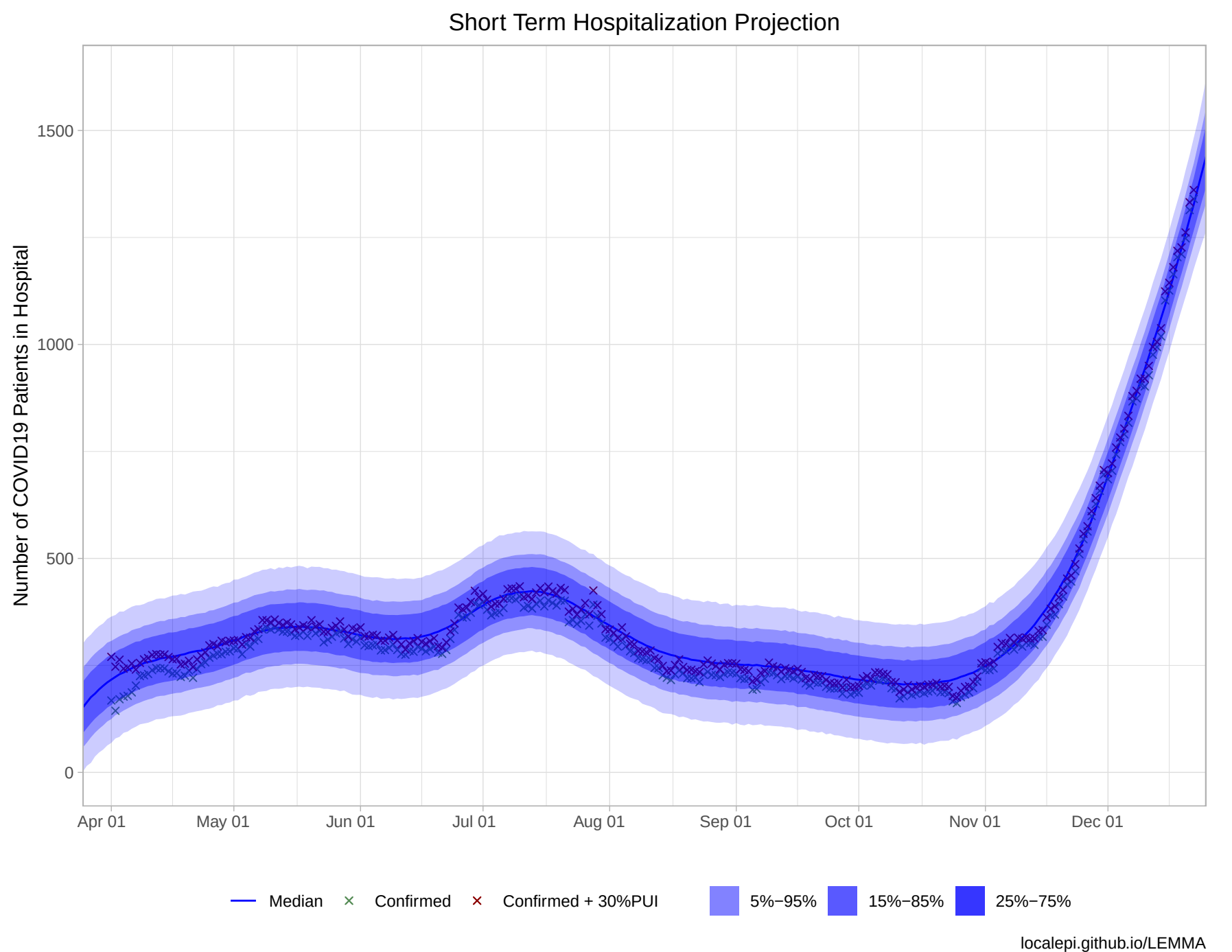
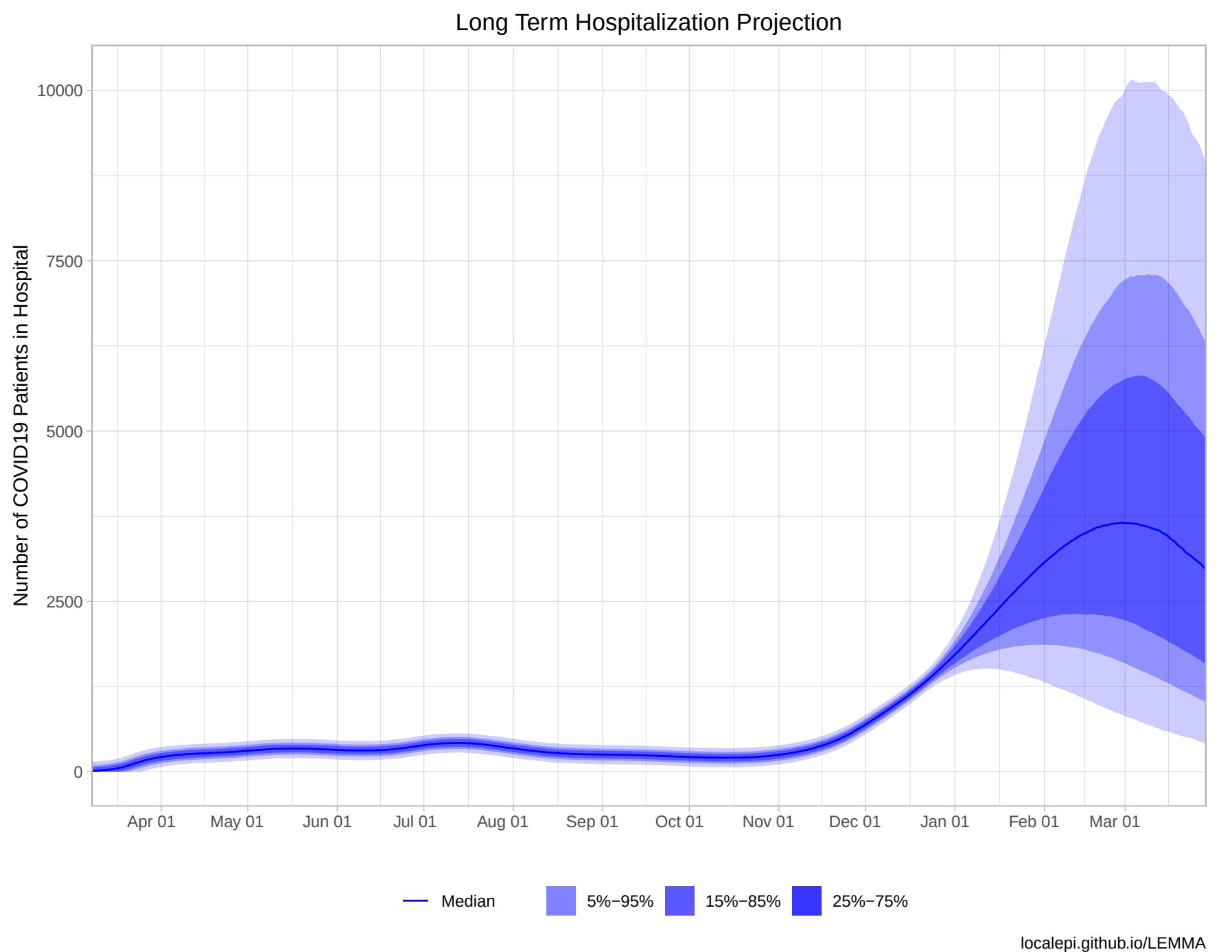
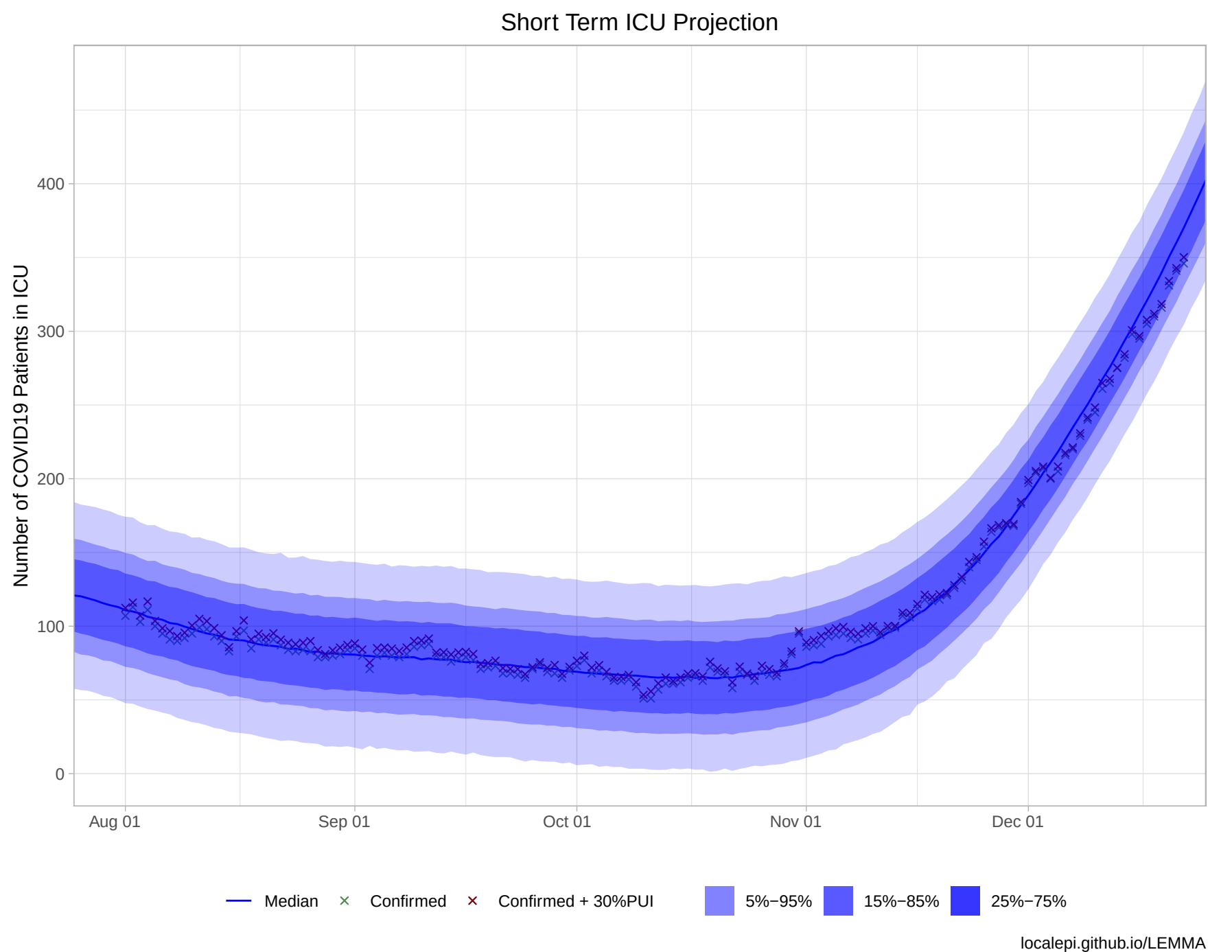
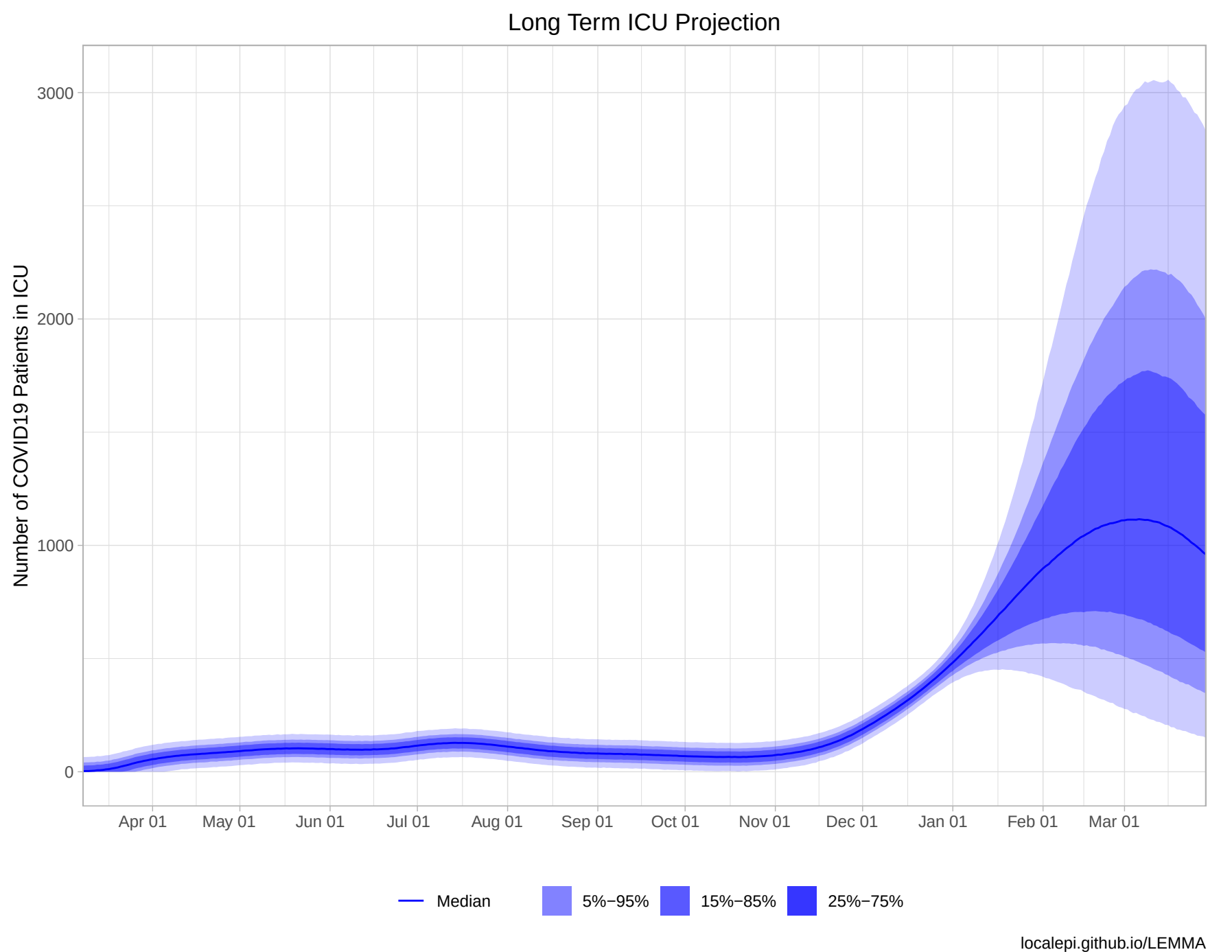
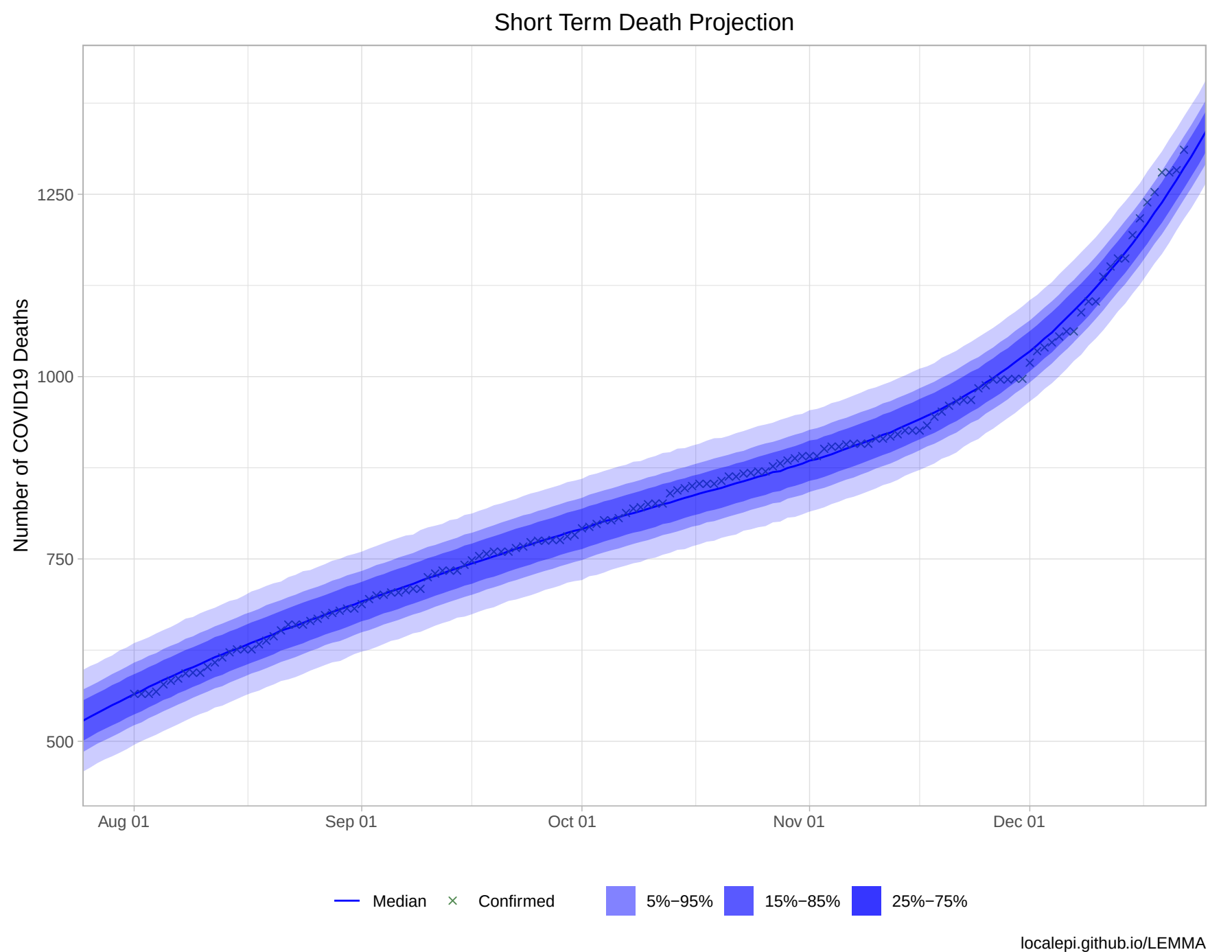
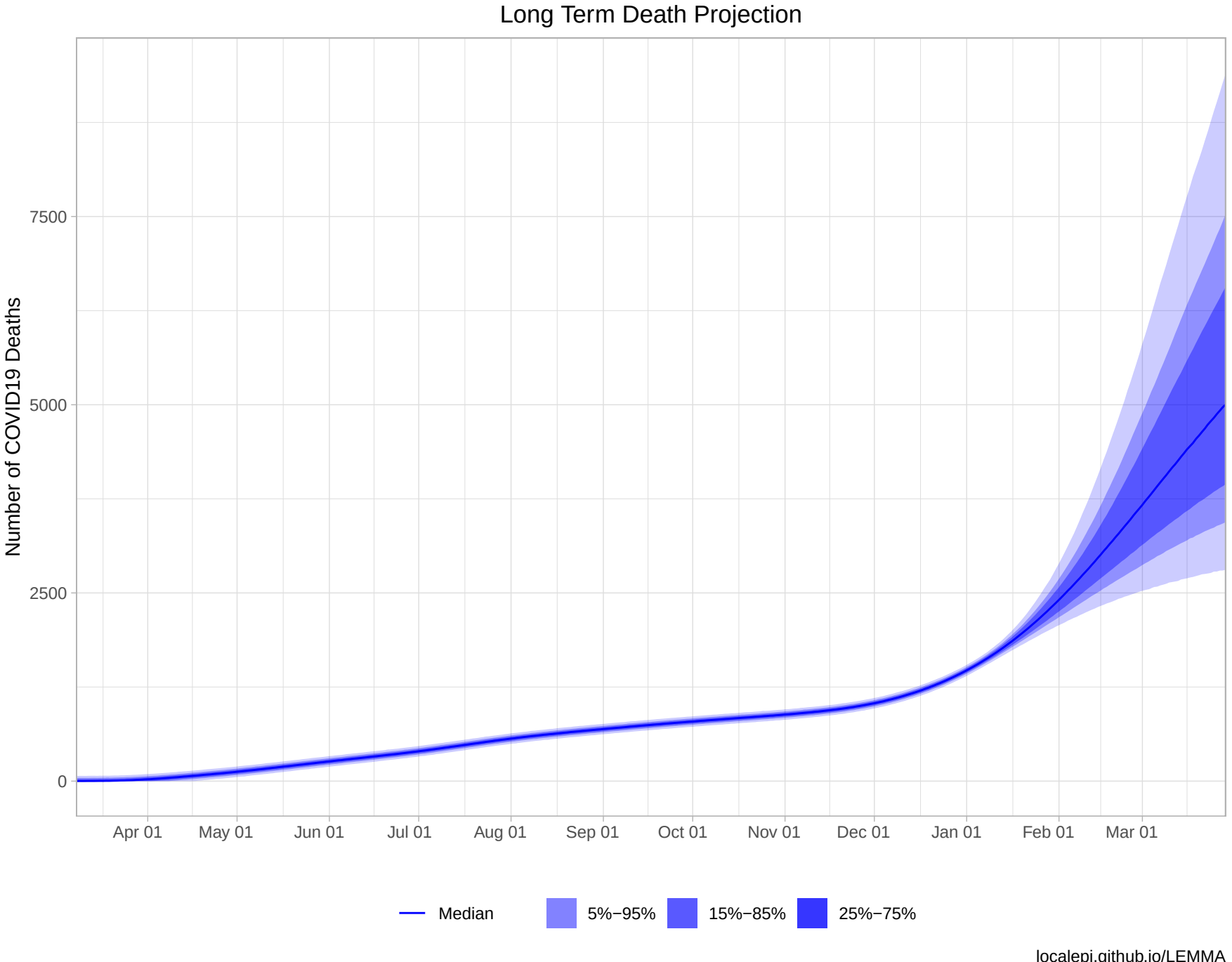

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

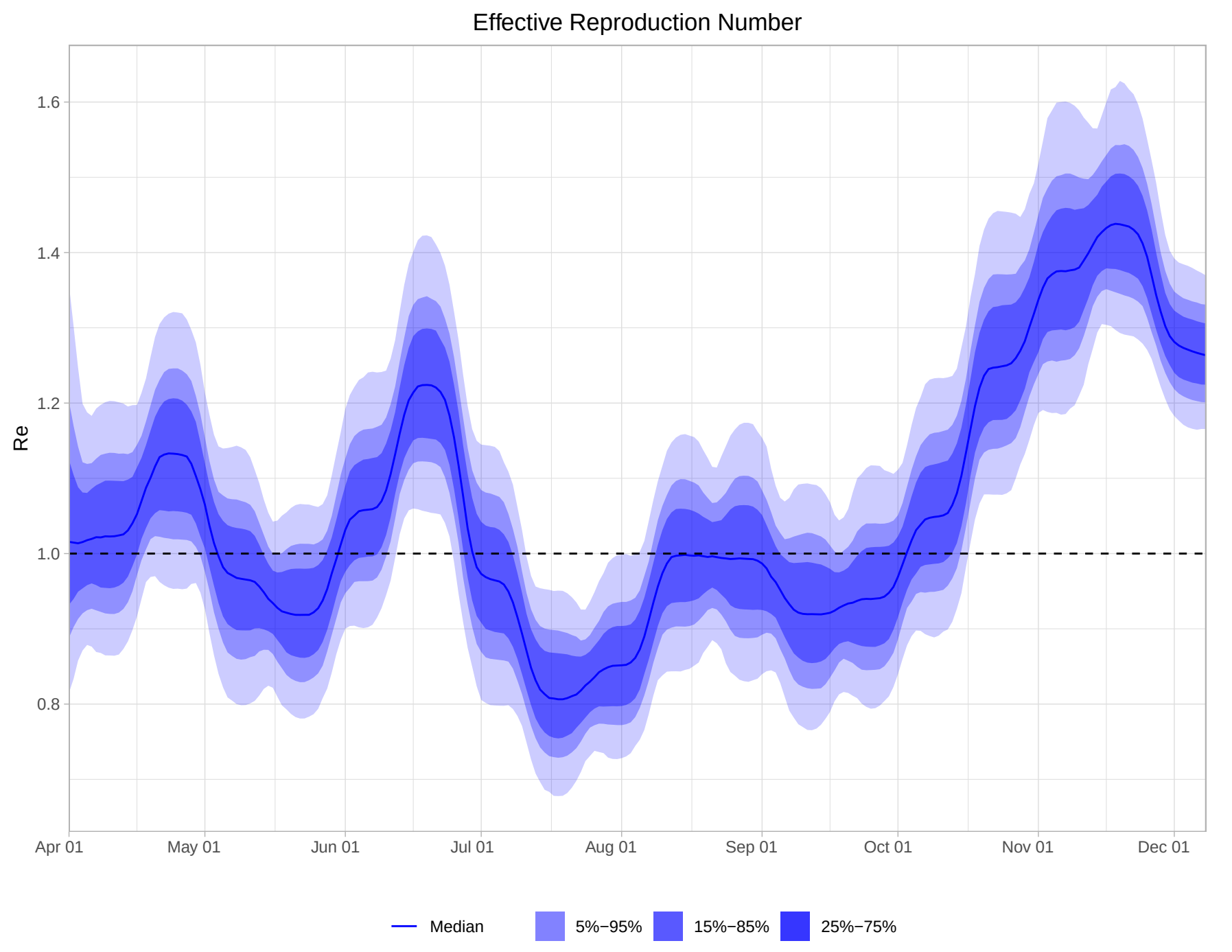

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
10000
7500
5000
2500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


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
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
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

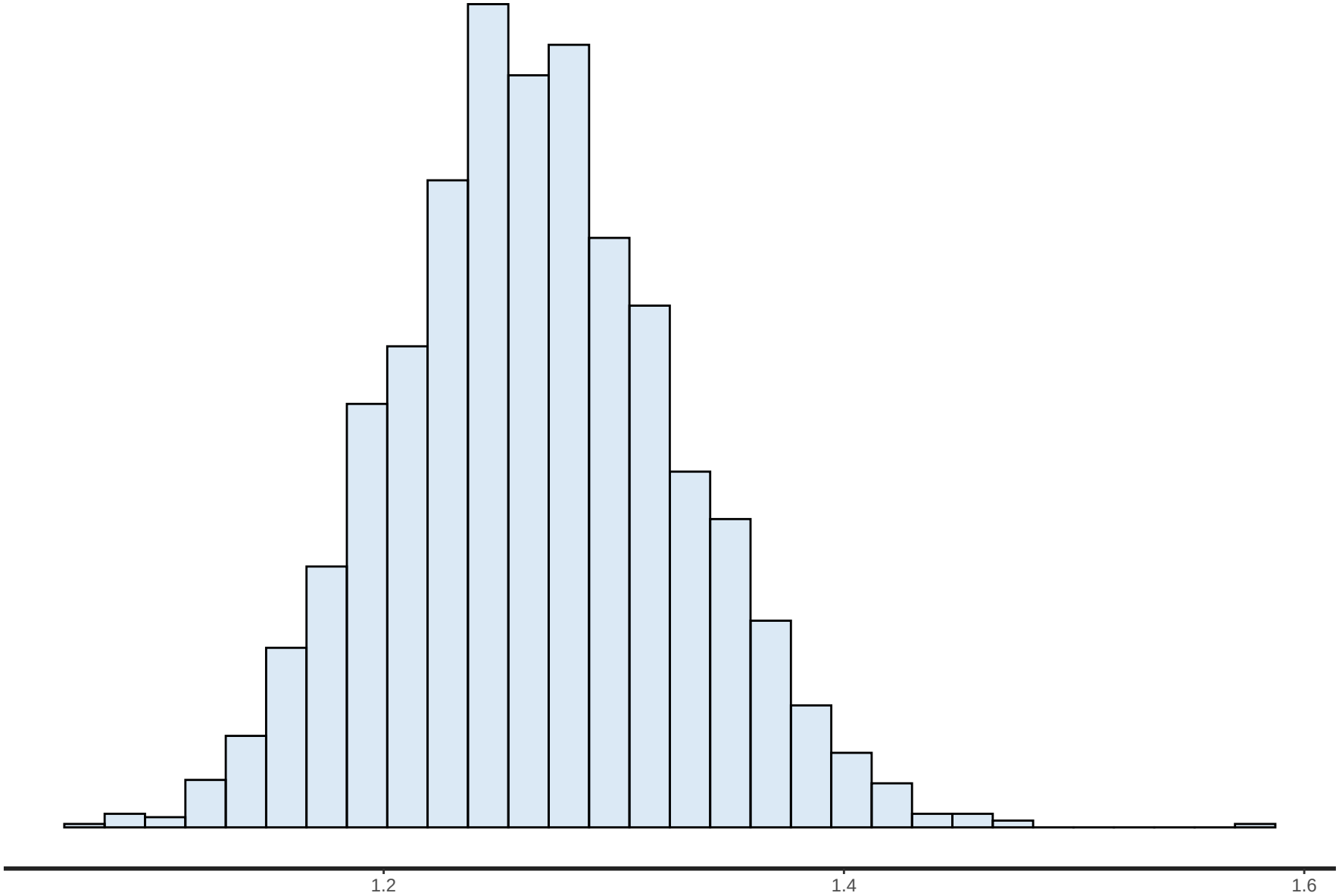

Short Term Death Projection
Number of COVID19 Deaths
1250
1000
750
500
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

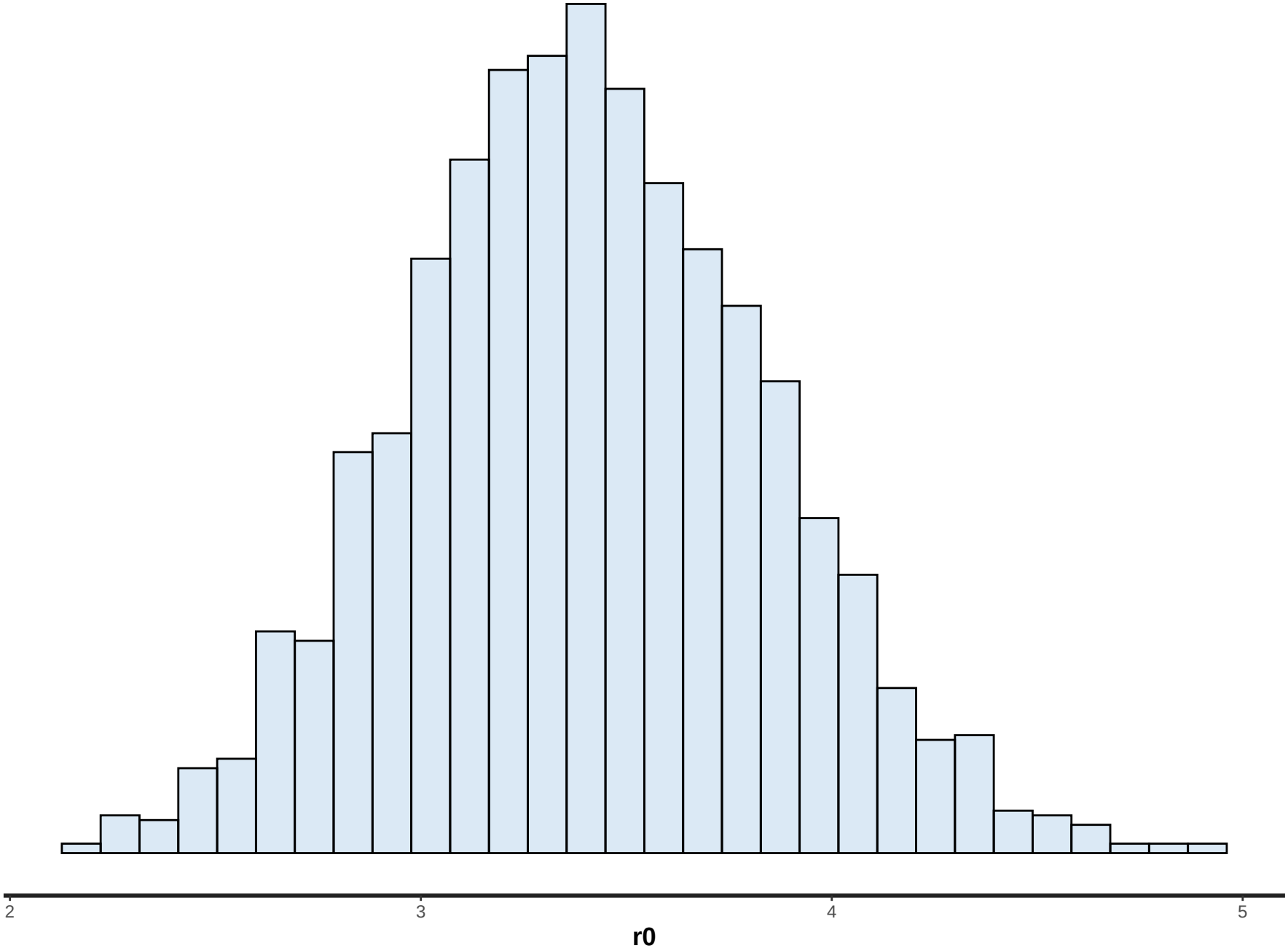

Long Term Death Projection
Number of COVID19 Deaths
7500
5000
2500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

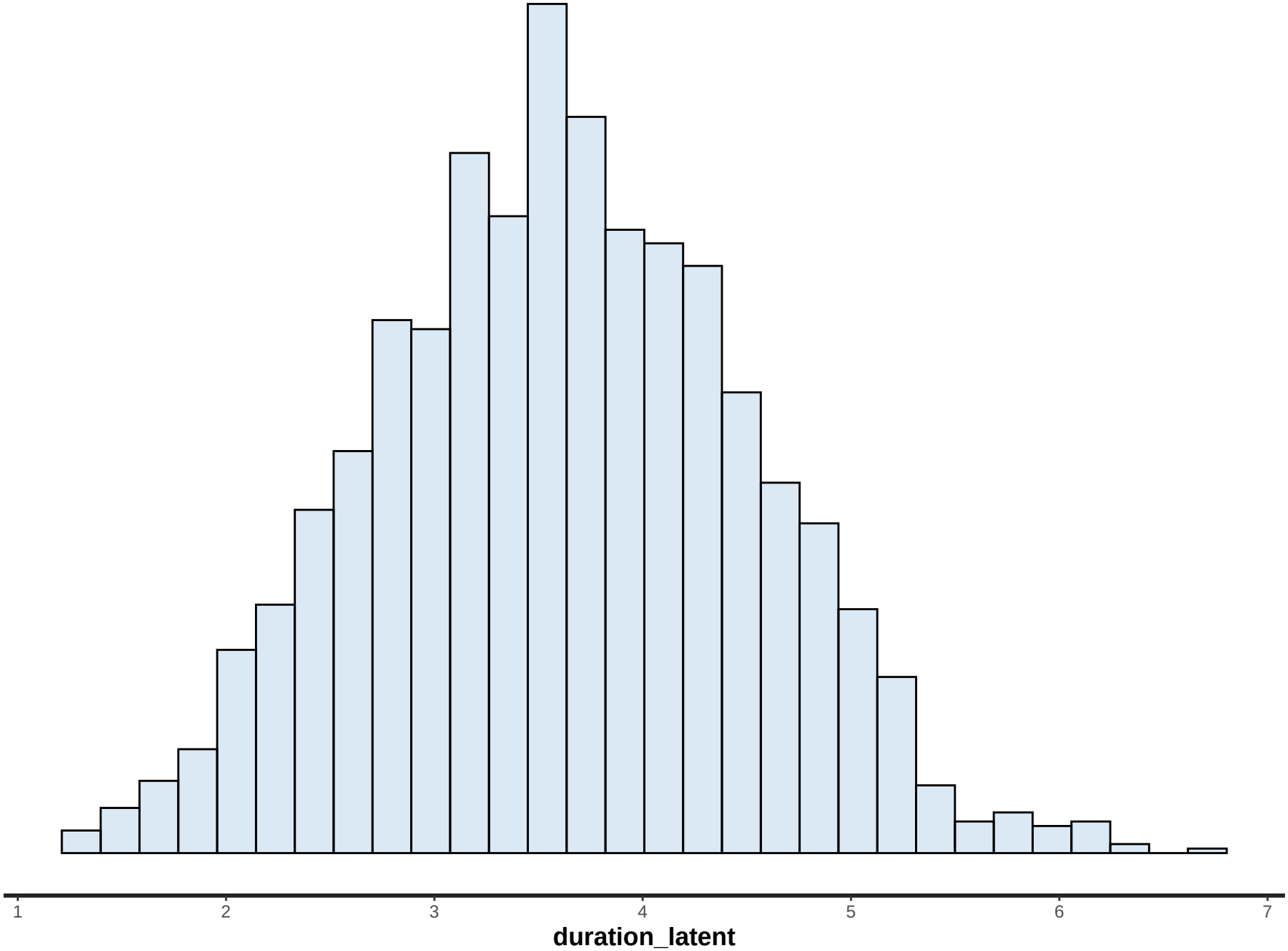

Effective Reproduction Number
Re
1.6
1.4
1.2
1.0
0.8
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

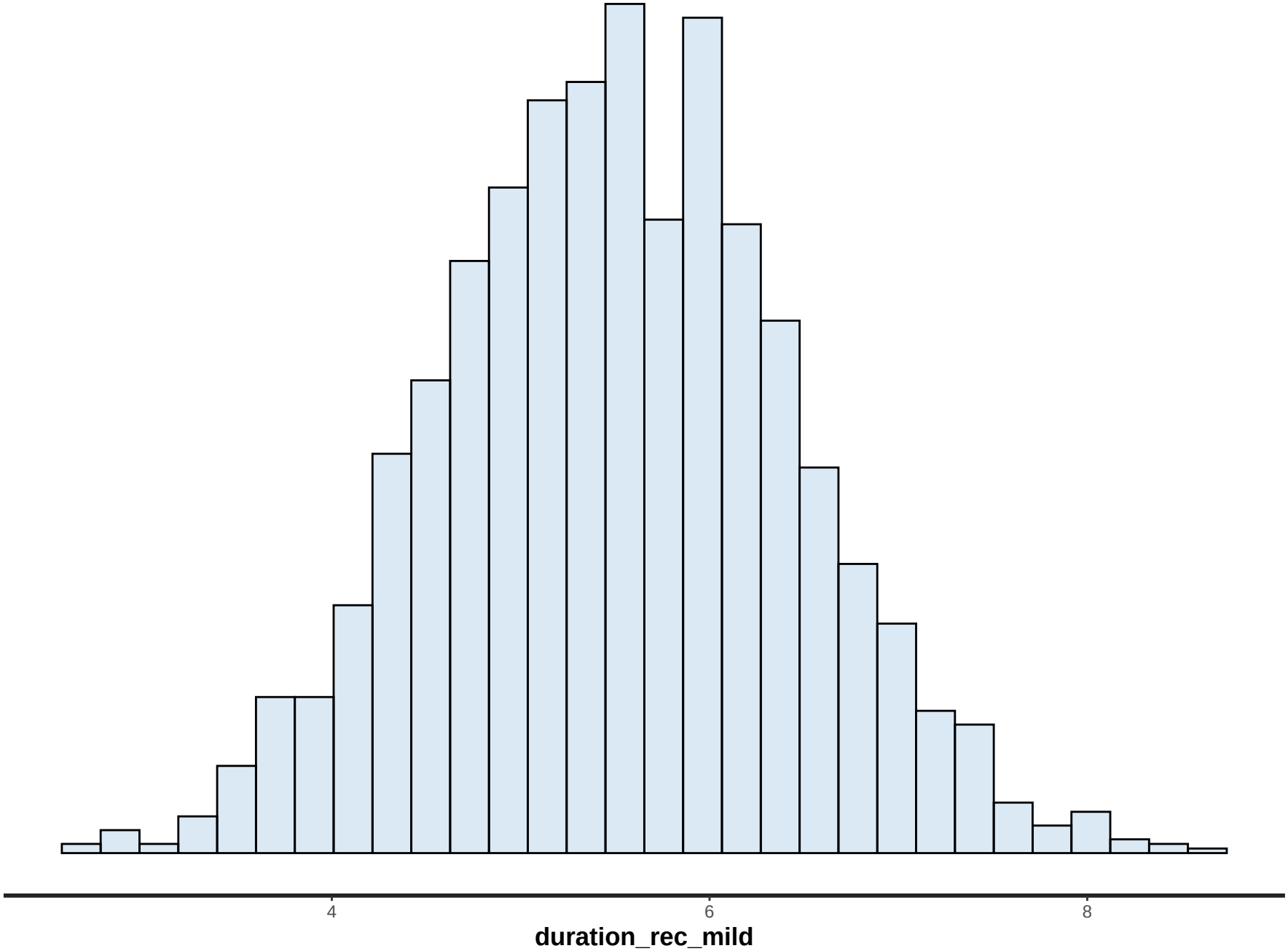
Rt as of 2020−12−08

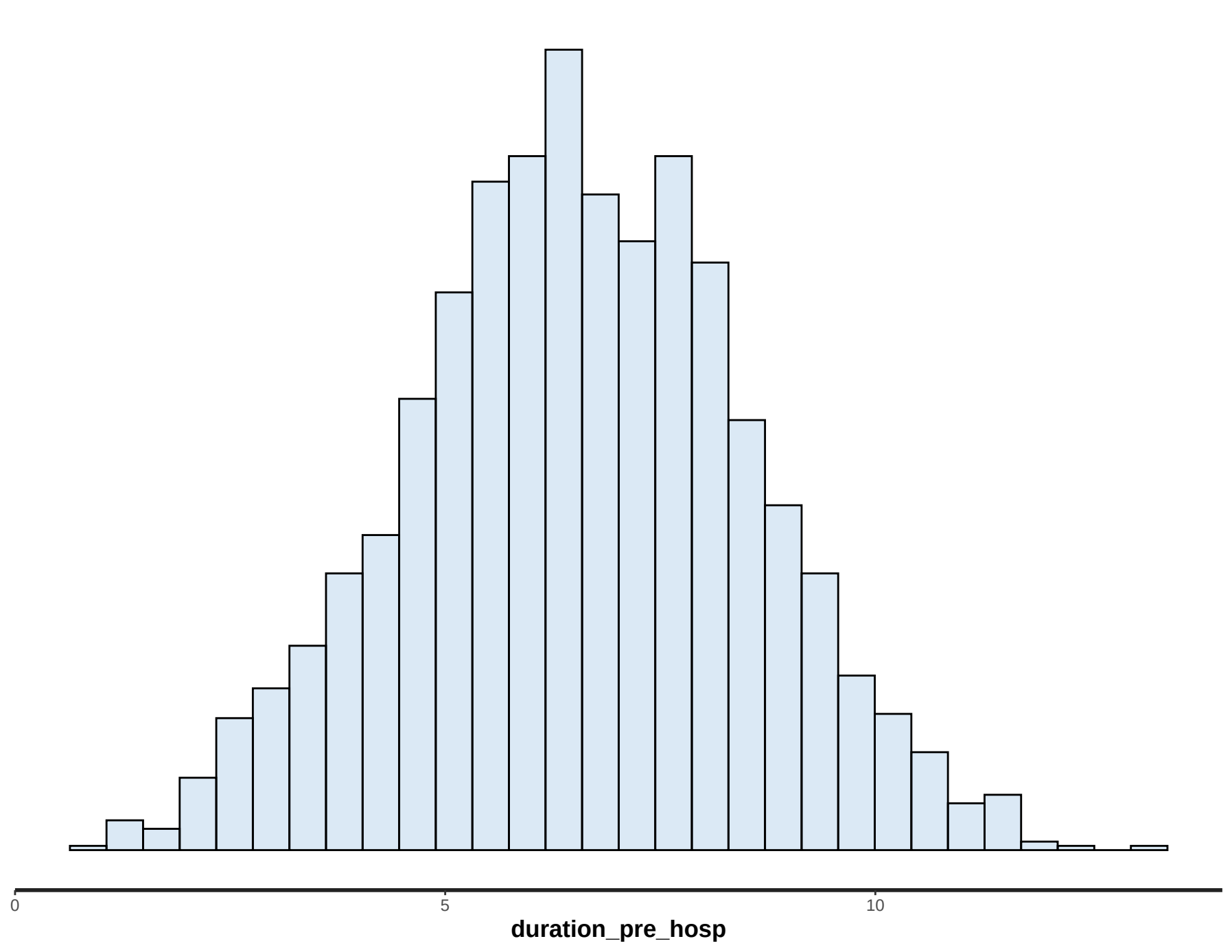
5%	10%	25%	50%	75%	90%	95%
1.17	1.19	1.22	1.26	1.31	1.35	1.37

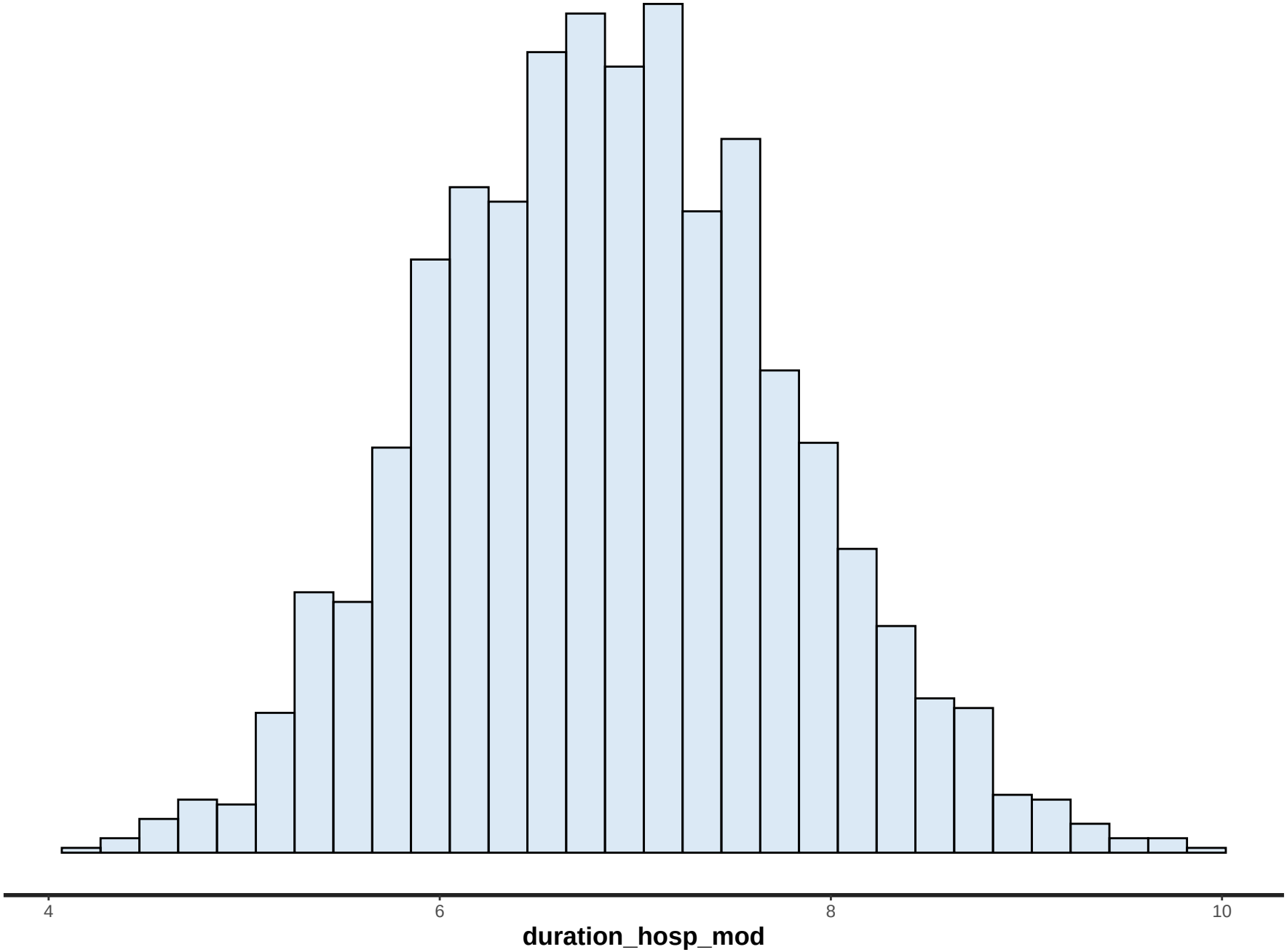


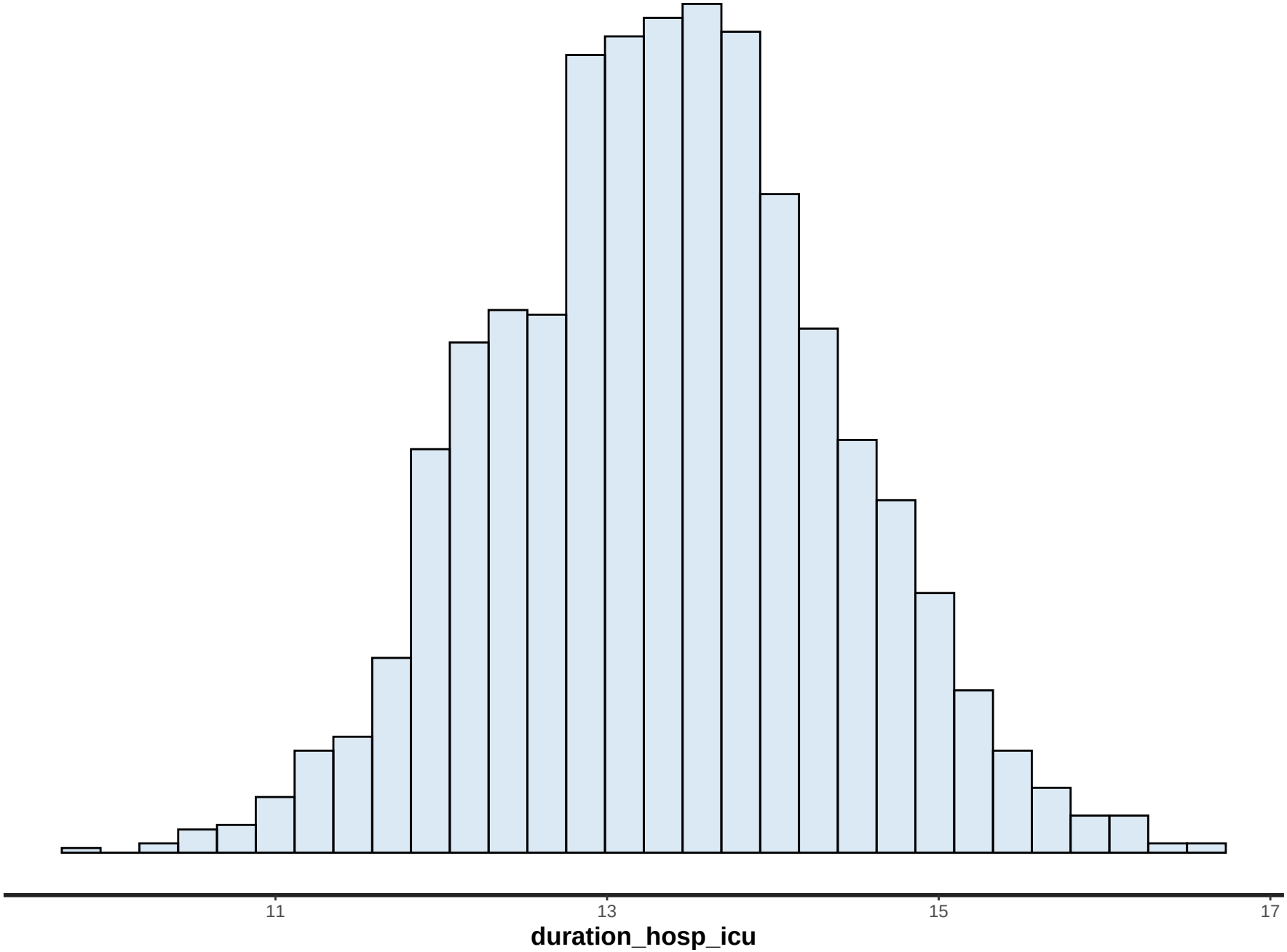

2
3
4
5
r0

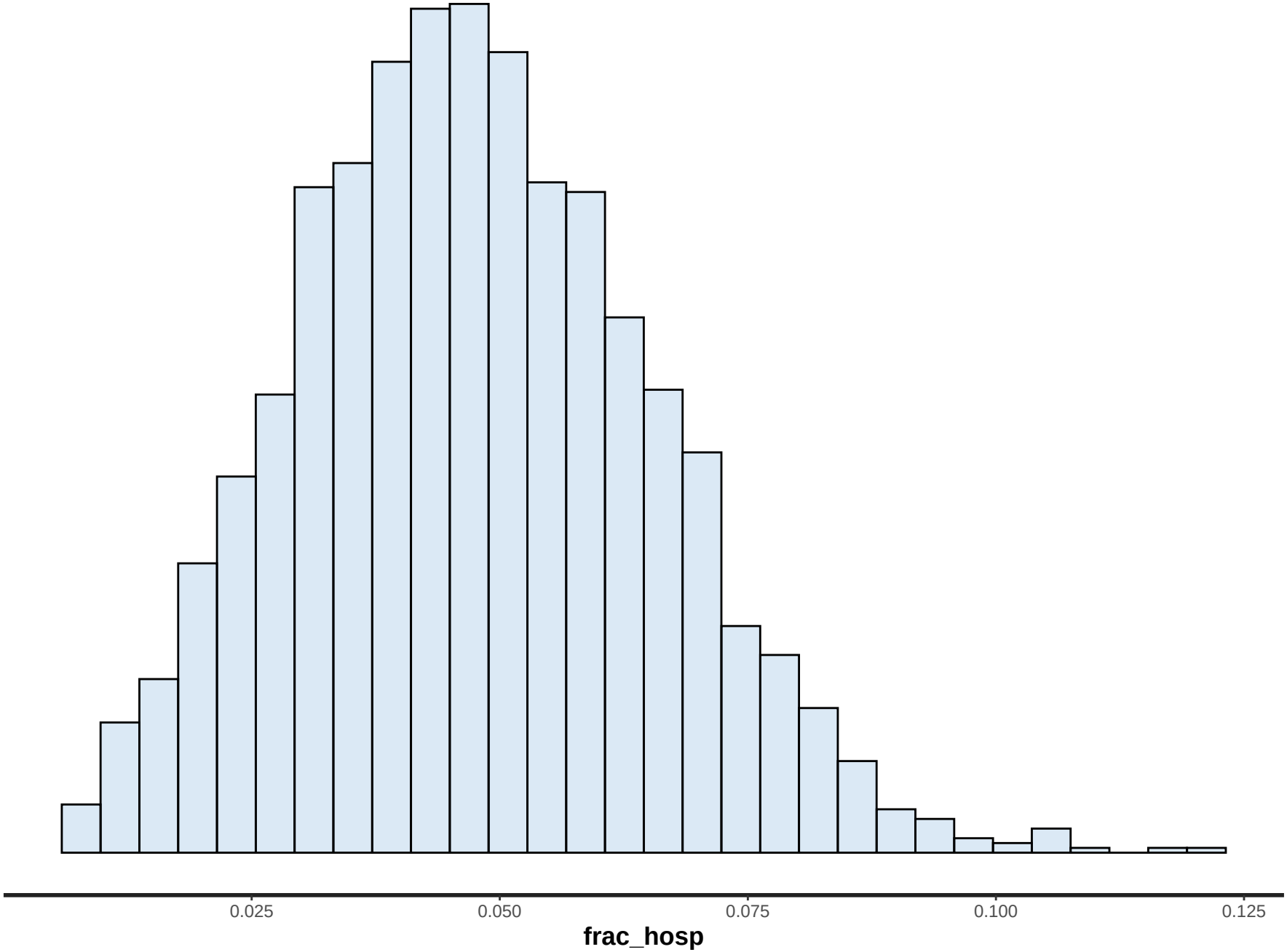

1
2
3
4
5
6
7
duration_latent

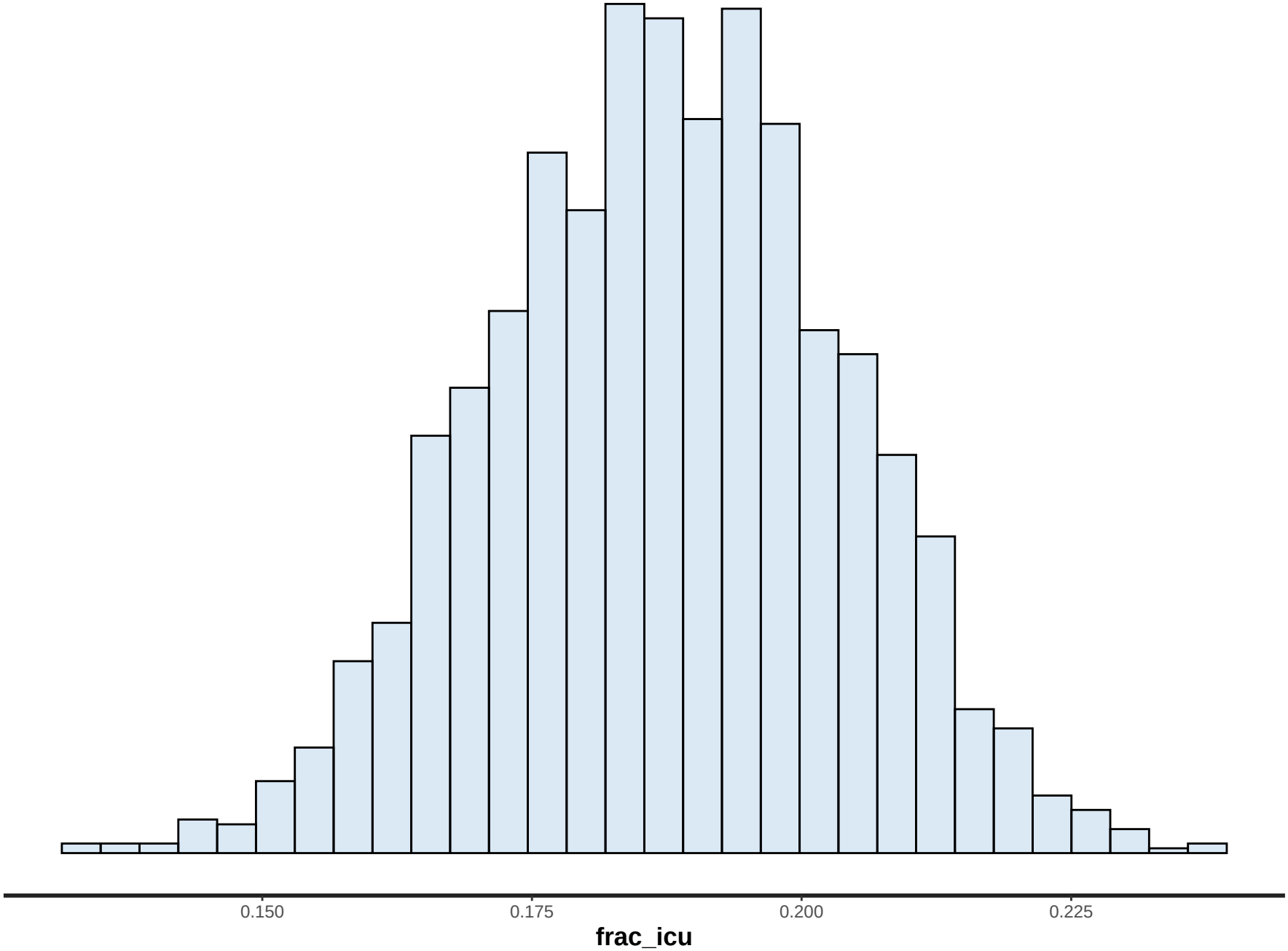

4
6
8
duration_rec_mild

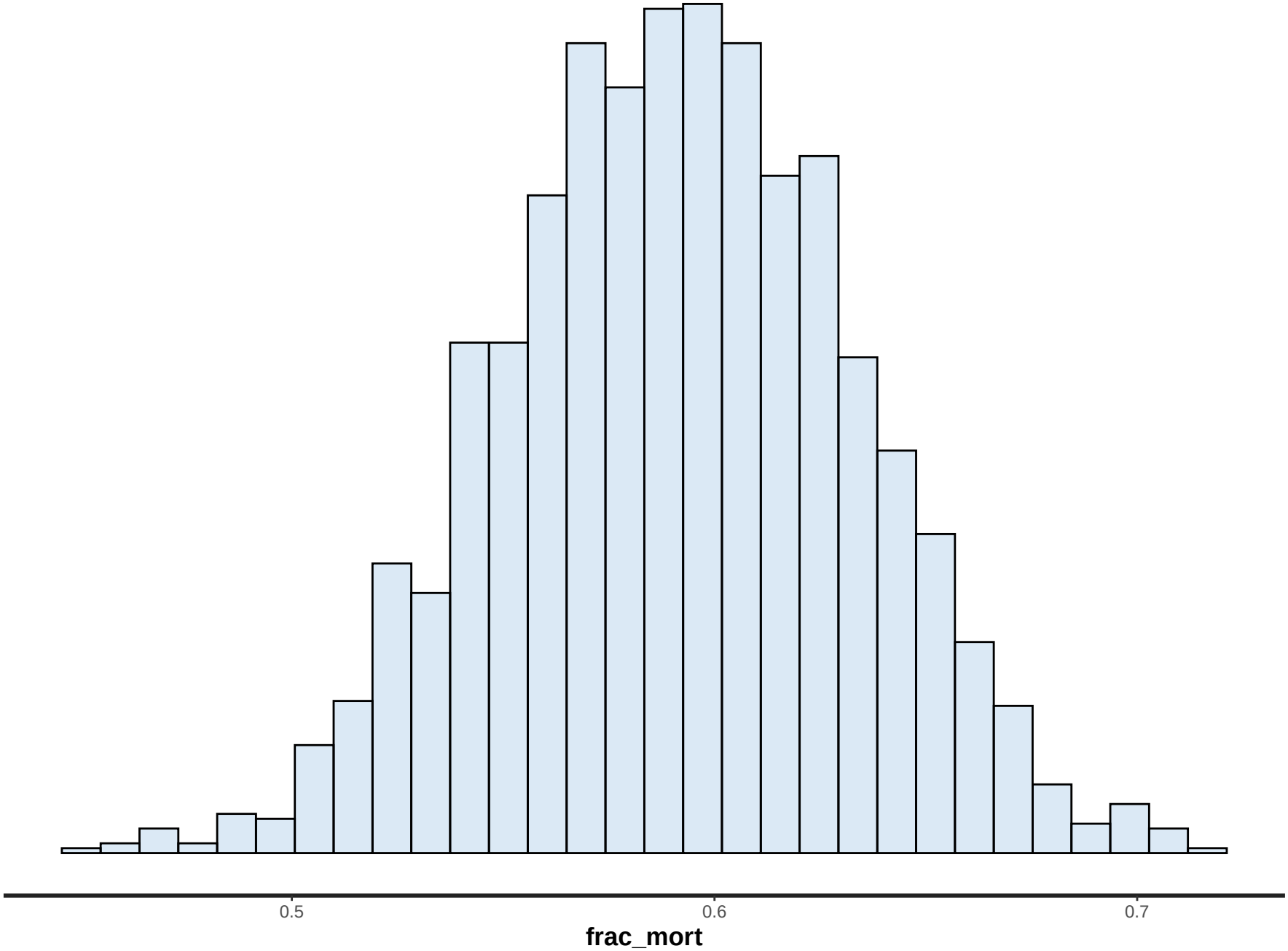

0
5
10
duration_pre_hosp

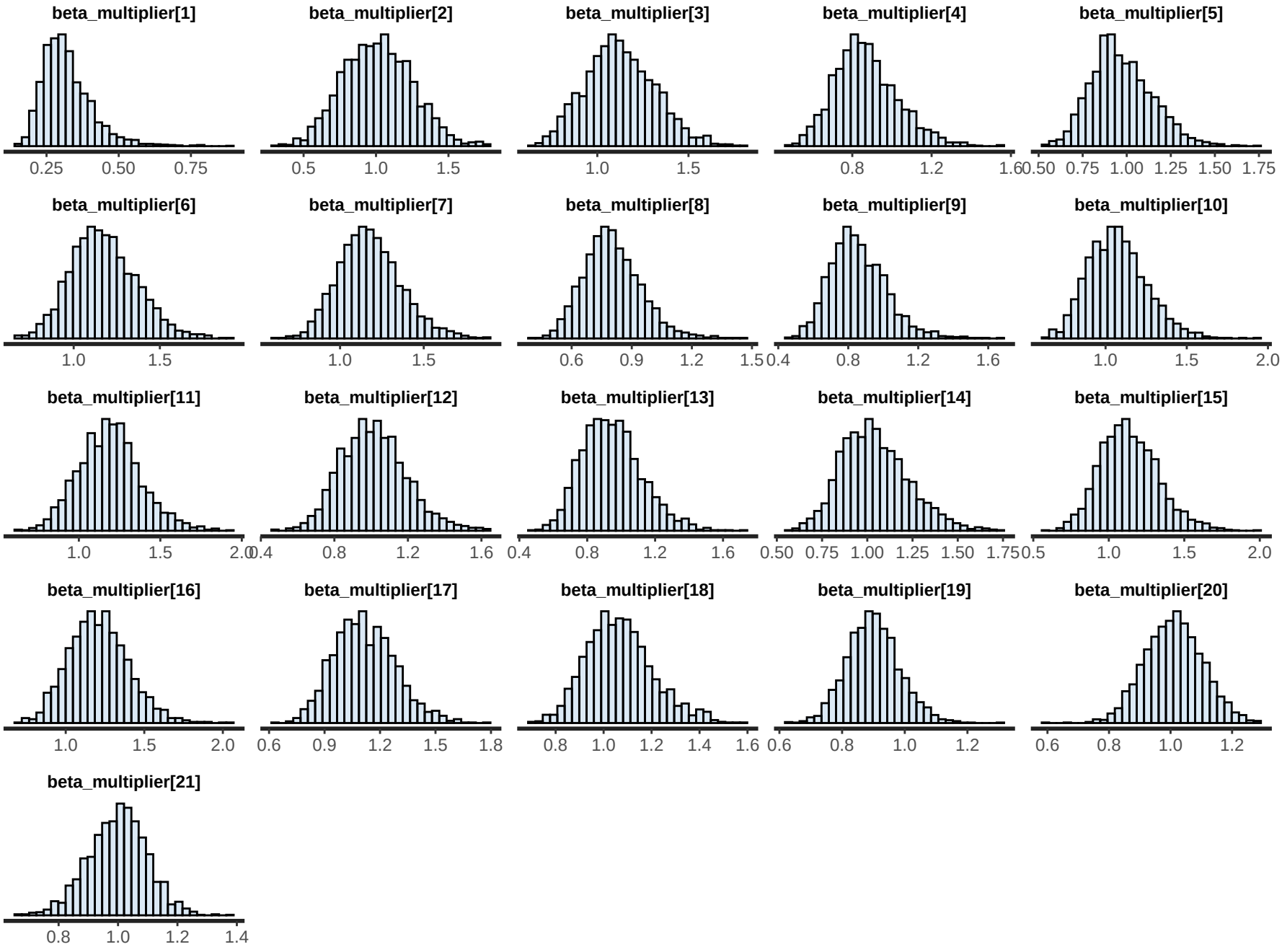

4
6
8
10
duration_hosp_mod


11
13
15
17
duration_hosp_icu


0.025
0.050
0.075
0.100
0.125
frac_hosp


0.150
0.175
0.200
0.225
frac_icu


0.5
0.6
0.7
frac_mort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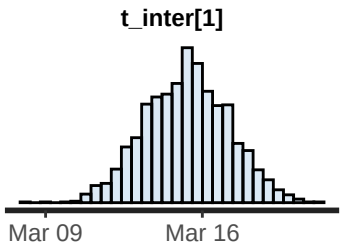
0.25 0.50 0.75
beta_multiplier[2]
0.5 1.0 1.5
beta_multiplier[3]
1.0 1.5
beta_multiplier[4]
0.8 1.2 1.6
beta_multiplier[5]
0.50 0.75 1.00 1.25 1.50 1.75
beta_multiplier[6]
1.0 1.5
beta_multiplier[7]
1.0 1.5
beta_multiplier[8]
0.6 0.9 1.2 1.5
beta_multiplier[9]
0.4 0.8 1.2 1.6
beta_multiplier[10]
1.0 1.5 2.0
beta_multiplier[11]
1.0 1.5 2.0
beta_multiplier[12]
0.4 0.8 1.2 1.6
beta_multiplier[13]
0.4 0.8 1.2 1.6
beta_multiplier[14]
0.50 0.75 1.00 1.25 1.50 1.75
beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
1.0 1.5 2.0
beta_multiplier[17]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[18]
0.8 1.0 1.2 1.4 1.6
beta_multiplier[19]
0.6 0.8 1.0 1.2
beta_multiplier[20]
0.6 0.8 1.0 1.2
beta_multiplier[21]
0.8 1.0 1.2 1.4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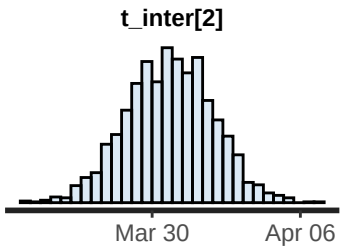
Mar 09
Mar 16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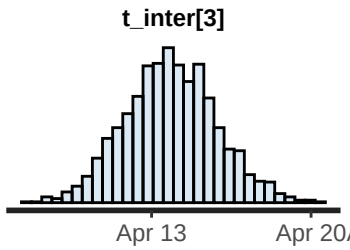
Mar 30
Apr 06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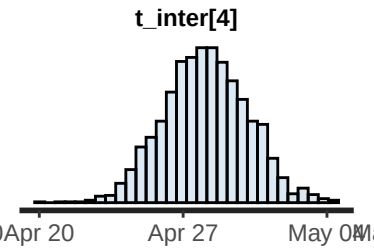
Apr 13
Apr 20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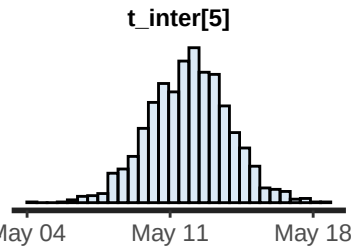
Apr 20
Apr 27
May 04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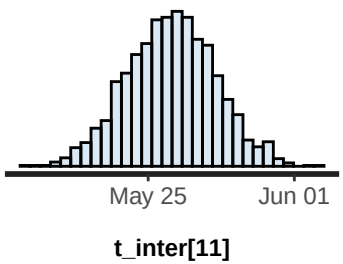
May 04
May 11
May 18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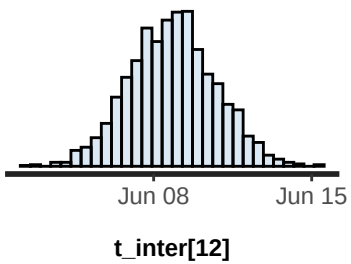
May 25
Jun 01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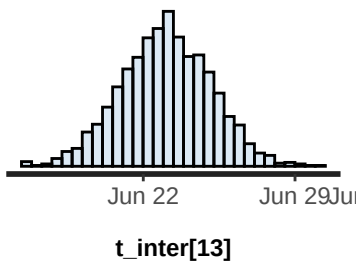
Jun 08
Jun 15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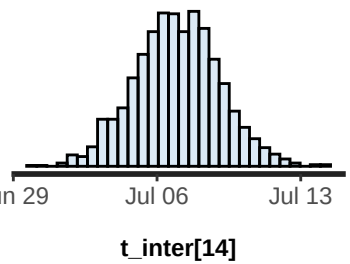
Jun 22
Jun 29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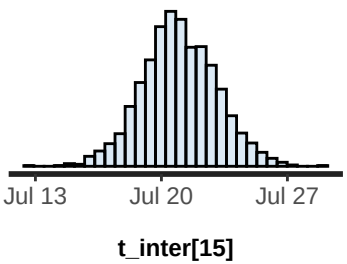
Jun 29
Jul 06
Jul 13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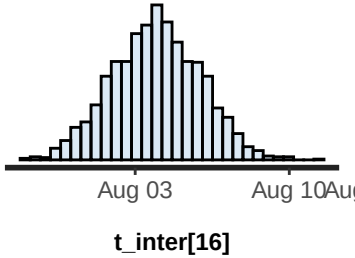
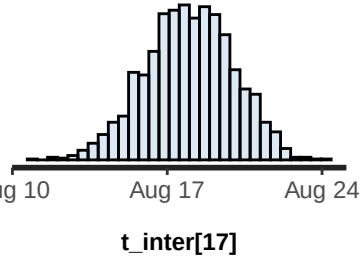
Jul 13
Jul 20
Jul 27


t_inter[11]
Aug 03
Aug 10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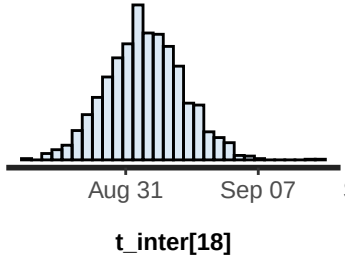
Aug 10
Aug 17
Aug 24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Aug 31
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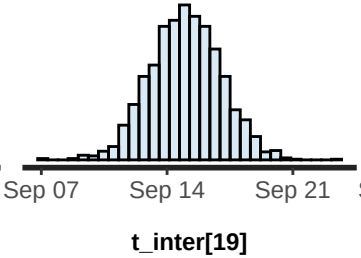
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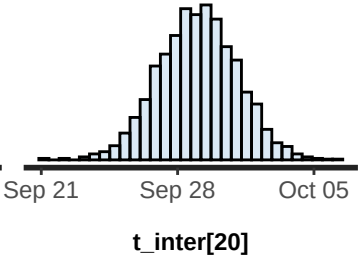
Sep 07
Sep 14
Sep 21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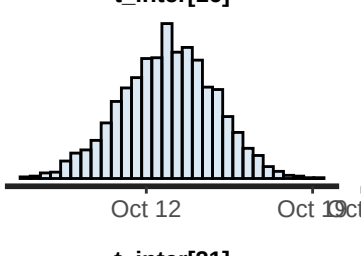
Sep 21
Sep 28
Oct 05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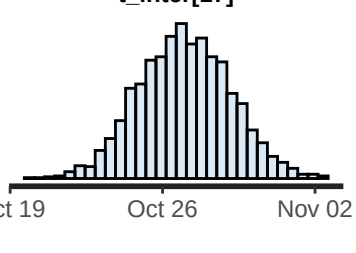
Oct 12
Oct 19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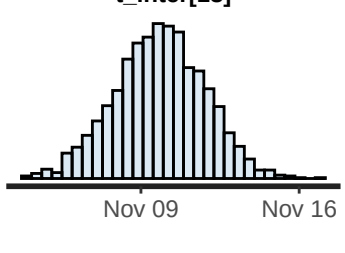
Oct 19
Oct 26
Nov 02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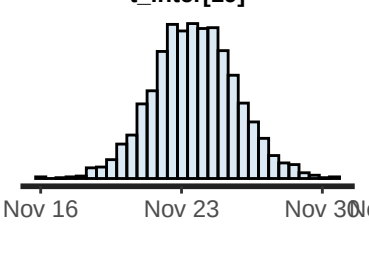
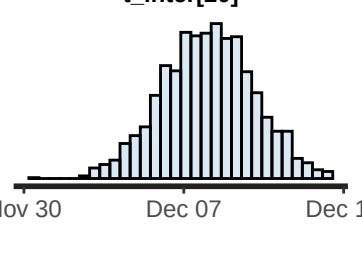
Nov 09
Nov 16


t_inter[19]
Nov 16
Nov 23
Nov 30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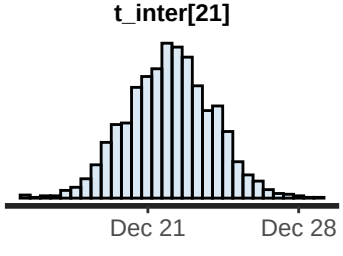
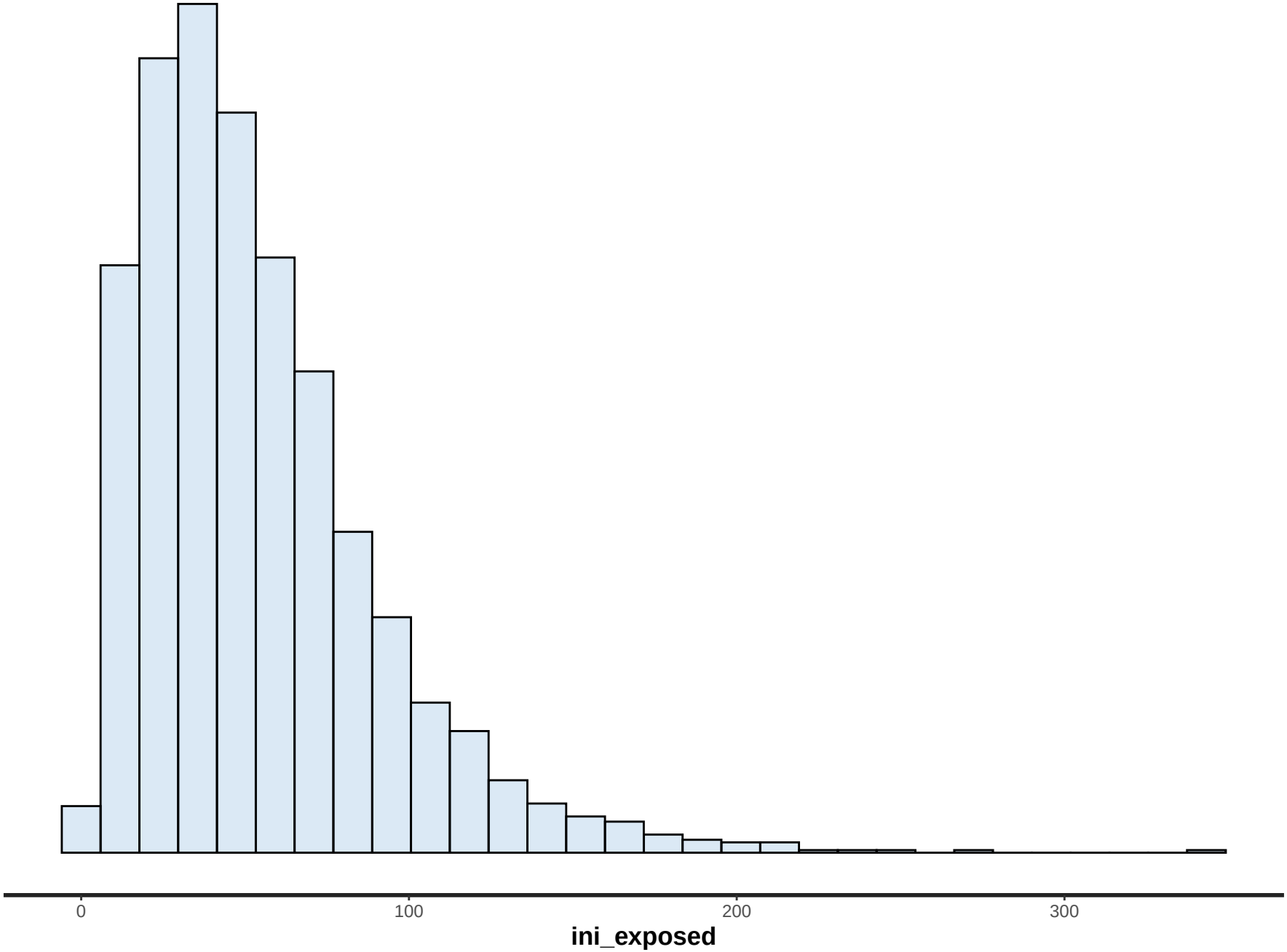
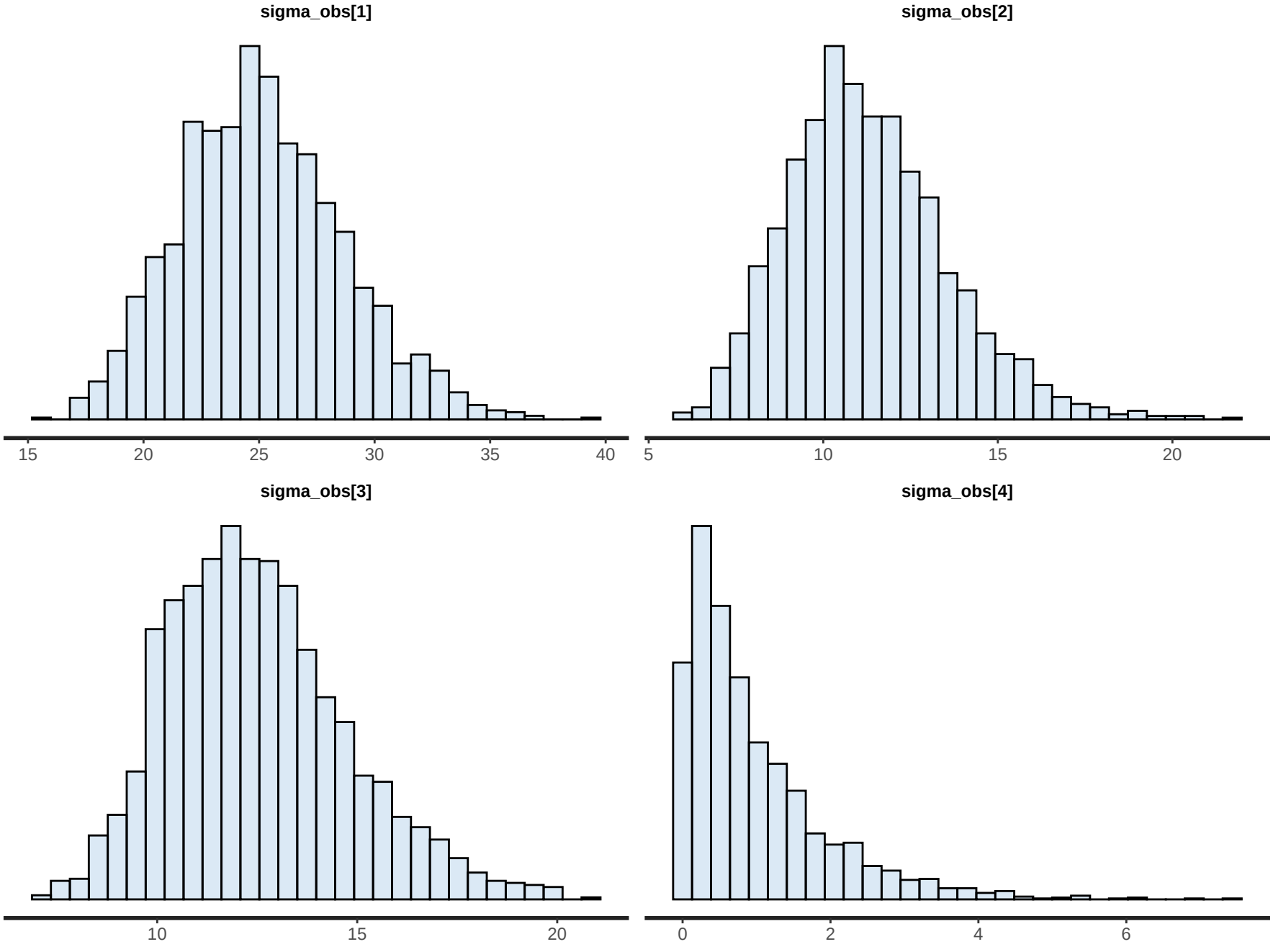
Nov 30
Dec 07


t_inter[21]
Dec 21
Dec 28


0
100
200
300
ini_exposed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15
20
25
30
35
40
sigma_obs[2]
5
10
15
20
sigma_obs[3]
10
15
20
sigma_obs[4]
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2
4
6