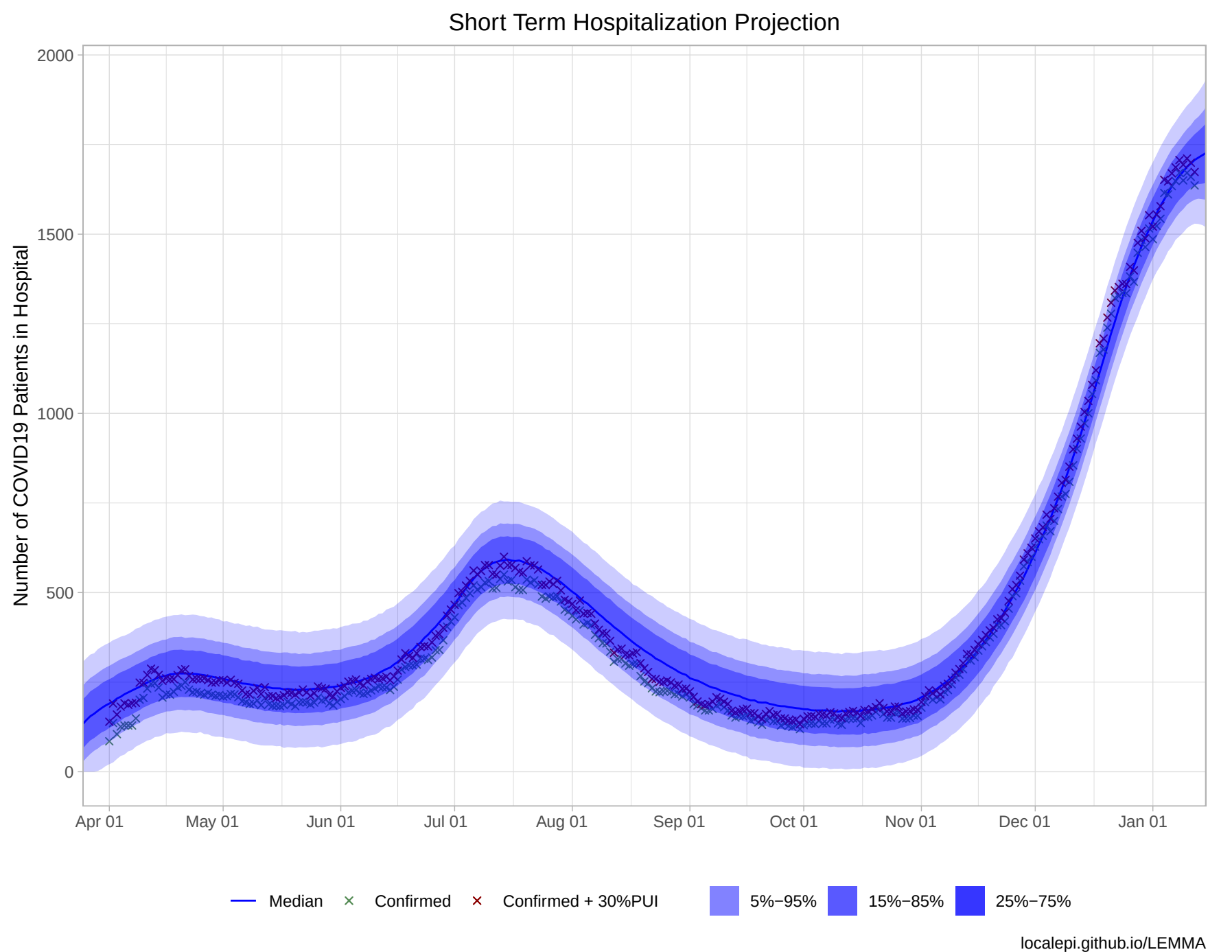
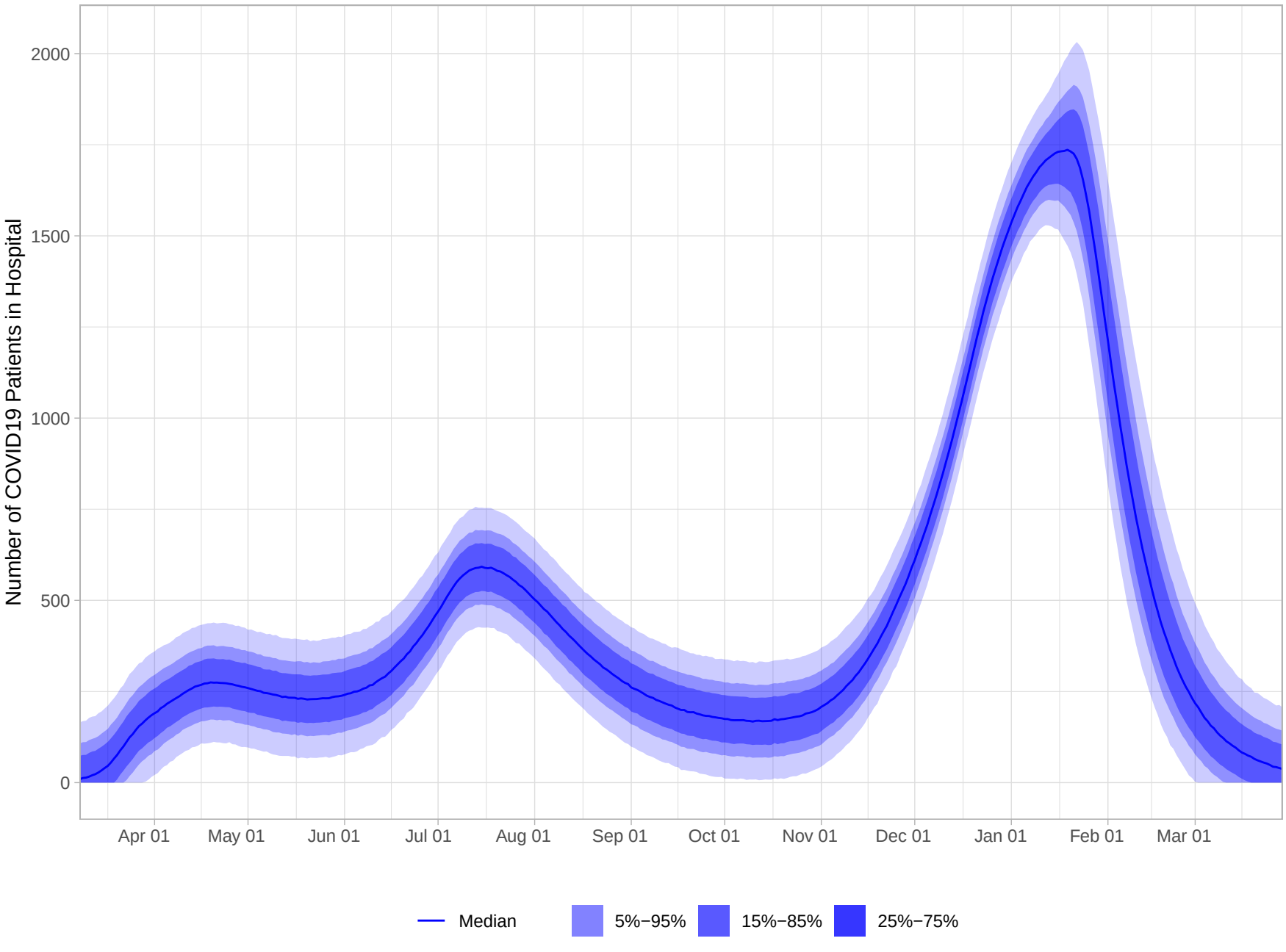
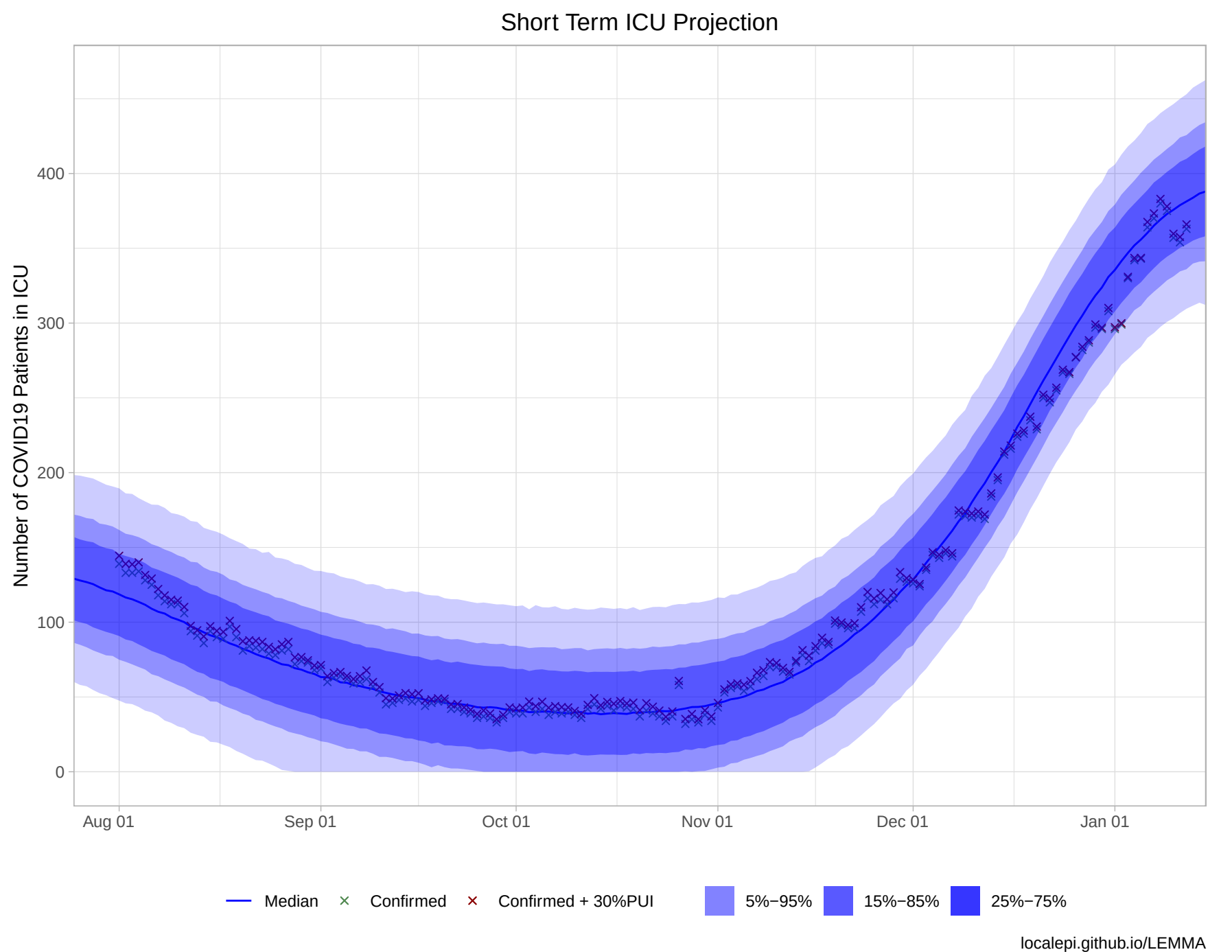
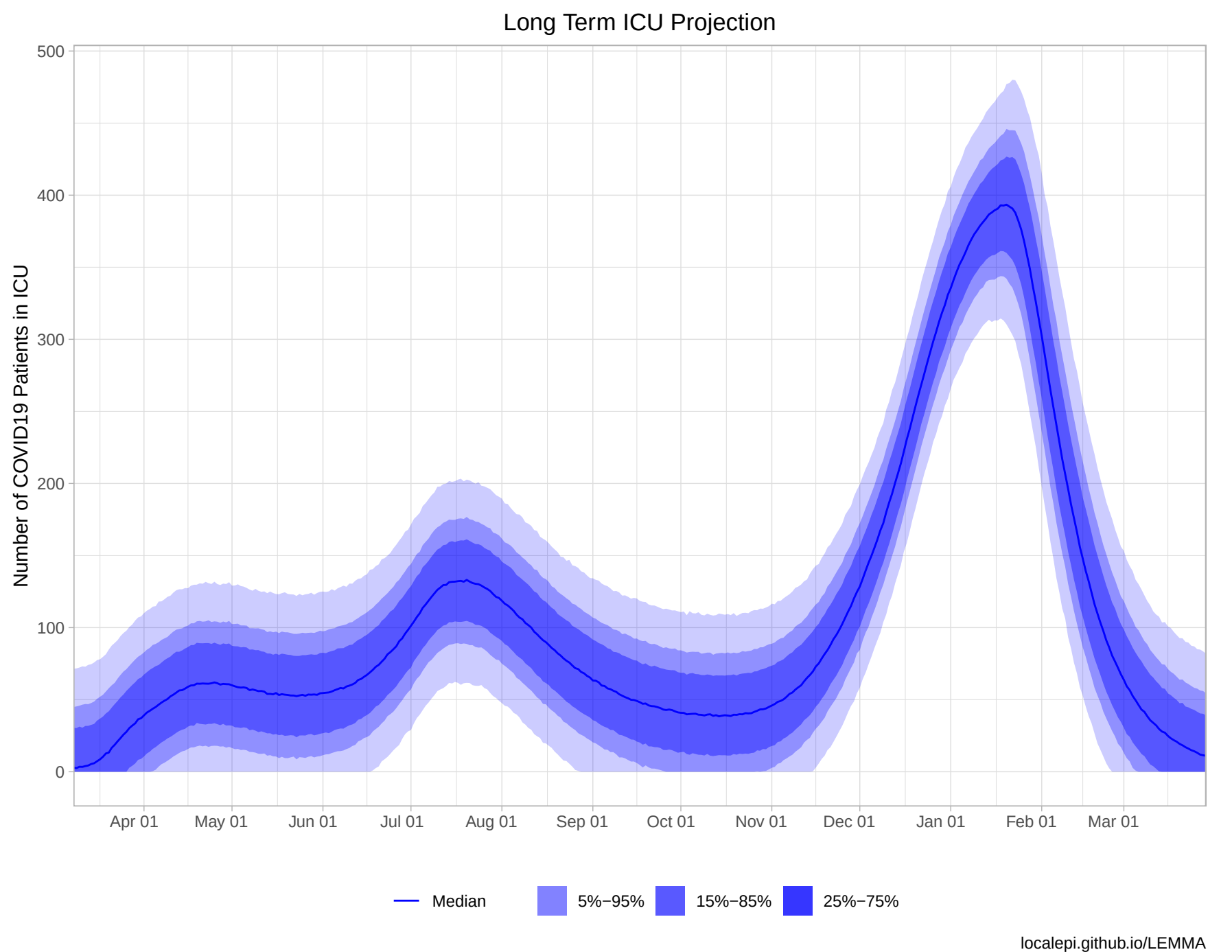
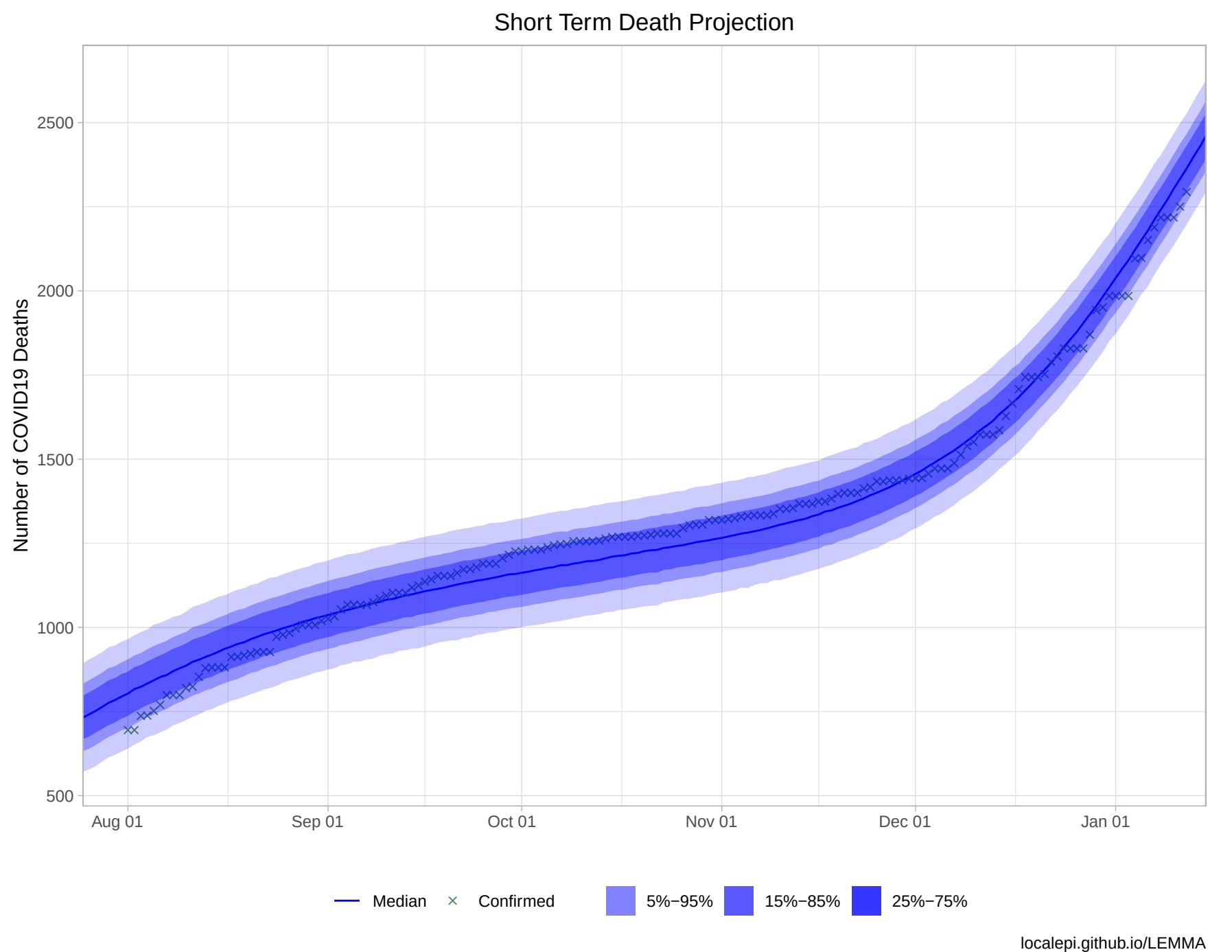
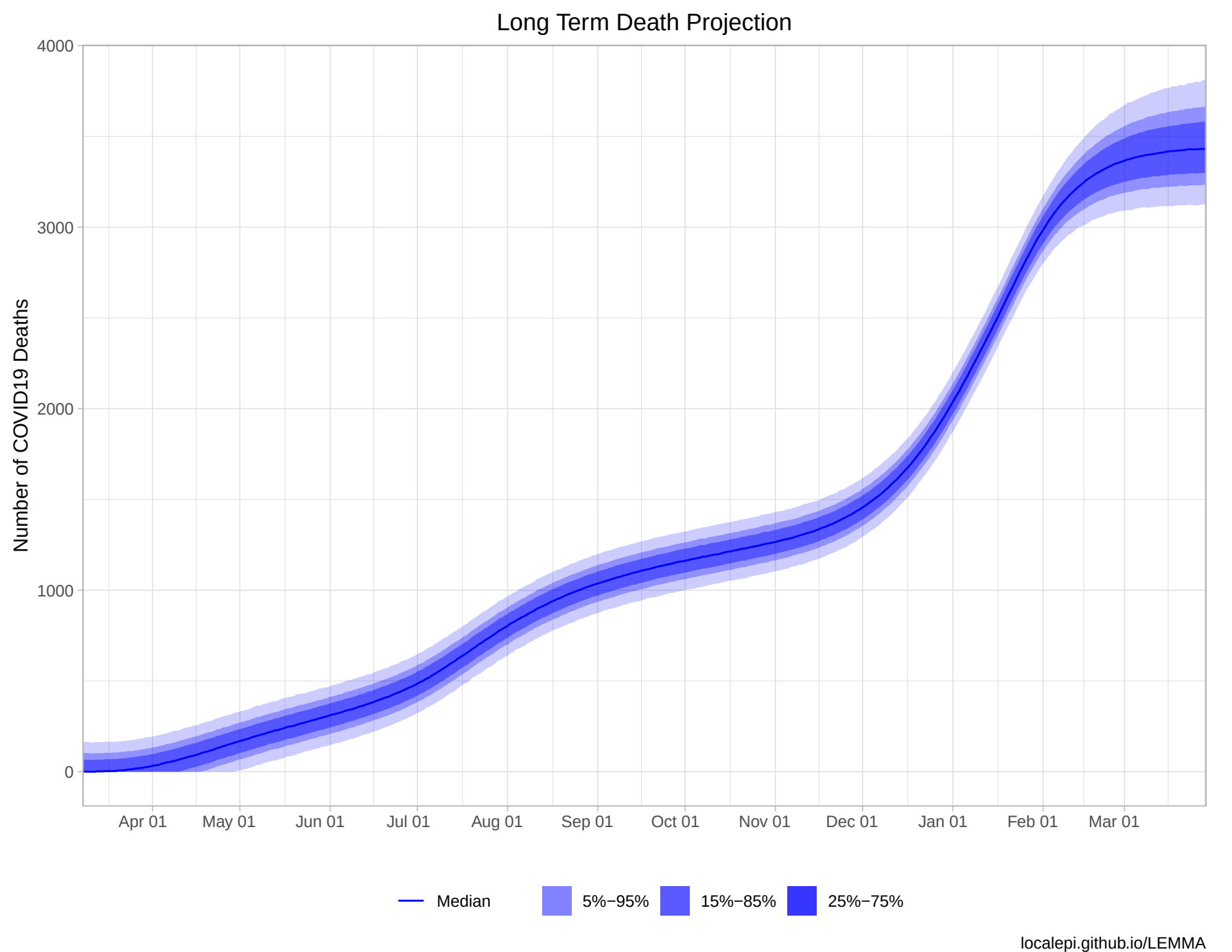

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
2000
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

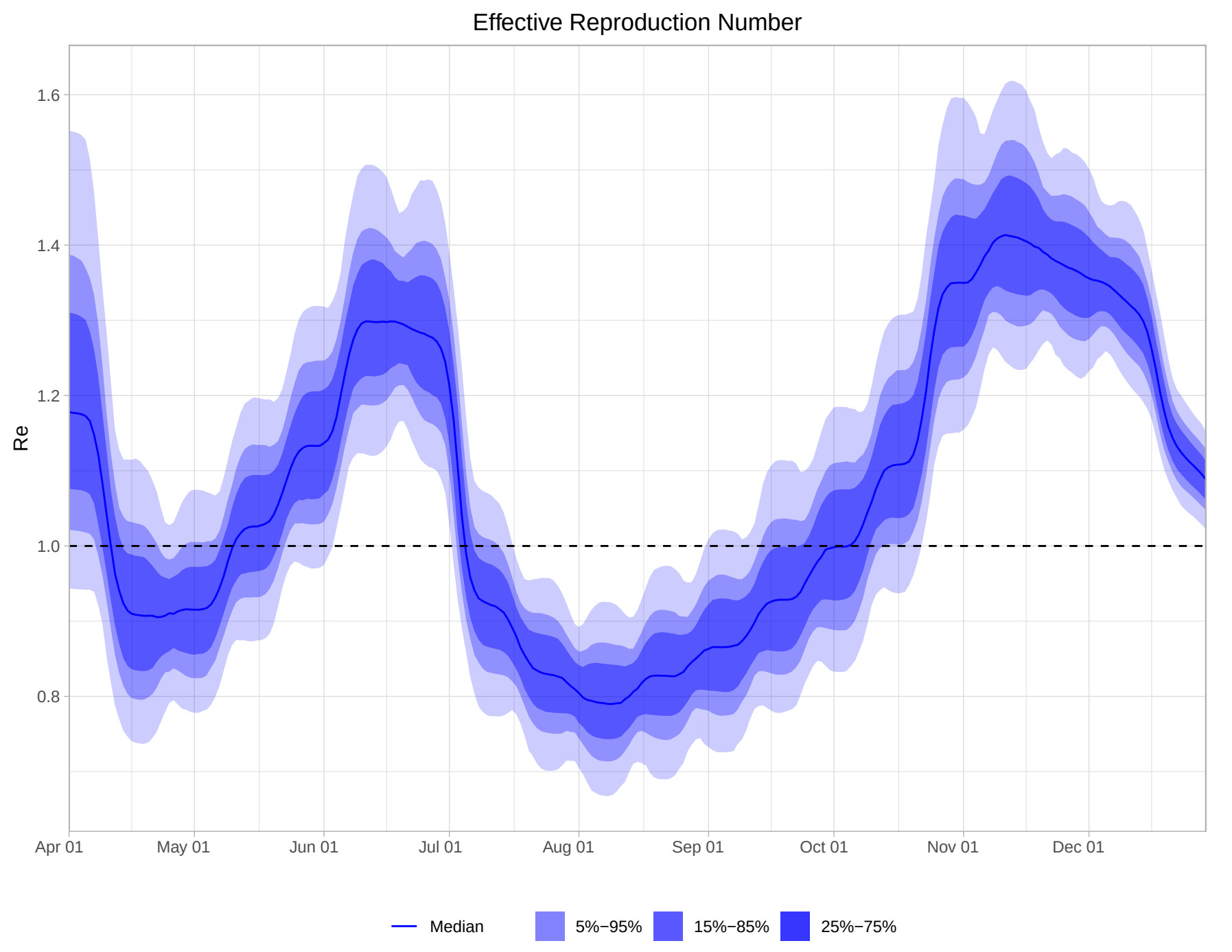

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
2000
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
0
100
200
300
400
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 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
500
400
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
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

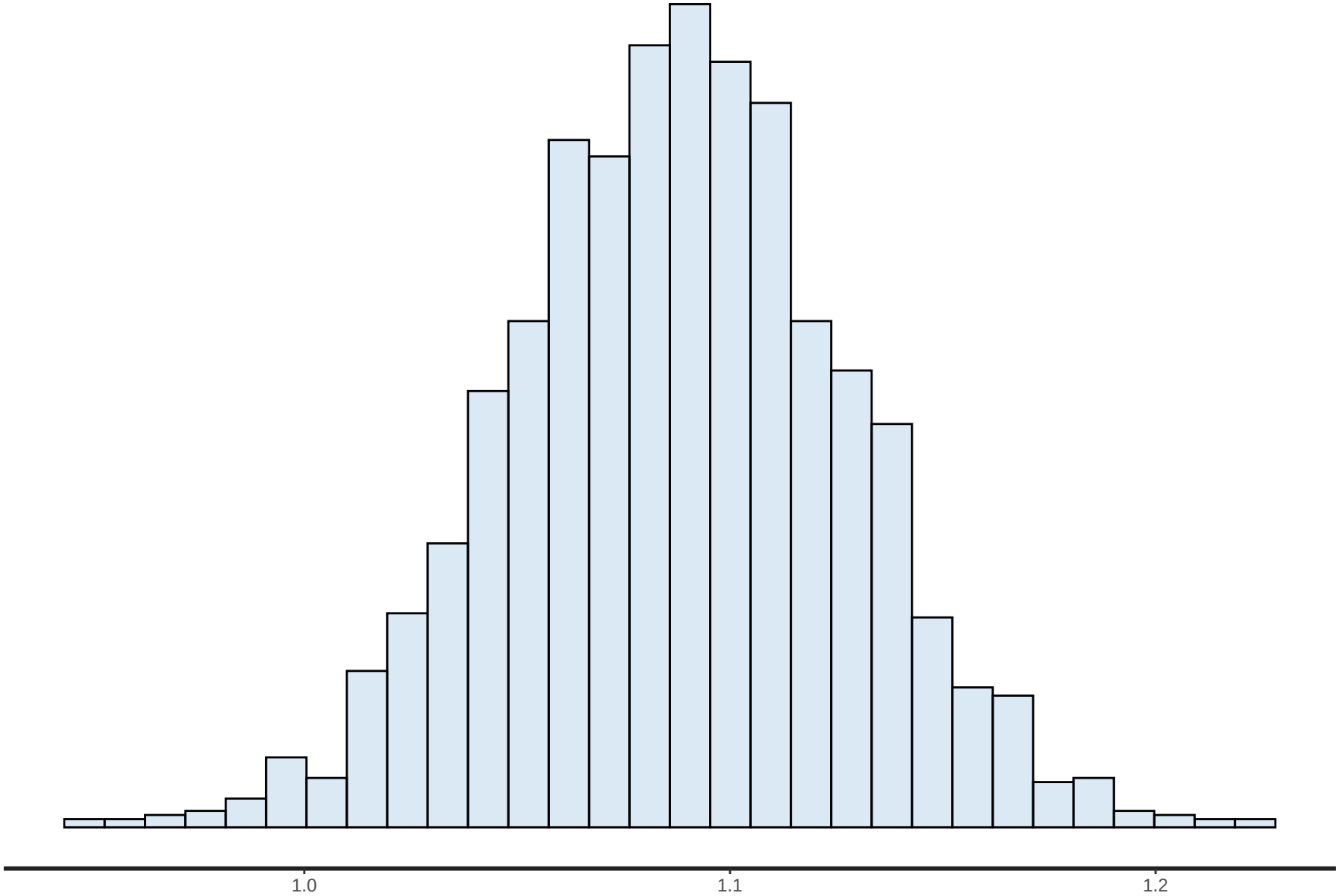

Short Term Death Projection
Number of COVID19 Deaths
2500
2000
1500
1000
500
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

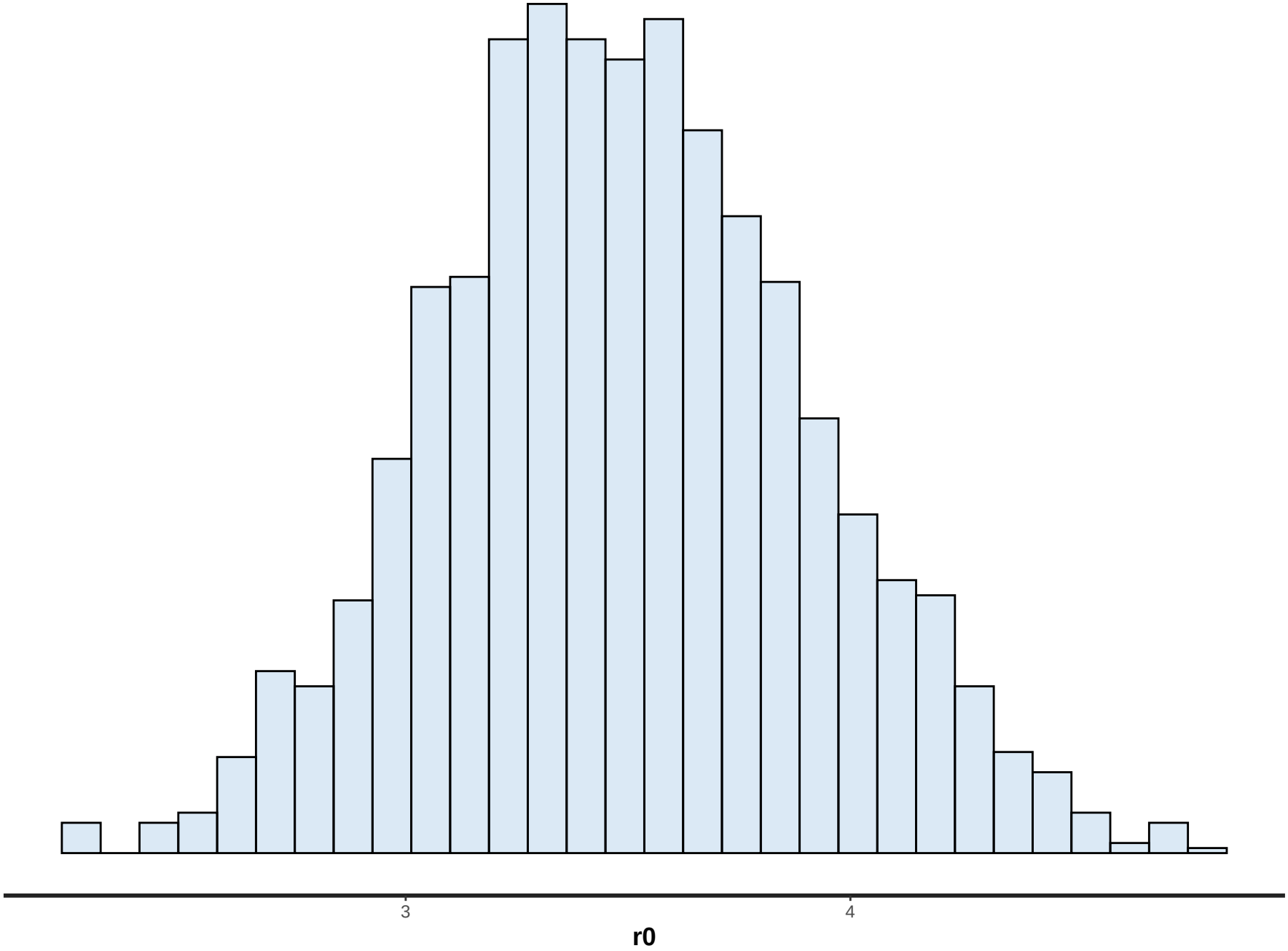

Long Term Death Projection
Number of COVID19 Deaths
4000
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

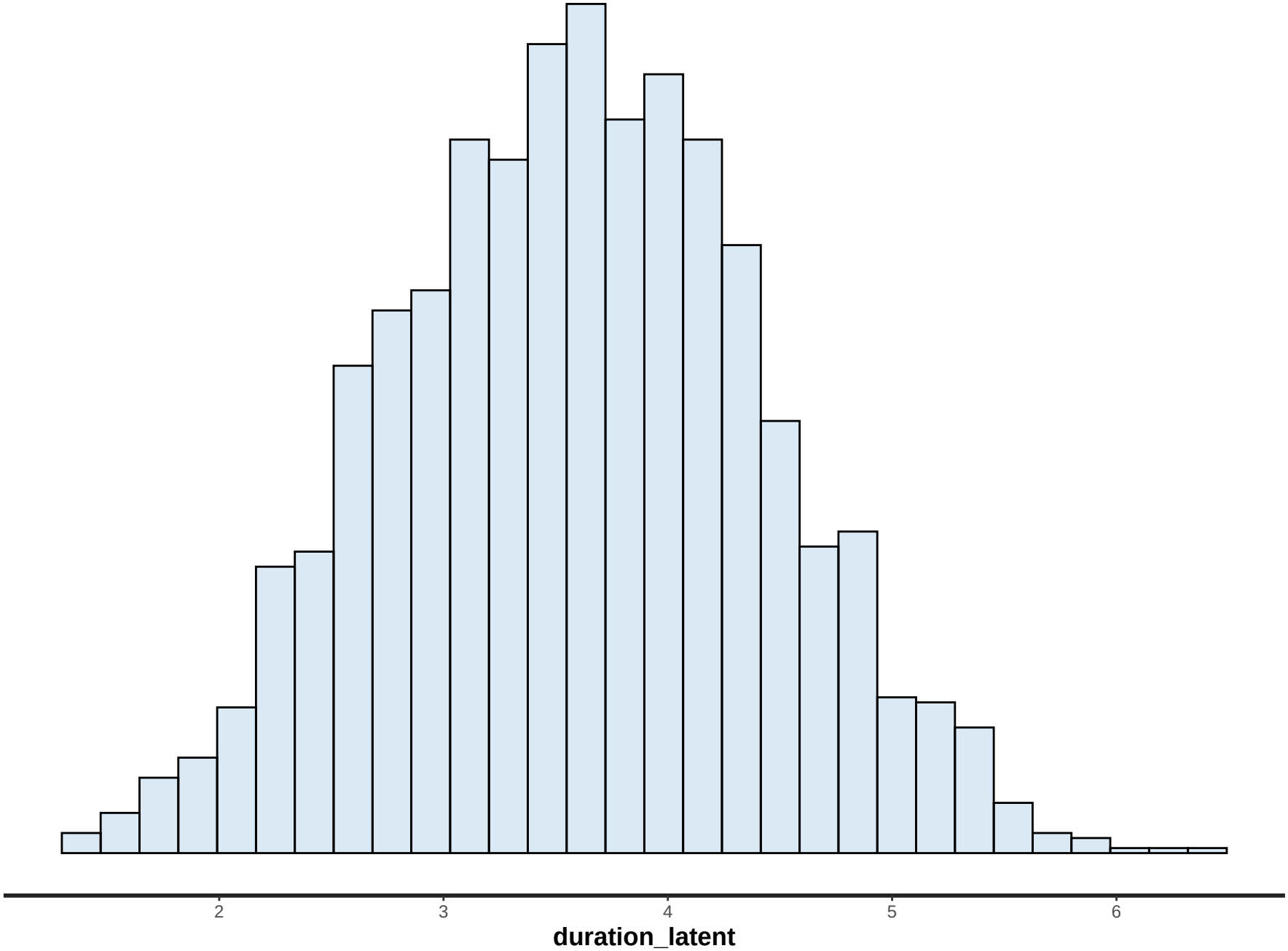

Effective Reproduction Number
Re
1.6
1.4
1.2
1.0
0.8
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

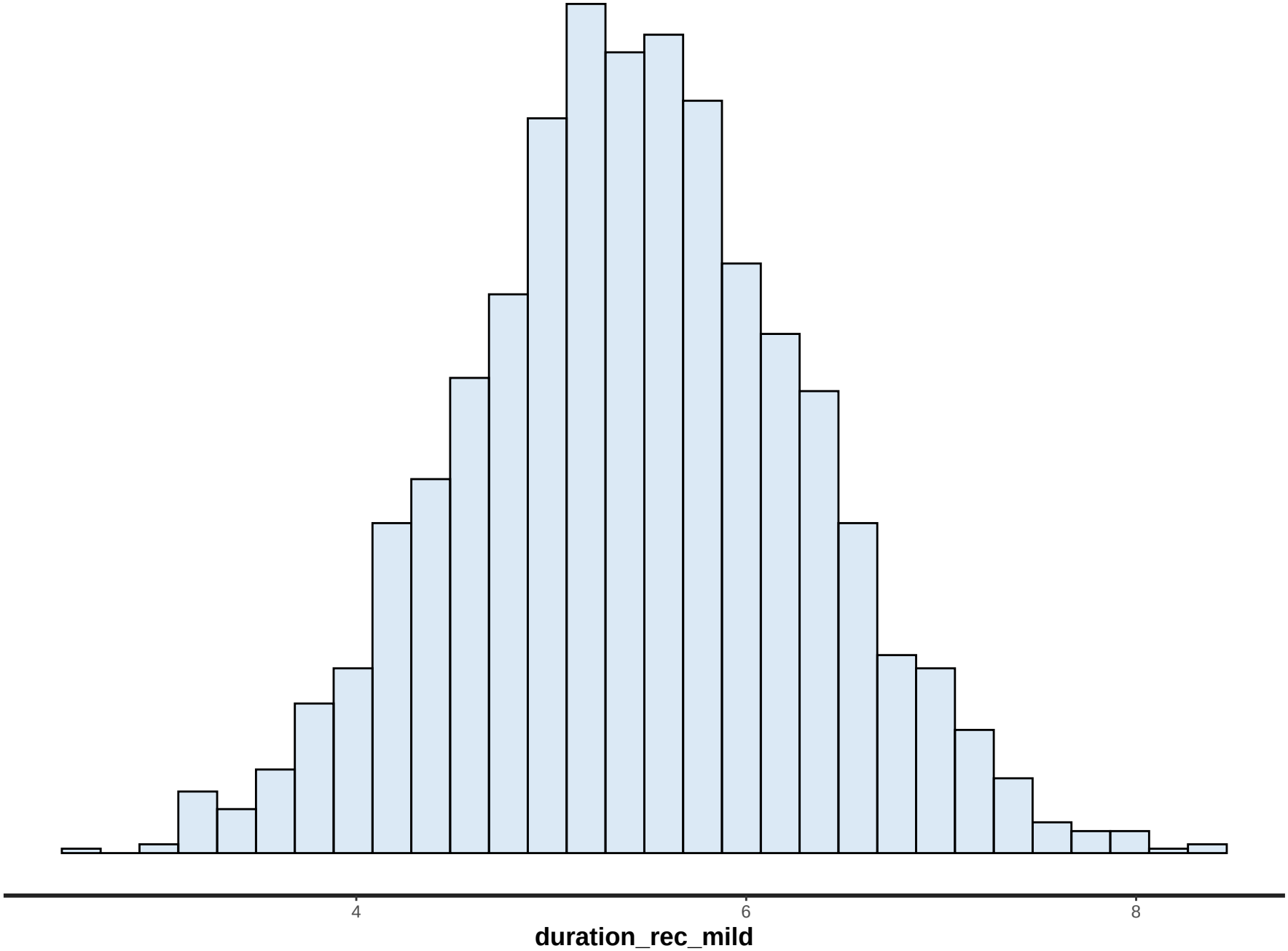
Rt as of 2020−12−29

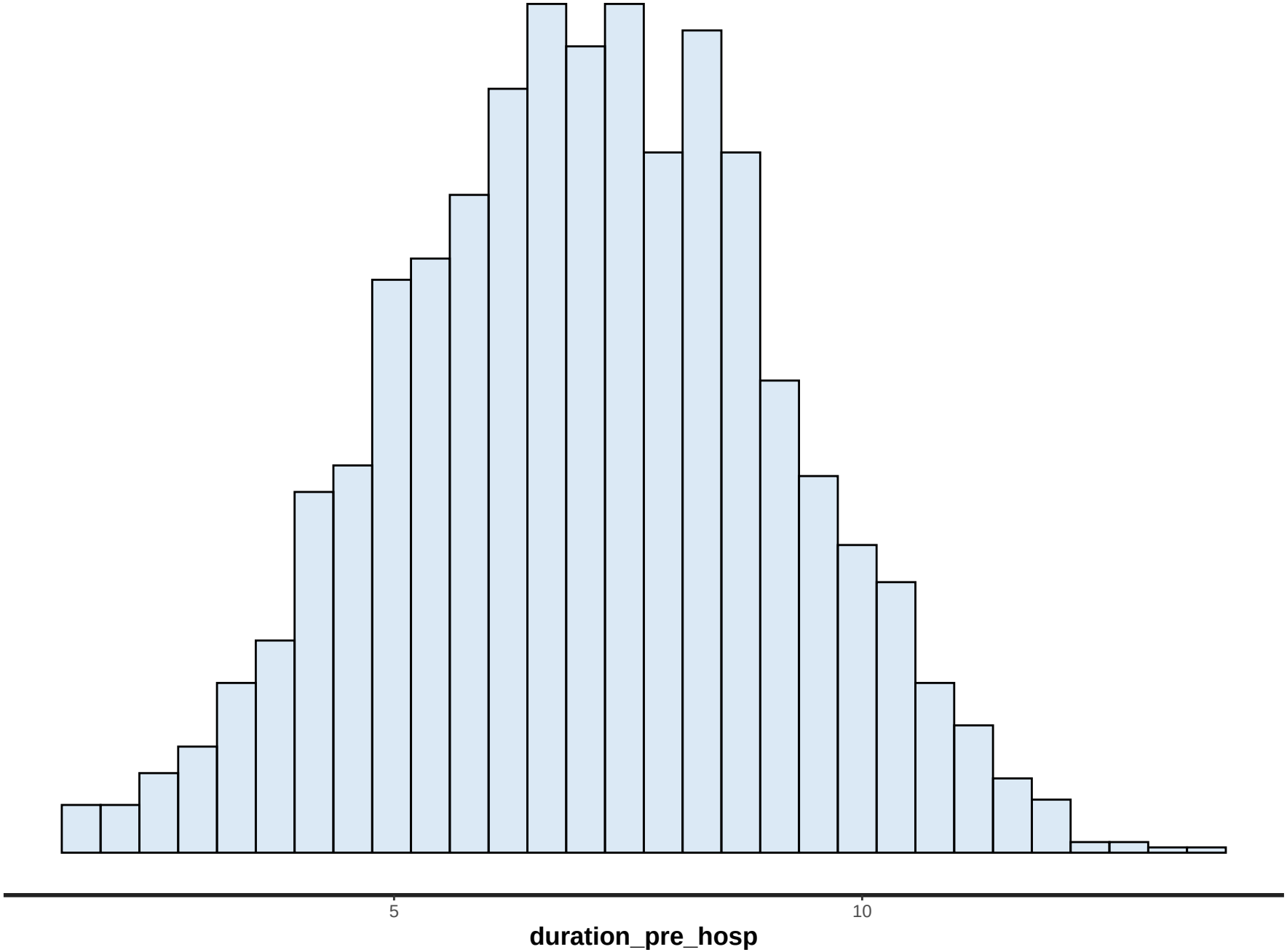
5%	10%	25%	50%	75%	90%	95%
1.02	1.04	1.06	1.09	1.11	1.14	1.15

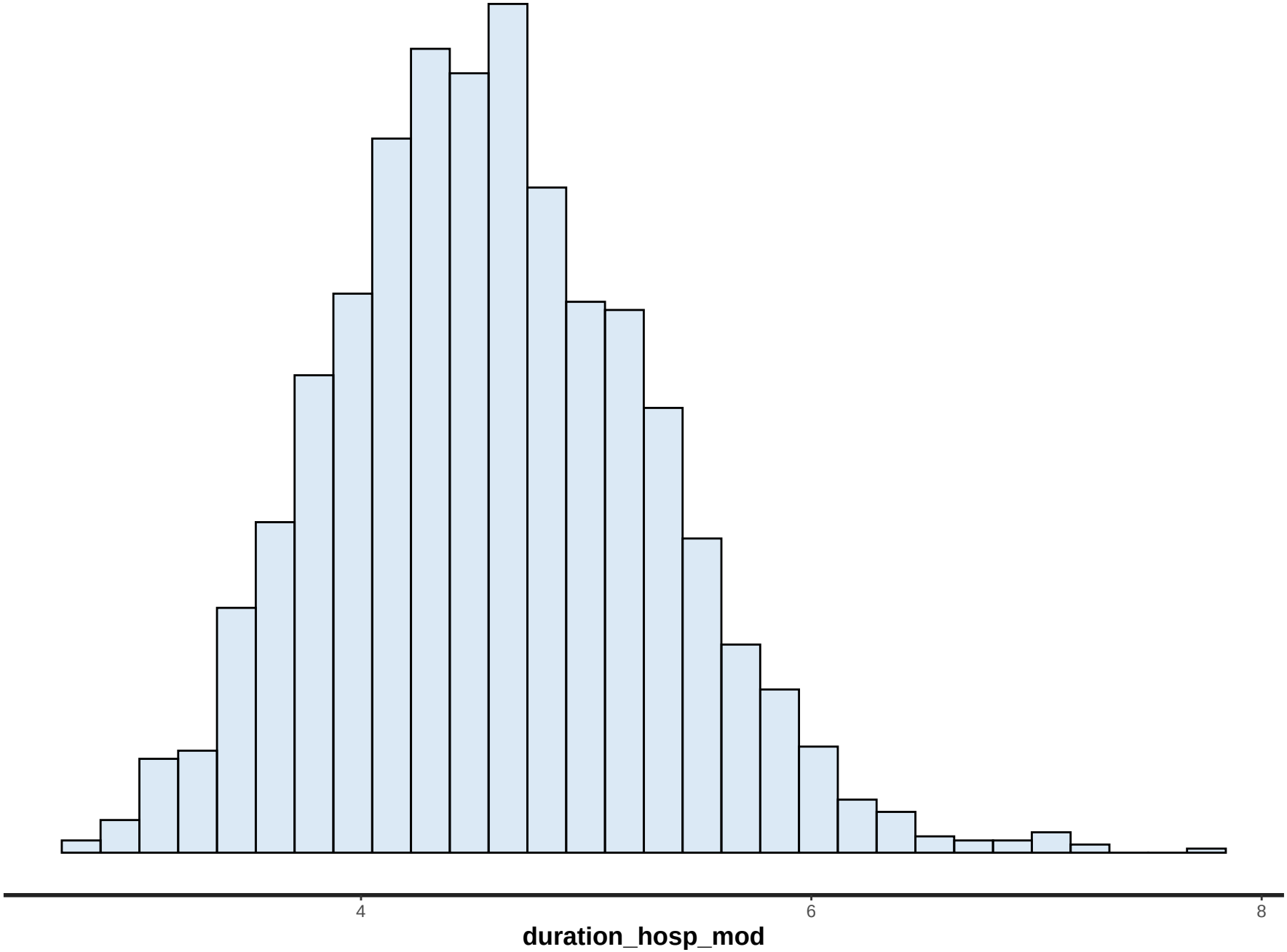


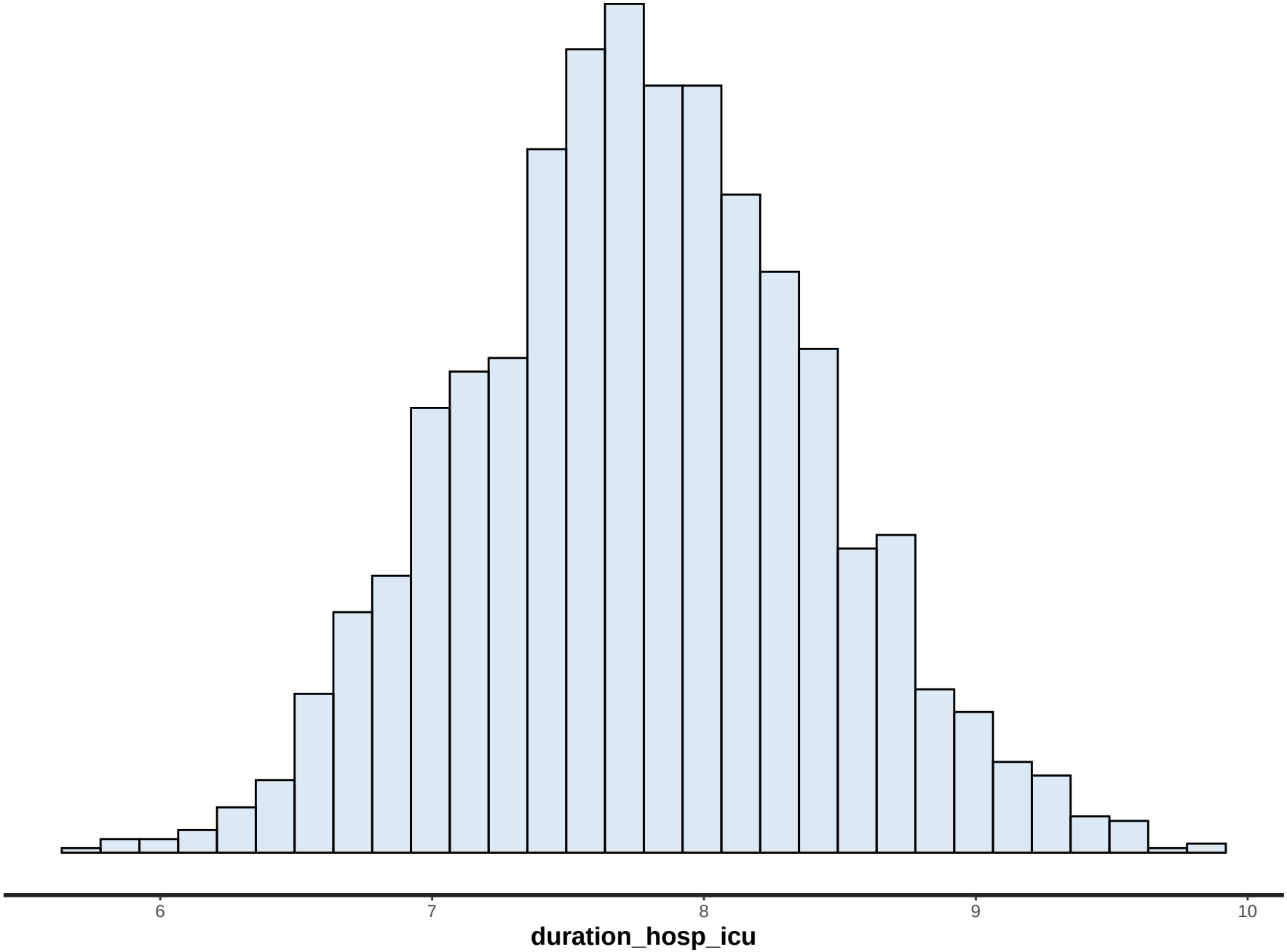

3
4
r0

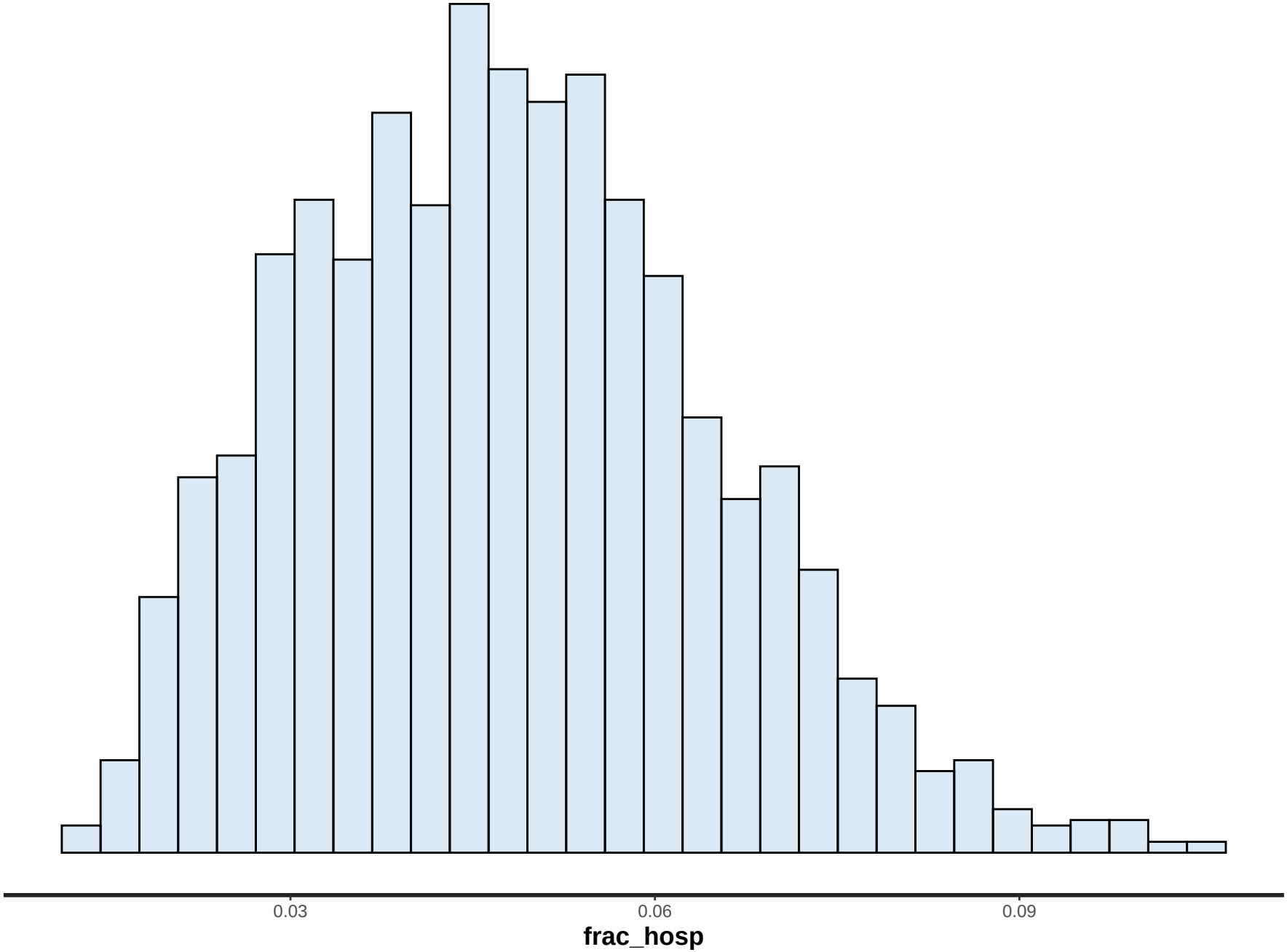

2
3
4
5
6
duration_latent

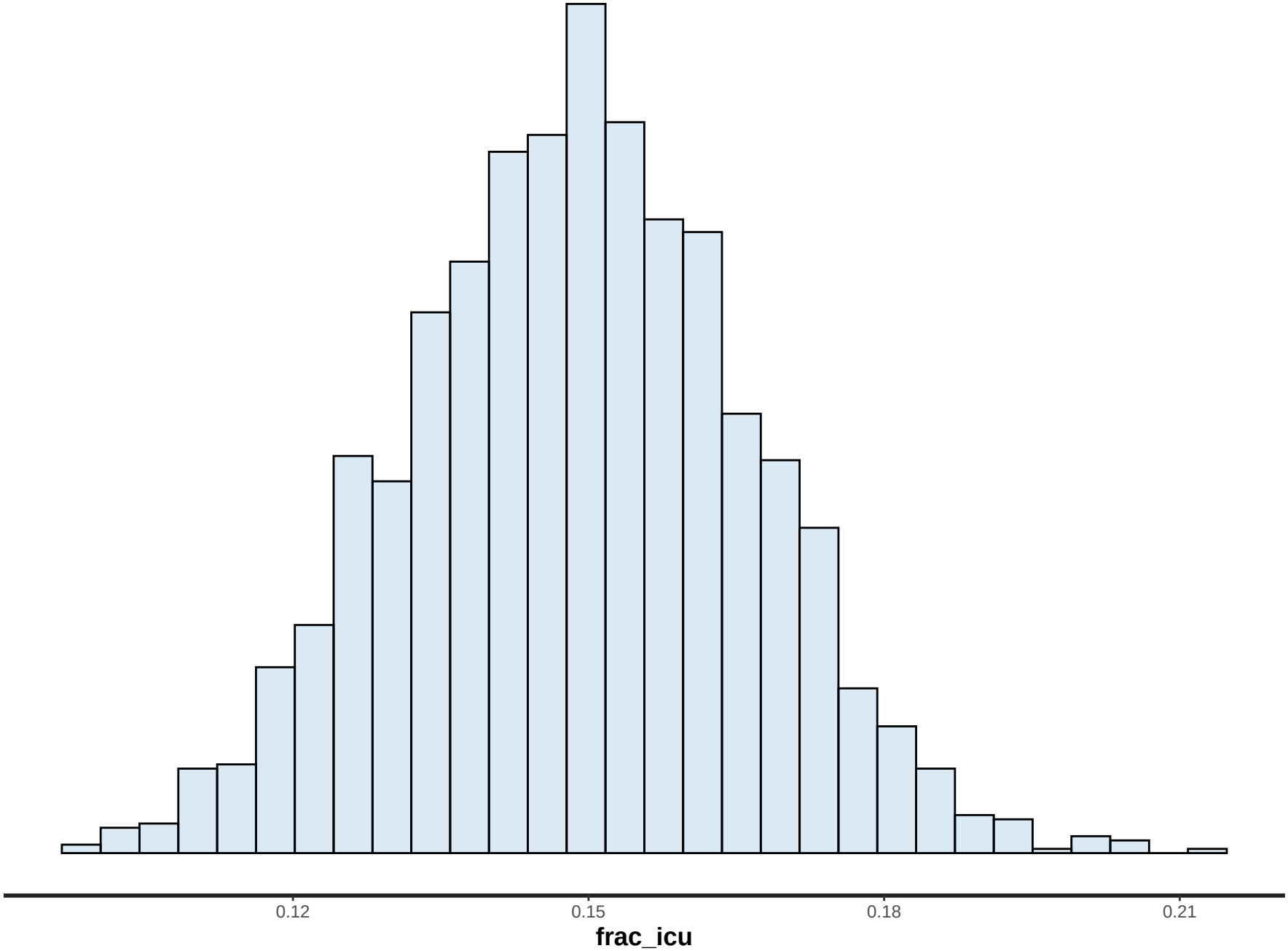

4
6
8
duration_rec_mild

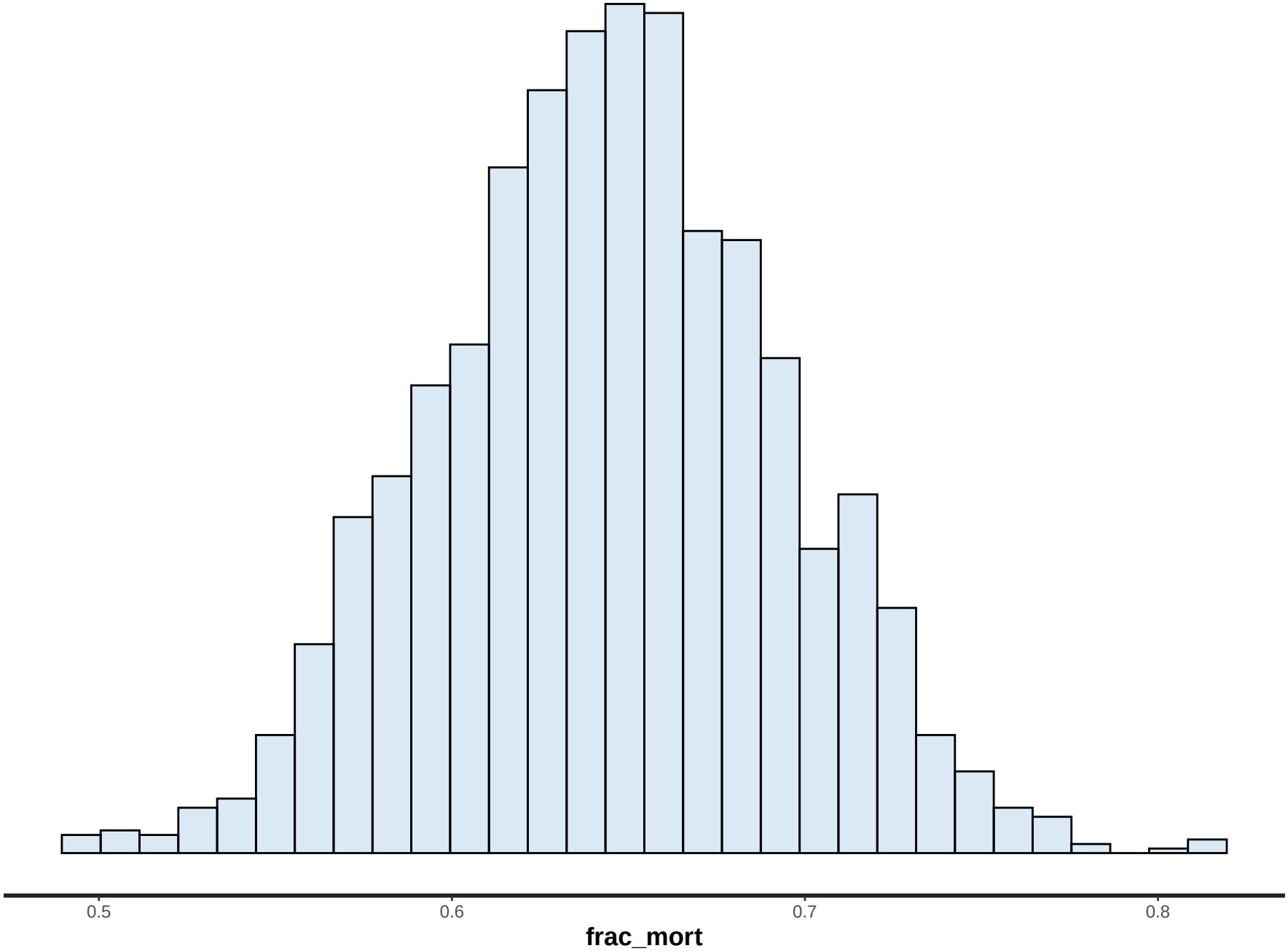

5
10
duration_pre_hosp

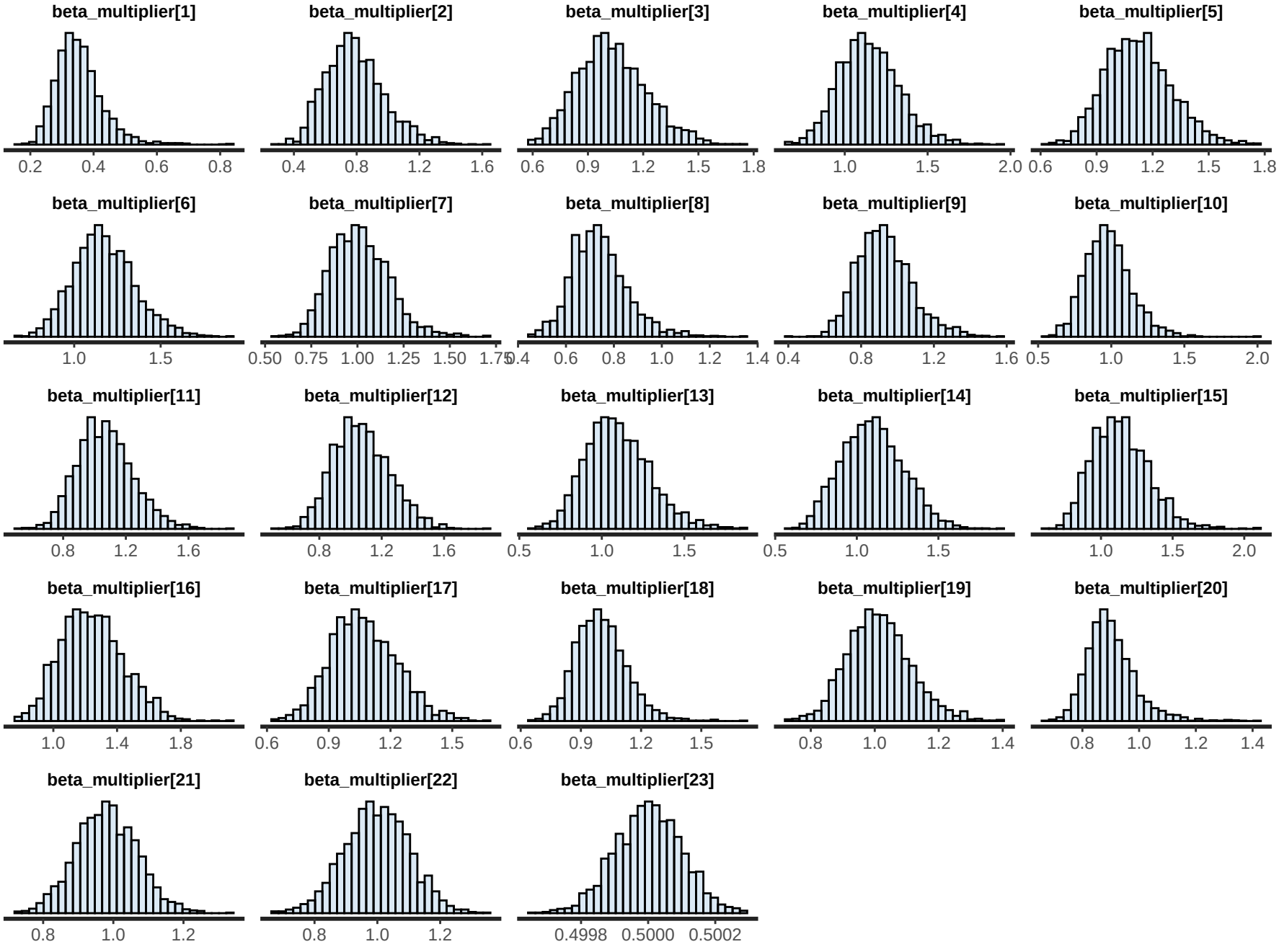

4
6
8
duration_hosp_mod


6
7
8
9
10
duration_hosp_icu


0.03
0.06
0.09
frac_hosp


0.12
0.15
0.18
0.21
frac_icu


0.5
0.6
0.7
0.8
frac_mort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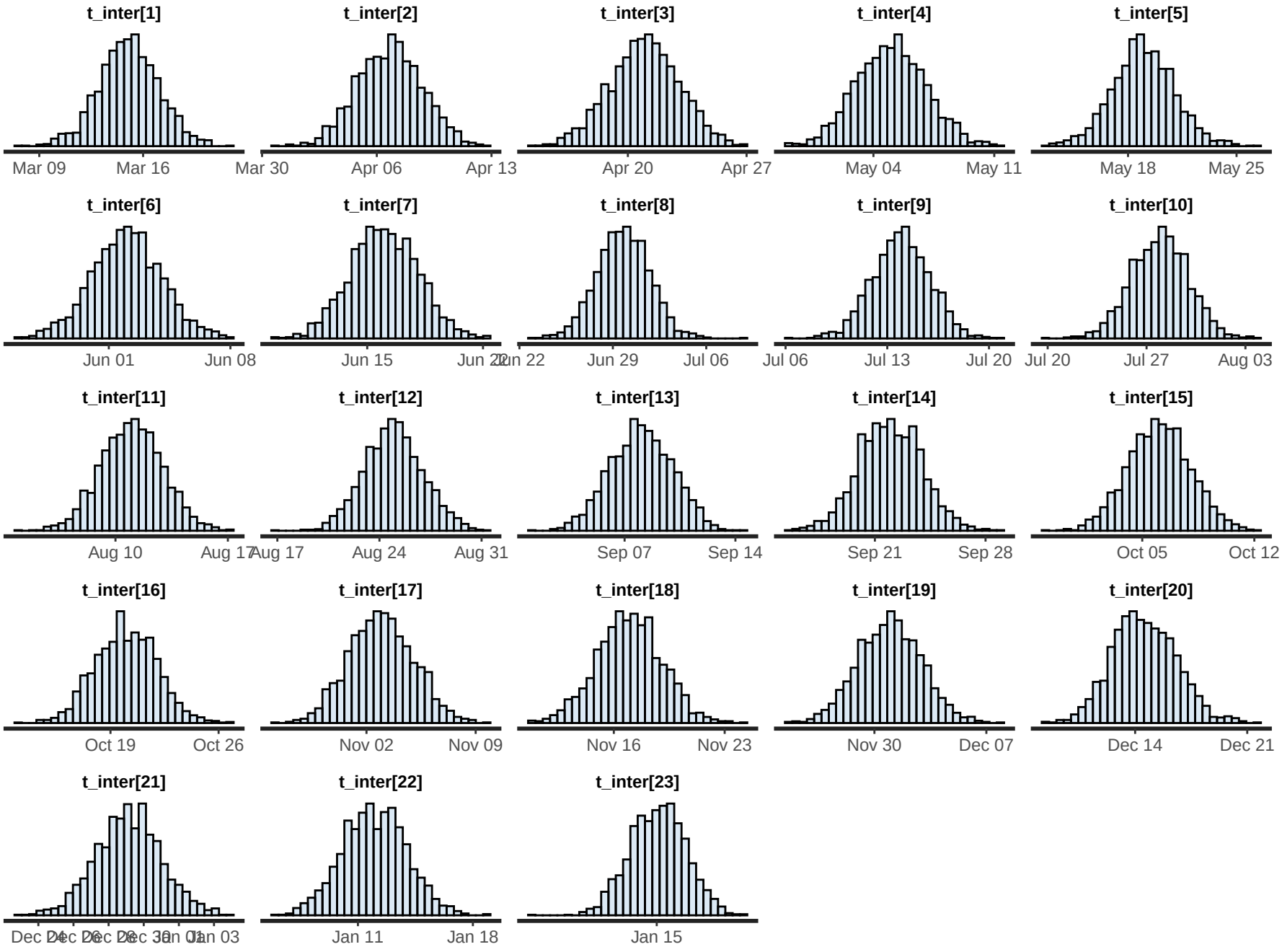
0.2 0.4 0.6 0.8
beta_multiplier[2]
0.4 0.8 1.2 1.6
beta_multiplier[3]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[4]
1.0 1.5 2.0
beta_multiplier[5]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[6]
1.0 1.5
beta_multiplier[7]
0.50 0.75 1.00 1.25 1.50 1.75
beta_multiplier[8]
0.4 0.6 0.8 1.0 1.2 1.4
beta_multiplier[9]
0.4 0.8 1.2 1.6
beta_multiplier[10]
0.5 1.0 1.5 2.0
beta_multiplier[11]
0.8 1.2 1.6
beta_multiplier[12]
0.8 1.2 1.6
beta_multiplier[13]
0.5 1.0 1.5
beta_multiplier[14]
0.5 1.0 1.5
beta_multiplier[15]
1.0 1.5 2.0
beta_multiplier[16]
1.0 1.4 1.8
beta_multiplier[17]
0.6 0.9 1.2 1.5
beta_multiplier[18]
0.6 0.9 1.2 1.5
beta_multiplier[19]
0.8 1.0 1.2 1.4
beta_multiplier[20]
0.8 1.0 1.2 1.4
beta_multiplier[21]
0.8 1.0 1.2
beta_multiplier[22]
0.8 1.0 1.2
beta_multiplier[23]
0.4998 0.5000 0.5002


t_inter[1]
Mar 09
Mar 16
t_inter[2]
Mar 30
Apr 06
Apr 13
t_inter[3]
Apr 20
Apr 27
t_inter[4]
May 04
May 11
t_inter[5]
May 18
May 25
t_inter[6]
Jun 01
Jun 08
t_inter[7]
Jun 15
Jun 22
t_inter[8]
Jun 22
Jun 29
Jul 06
t_inter[9]
Jul 06
Jul 13
Jul 20
t_inter[10]
Jul 20
Jul 27
Aug 03
t_inter[11]
Aug 10
Aug 17
t_inter[12]
Aug 17
Aug 24
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Oct 05
Oct 12
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Oct 19
Oct 26
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Nov 02
Nov 09
t_inter[18]
Nov 16
Nov 23
t_inter[19]
Nov 30
Dec 07
t_inter[20]
Dec 14
Dec 21
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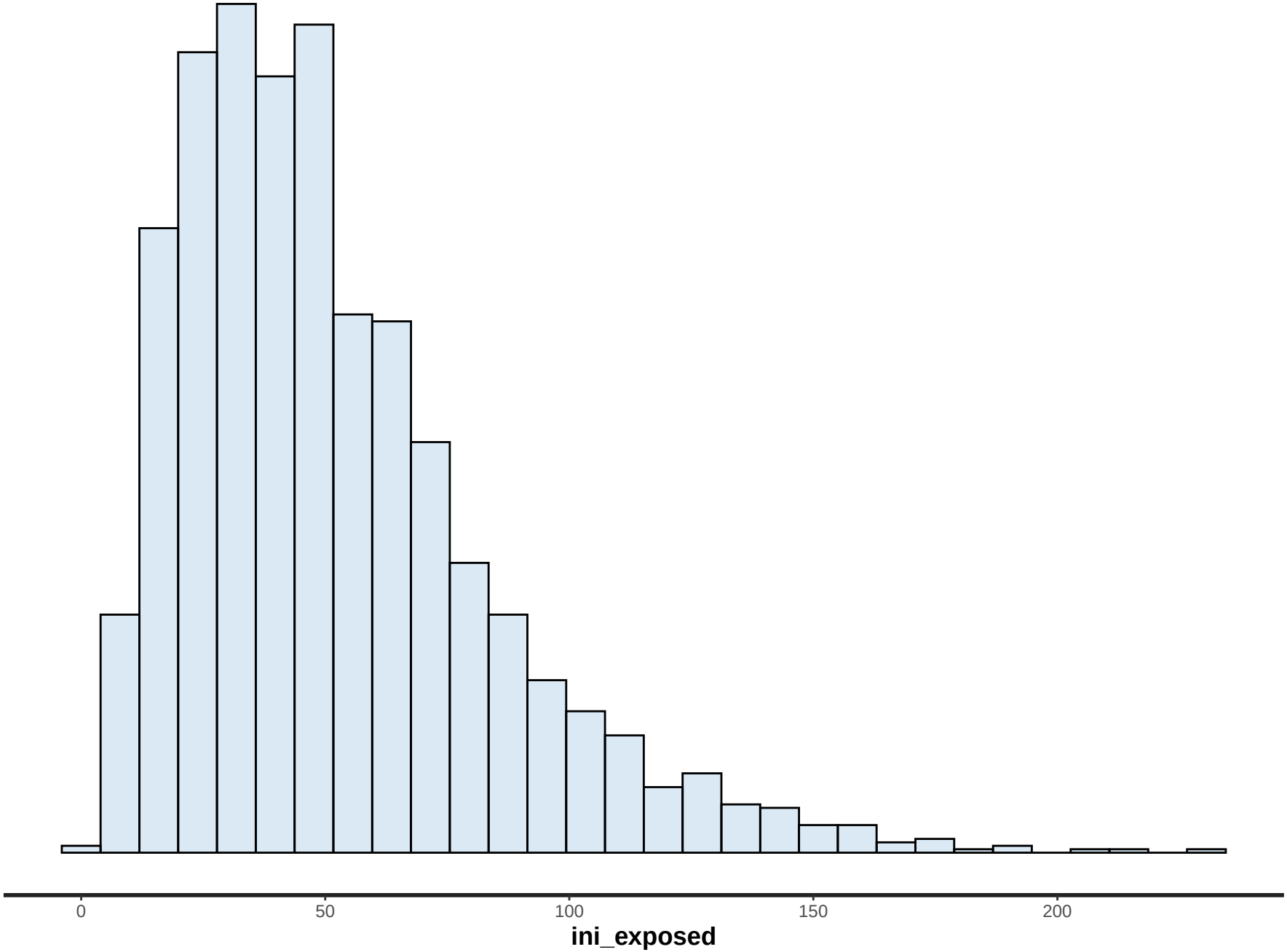
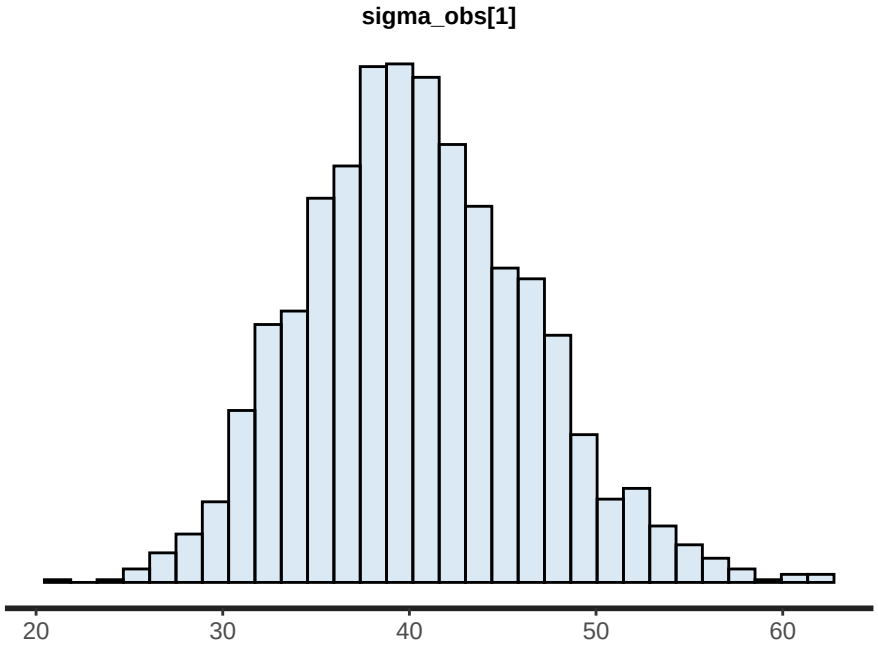
Dec 24
Dec 26
Dec 28
Dec 30
Jan 01
Jan 03
t_inter[22]
Jan 11
Jan 18
t_inter[23]
Jan 15


0
50
100
150
200
ini_exposed


sigma_obs[1]
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30
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50
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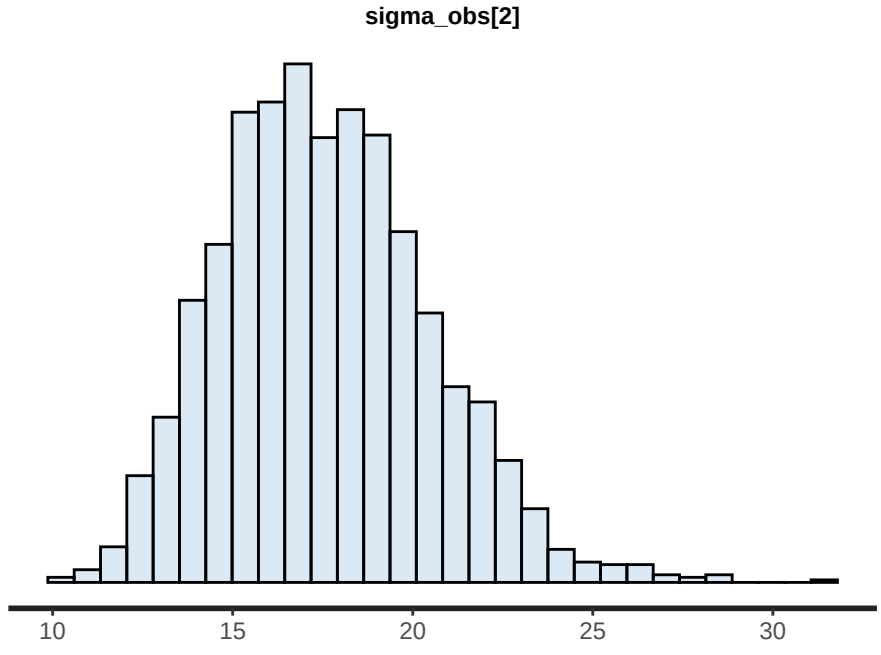
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15
20
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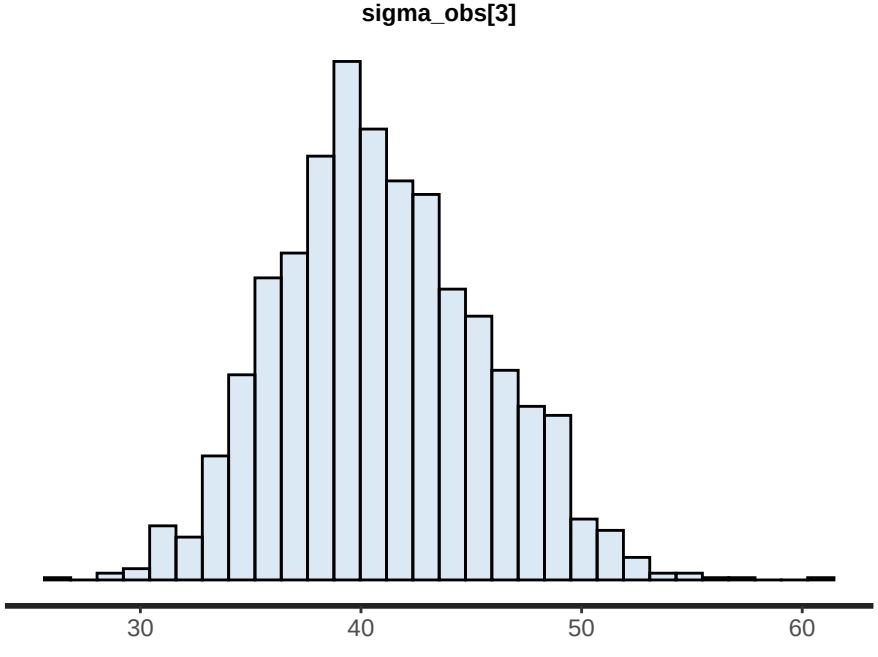
30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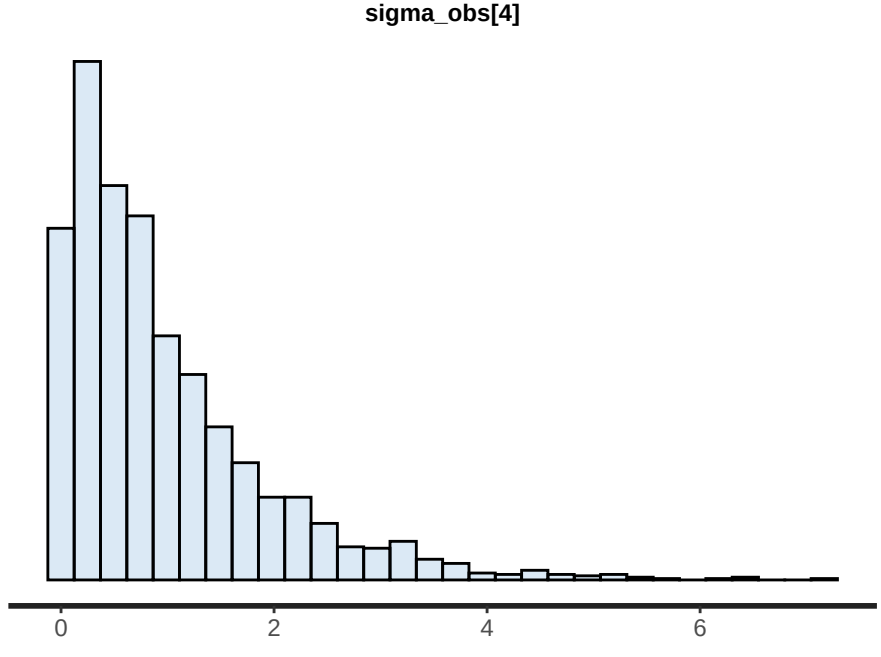
60


sigma_obs[4]
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2
4
6