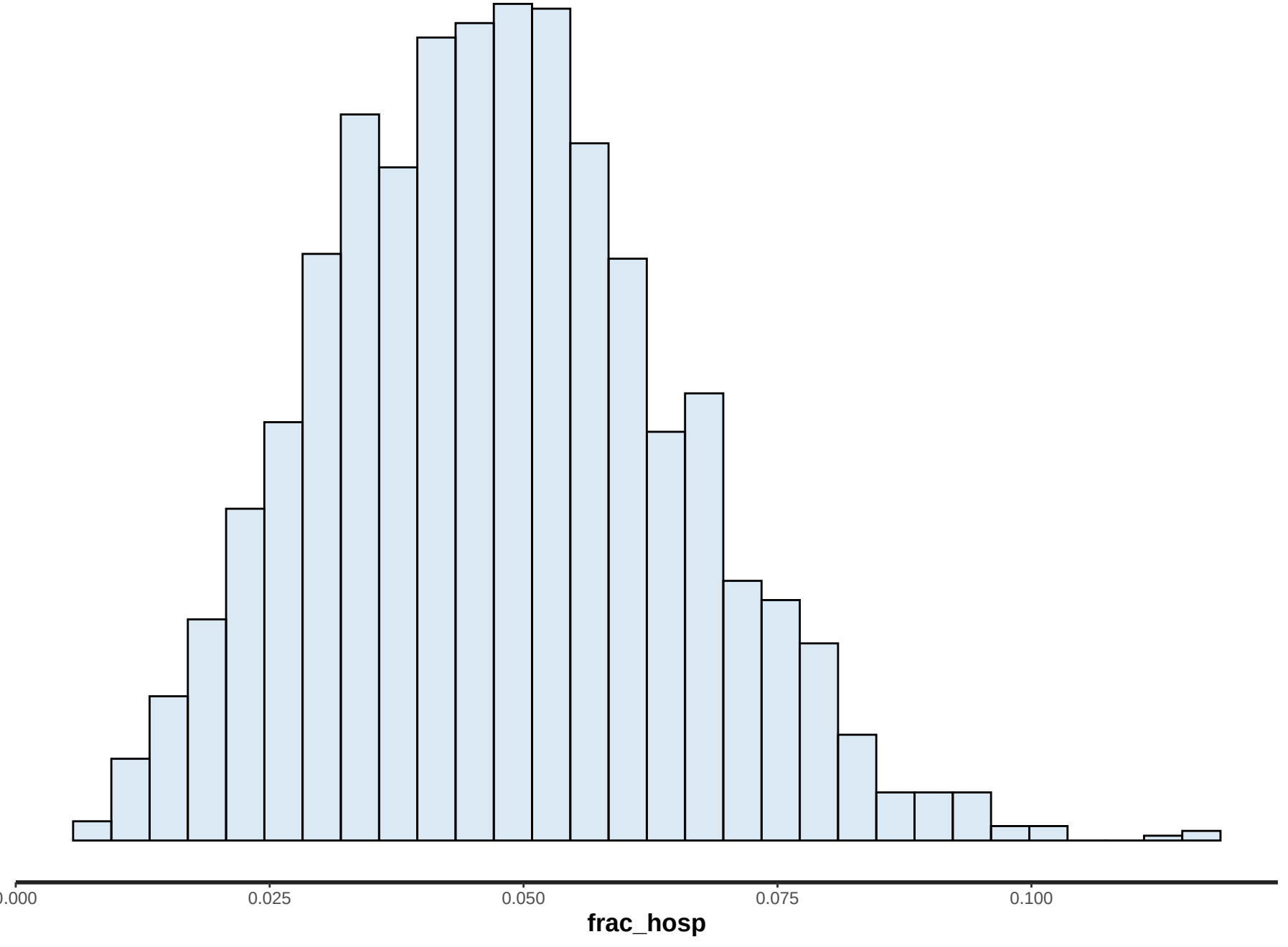

2
3
4
5
6
duration_latent

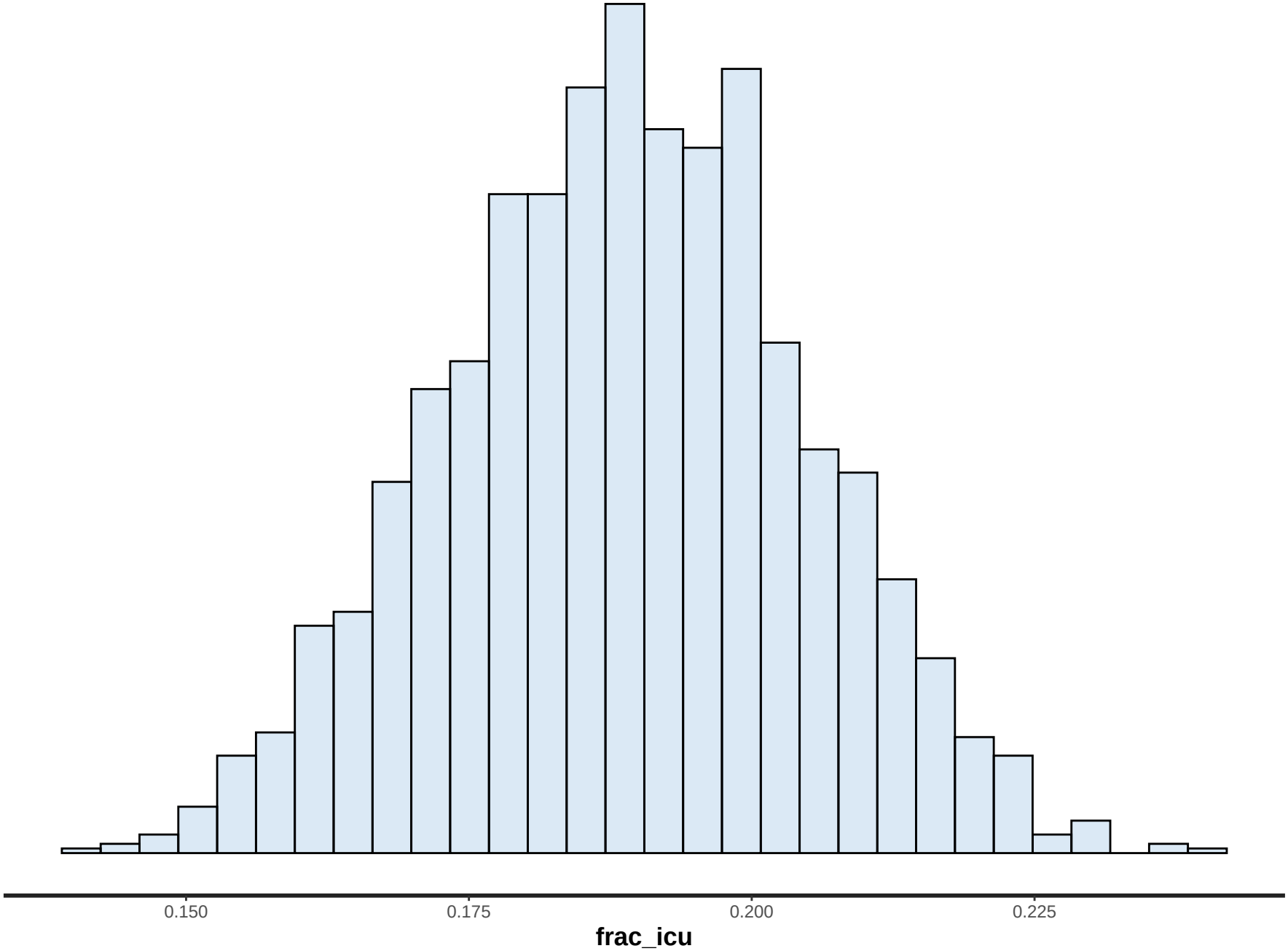

2
4
6
8
duration_rec_mild

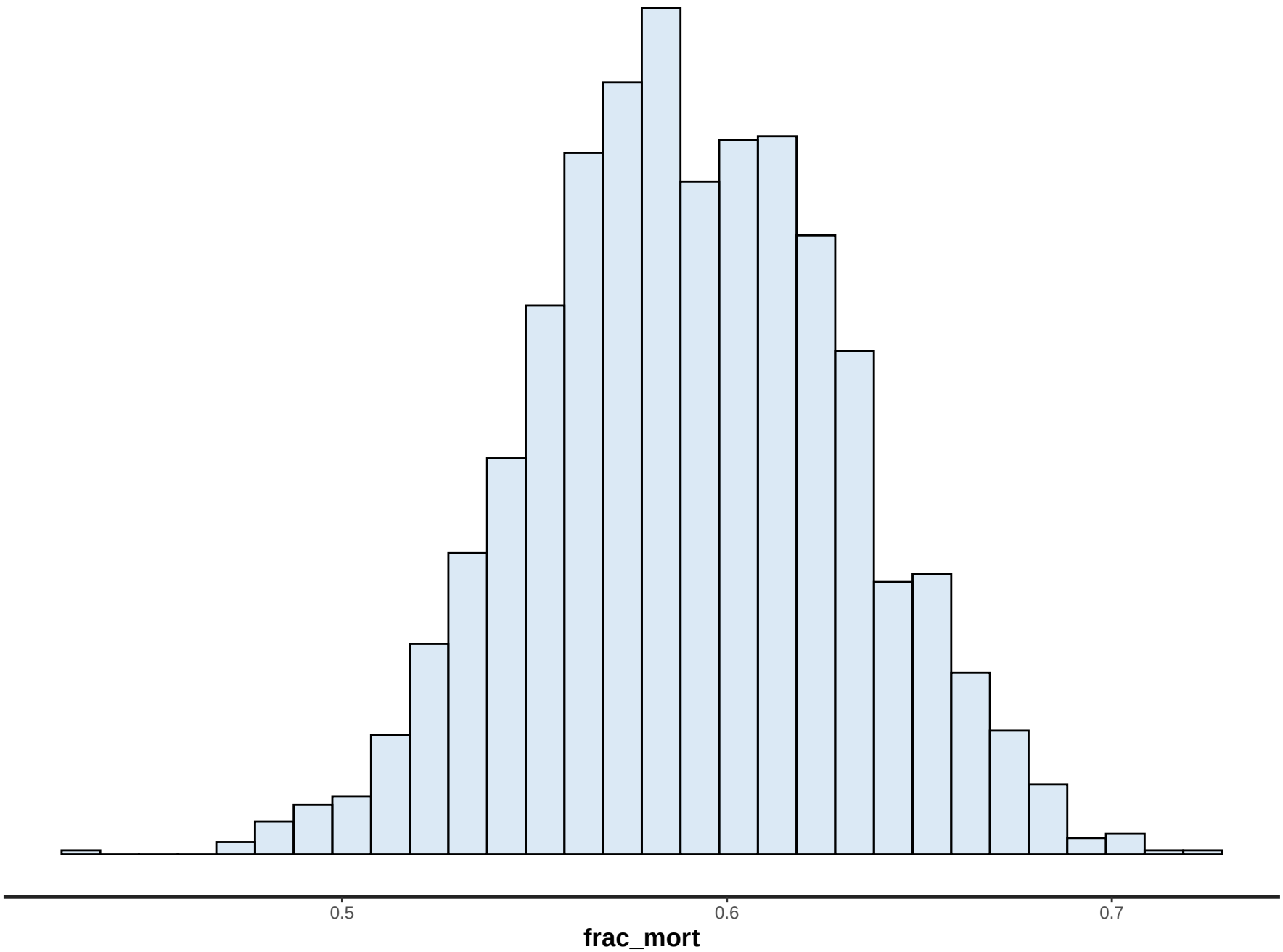

5
10
duration_pre_hosp

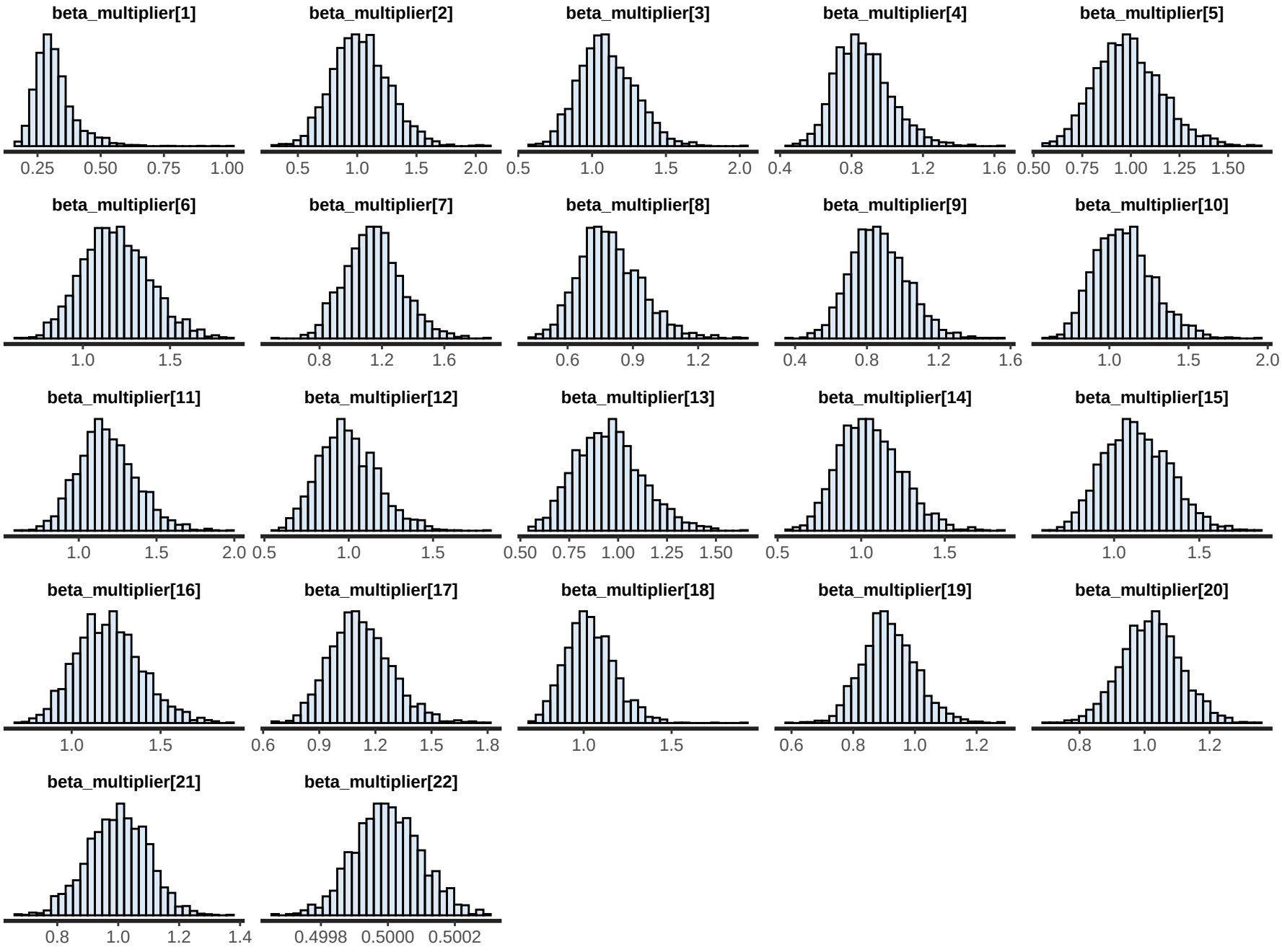

6
8
10
duration_hosp_mod


11
13
15
17
duration_hosp_icu


0.000
0.025
0.050
0.075
0.100
frac_hosp


0.150
0.175
0.200
0.225
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]
0.5 1.0 1.5 2.0
beta_multiplier[4]
0.4 0.8 1.2 1.6
beta_multiplier[5]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[6]
1.0 1.5
beta_multiplier[7]
0.8 1.2 1.6
beta_multiplier[8]
0.6 0.9 1.2
beta_multiplier[9]
0.4 0.8 1.2 1.6
beta_multiplier[10]
1.0 1.5 2.0
beta_multiplier[11]
1.0 1.5 2.0
beta_multiplier[12]
0.5 1.0 1.5
beta_multiplier[13]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[14]
0.5 1.0 1.5
beta_multiplier[15]
1.0 1.5
beta_multiplier[16]
1.0 1.5
beta_multiplier[17]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[18]
1.0 1.5
beta_multiplier[19]
0.6 0.8 1.0 1.2
beta_multiplier[20]
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beta_multiplier[21]
0.8 1.0 1.2 1.4
beta_multiplier[22]
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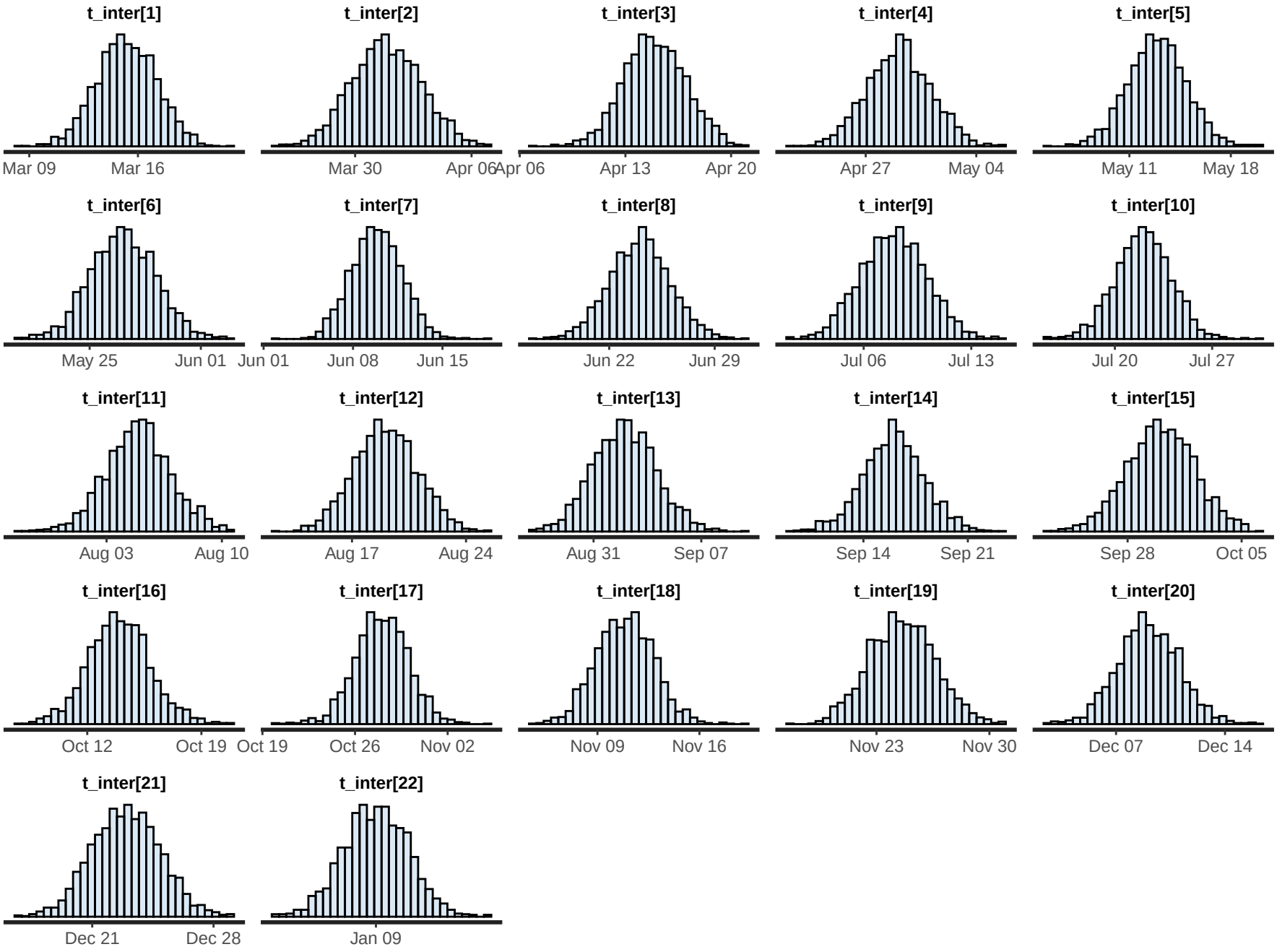
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Mar 09
Mar 16
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Mar 30
Apr 06
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Apr 13
Apr 20
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Apr 27
May 04
t_inter[5]
May 11
May 18
t_inter[6]
May 25
Jun 01
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Jun 01
Jun 08
Jun 15
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Jun 22
Jun 29
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Jul 06
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Jul 20
Jul 27
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Aug 31
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Oct 19
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Oct 19
Oct 26
Nov 02
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Nov 09
Nov 16
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Nov 30
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Dec 07
Dec 14
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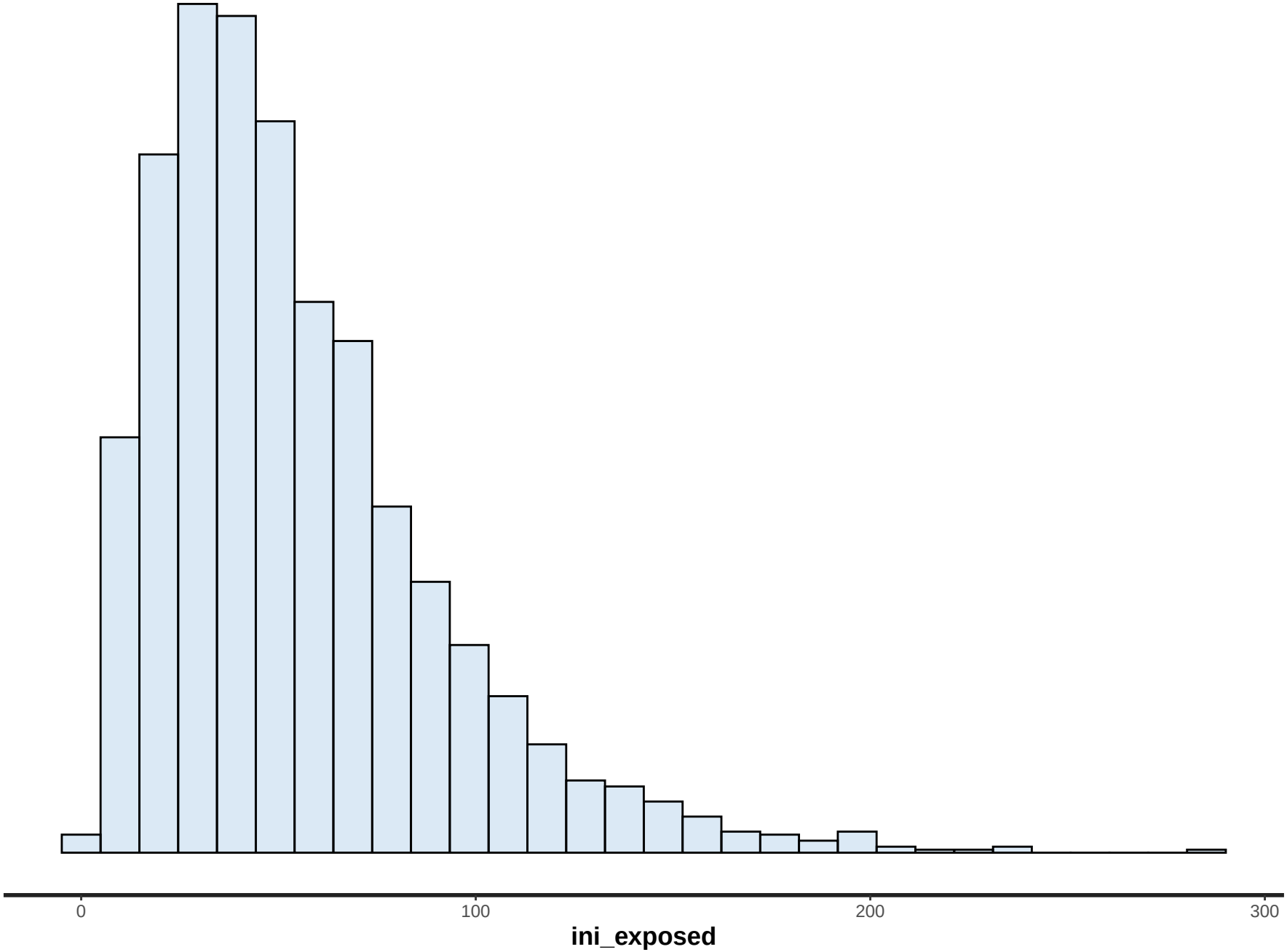
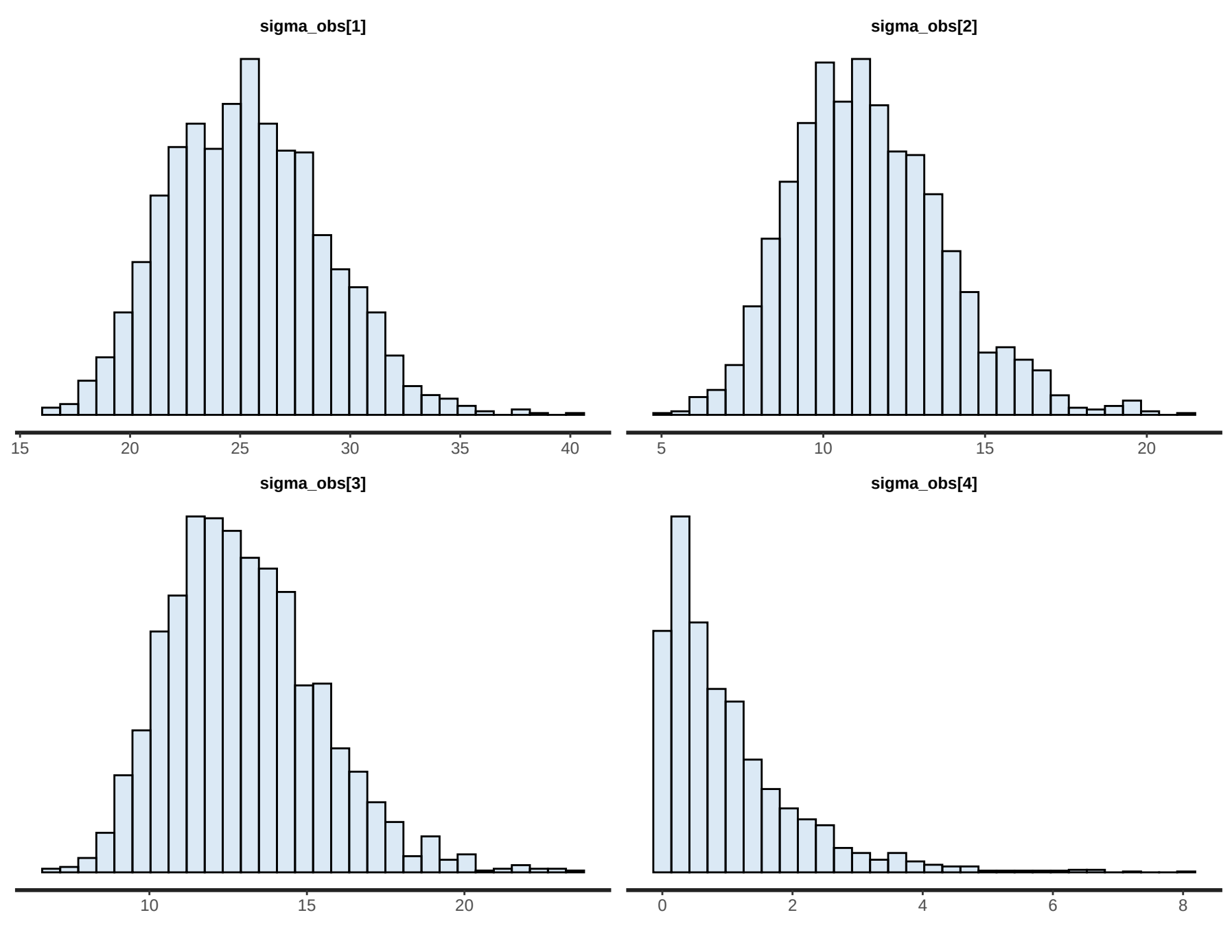
Dec 21
Dec 28
t_inter[22]
Jan 09


0
100
200
300
ini_exposed


sigma_obs[1]
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20
25
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20
sigma_obs[4]
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4
6
8