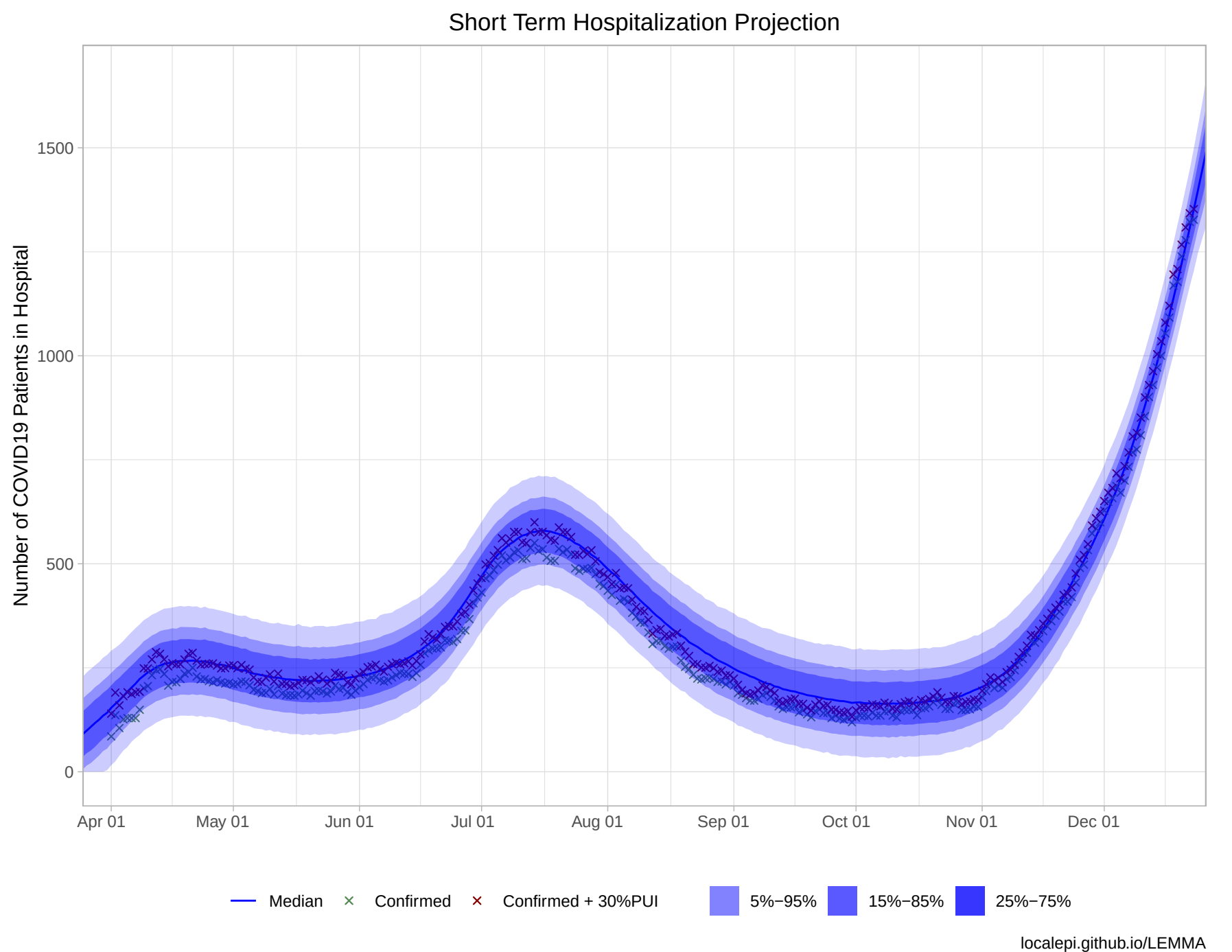
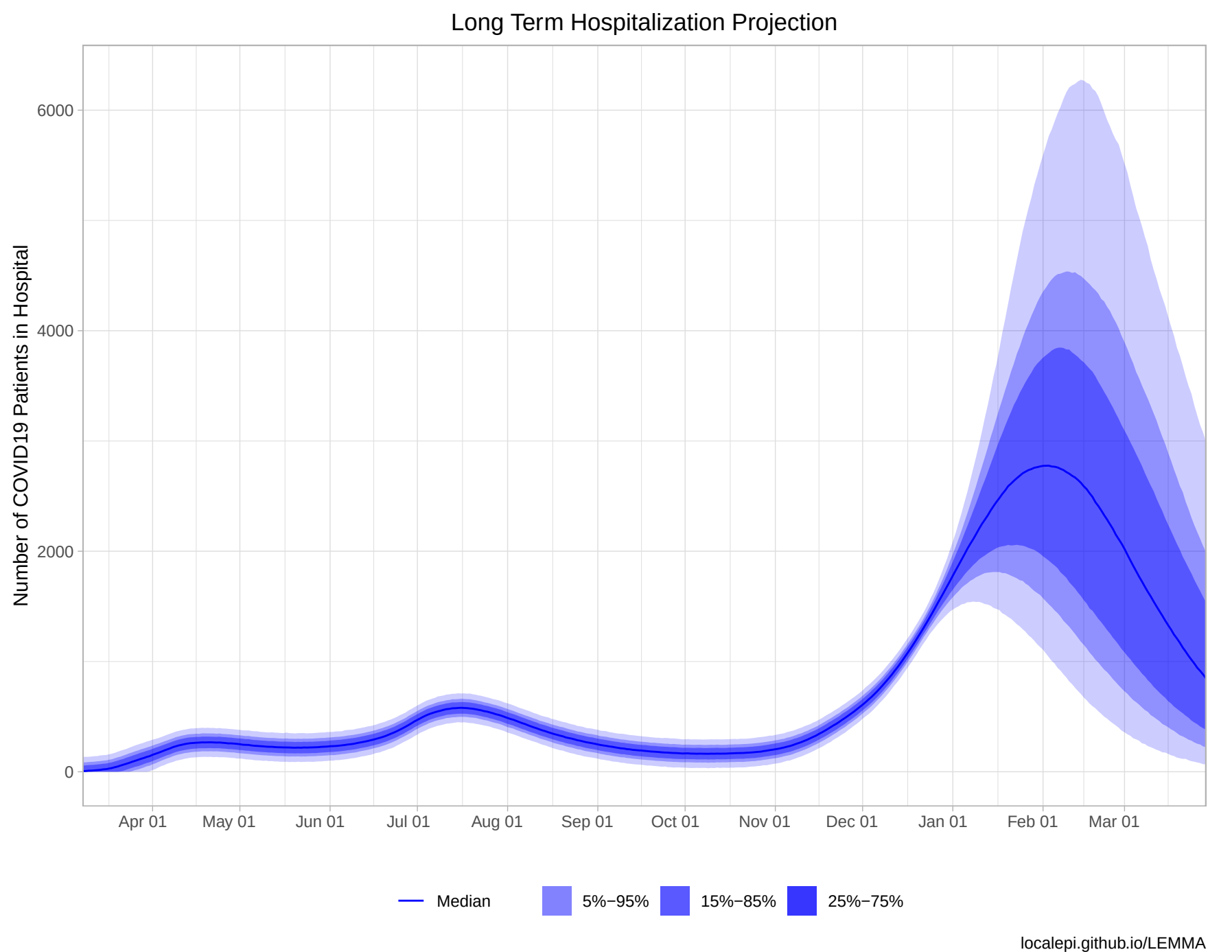
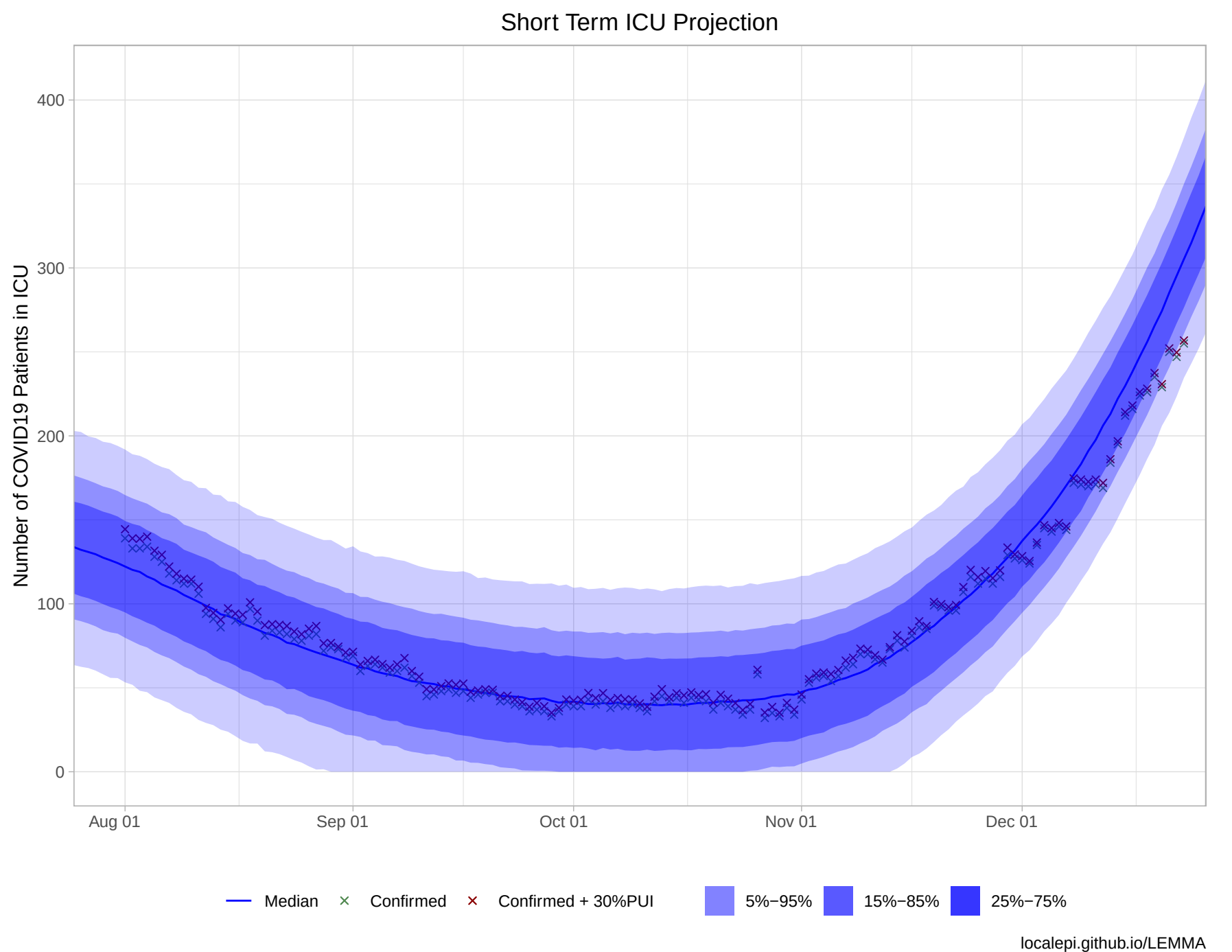
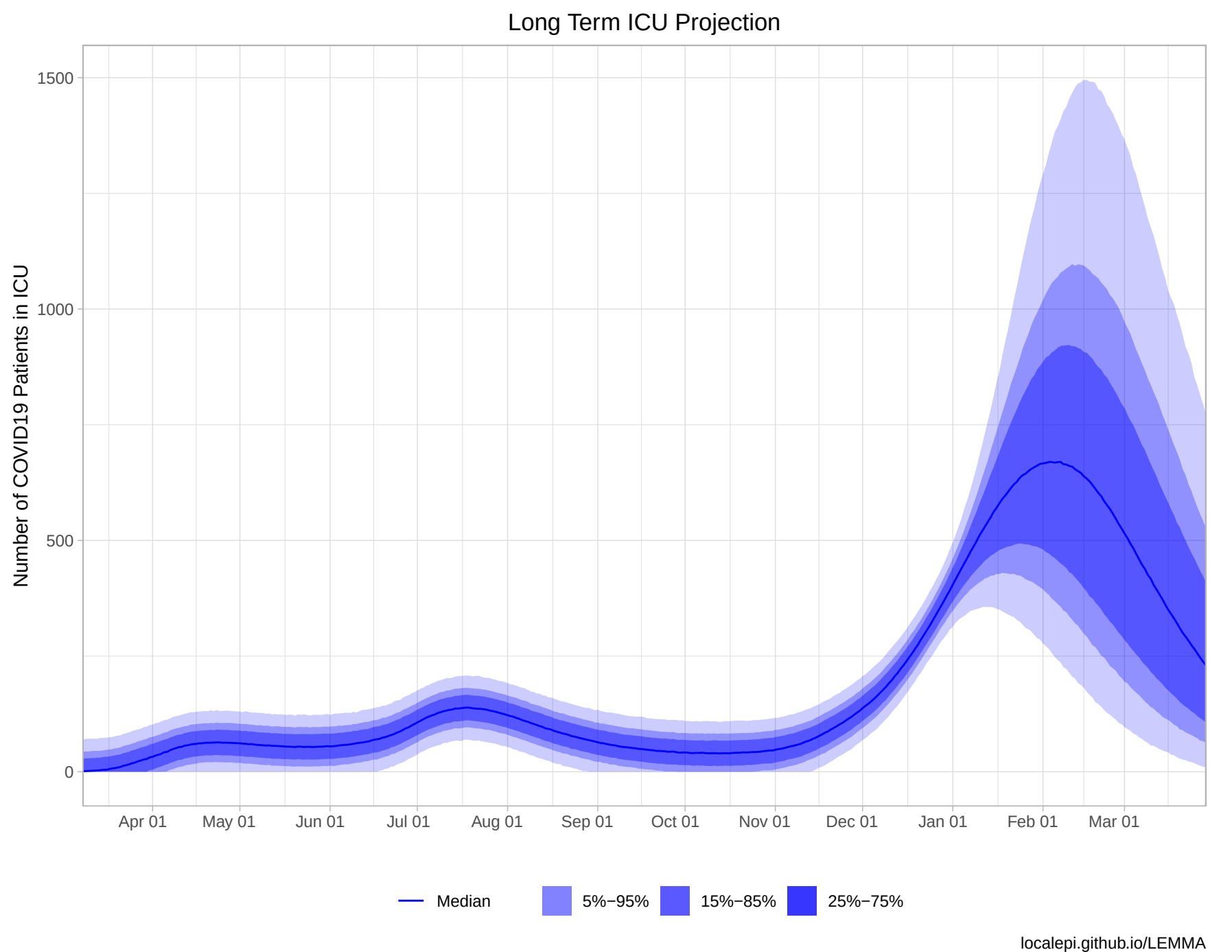
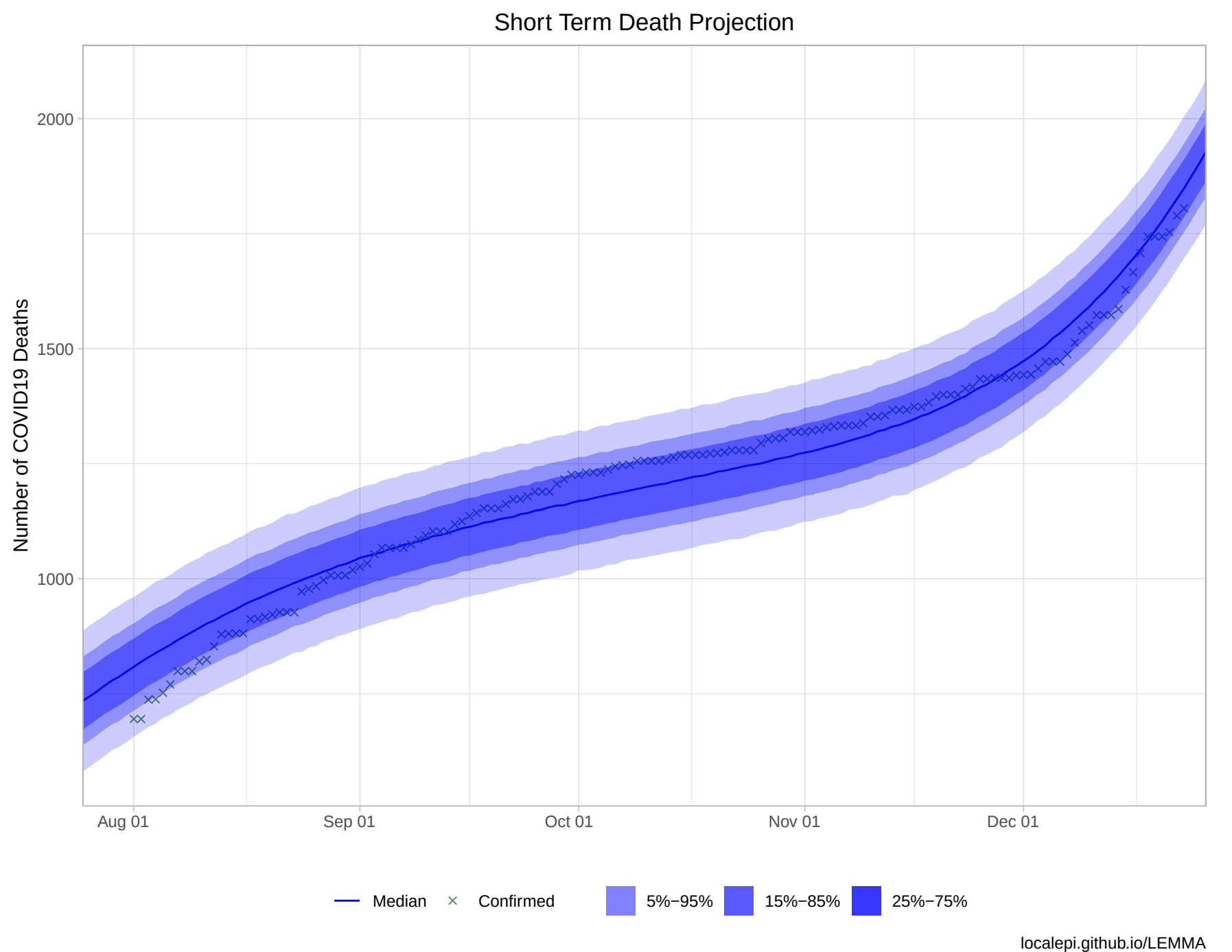
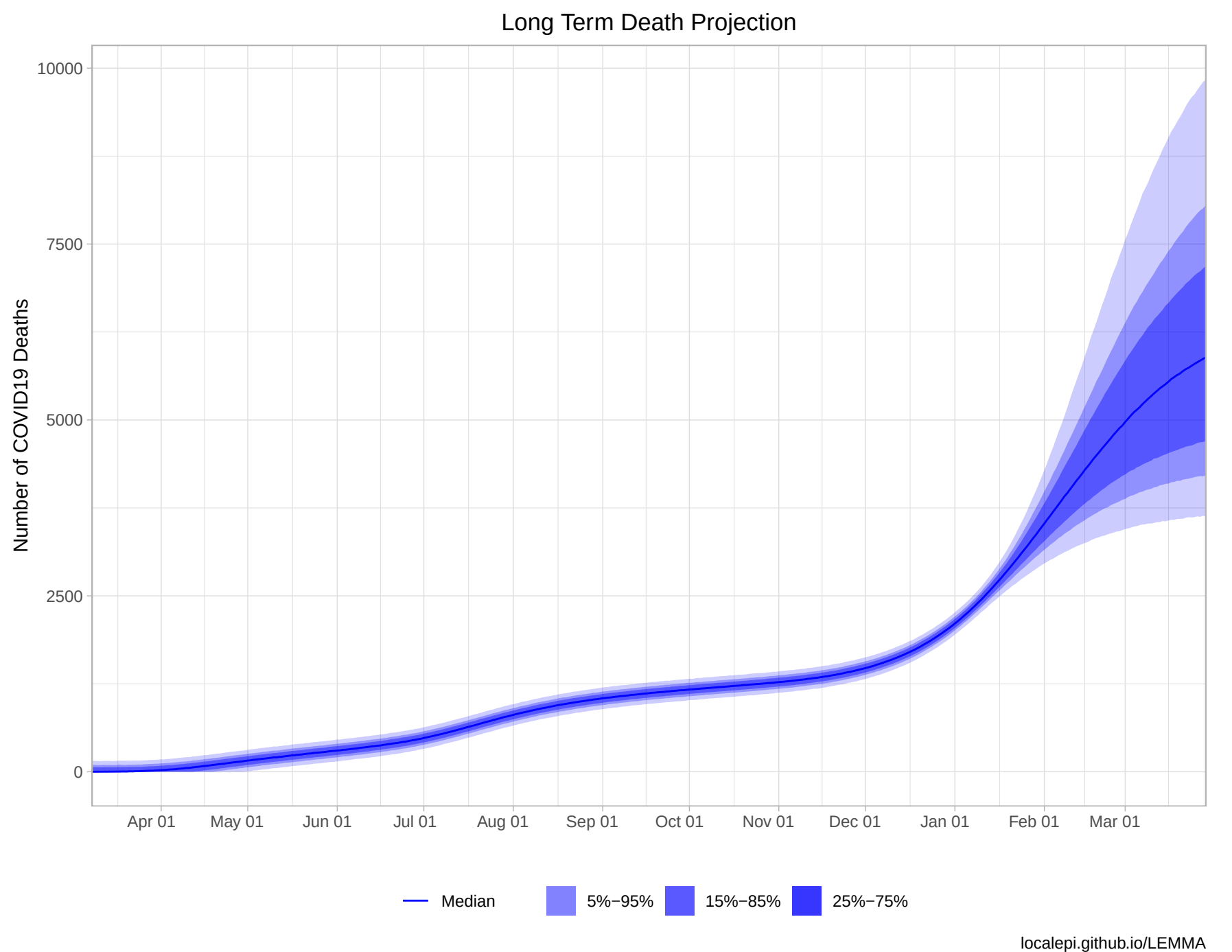

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

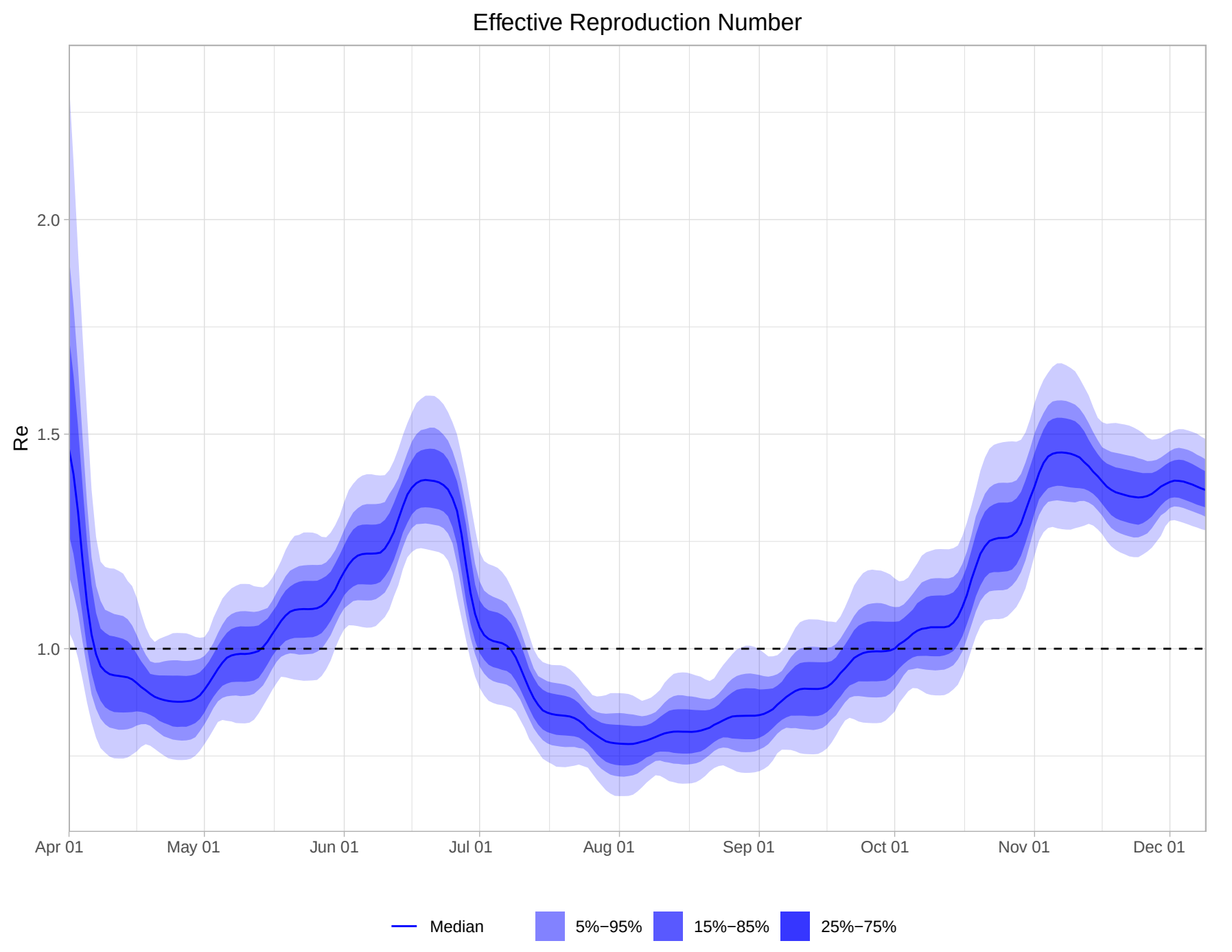

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
6000
4000
2000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
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
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

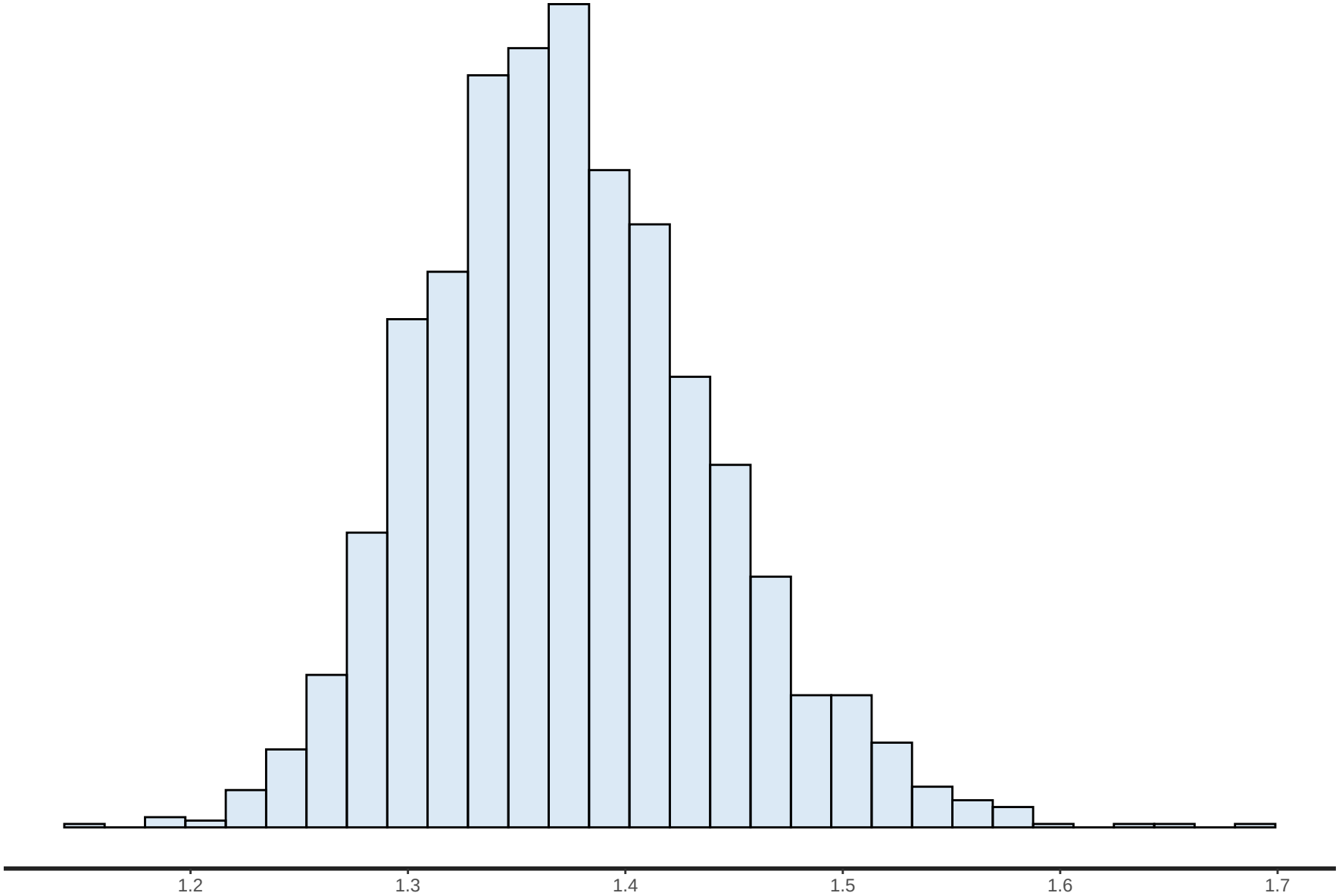

Short Term Death Projection
Number of COVID19 Deaths
2000
1500
1000
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

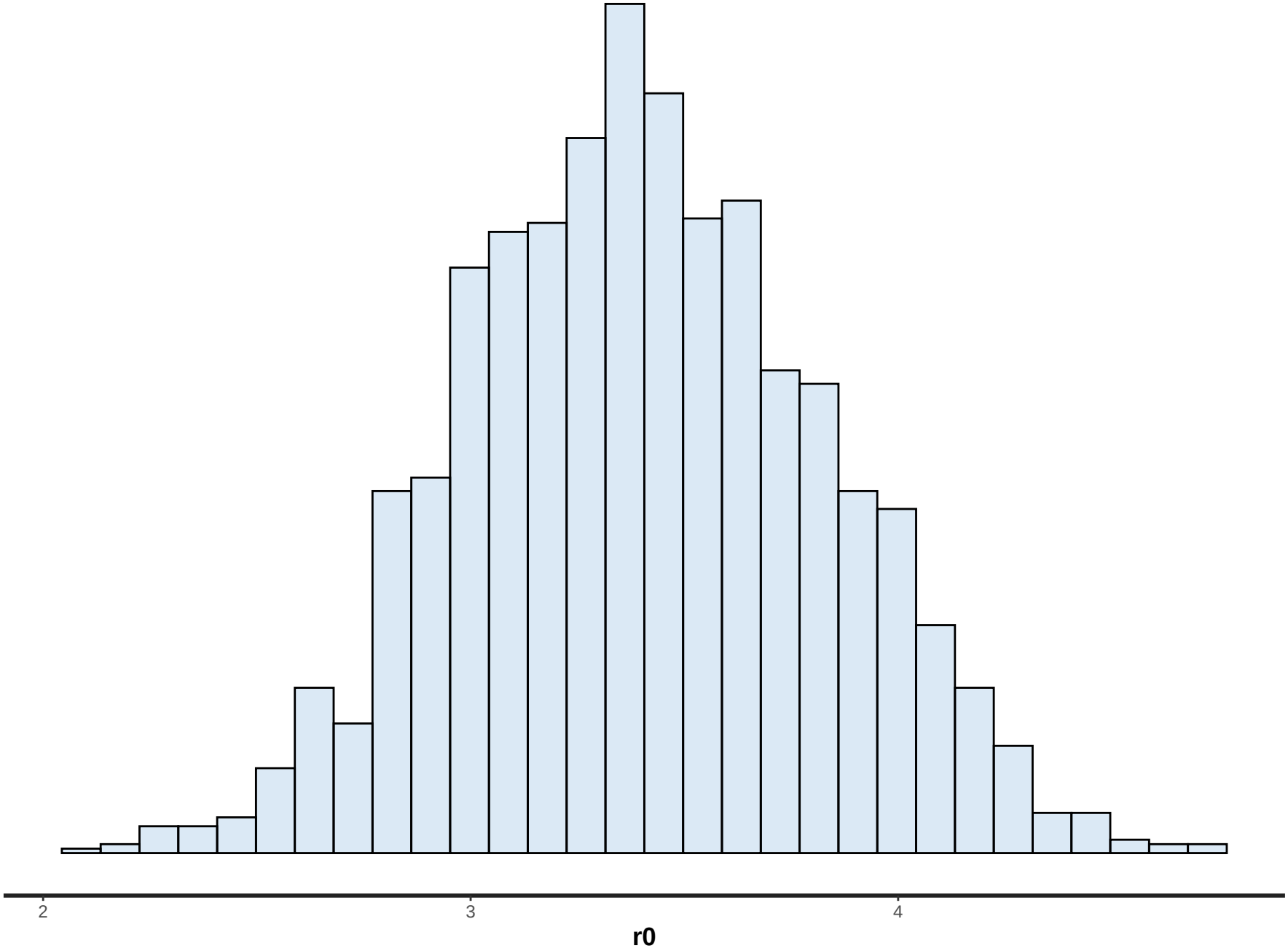

Long Term Death Projection
Number of COVID19 Deaths
10000
7500
5000
2500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

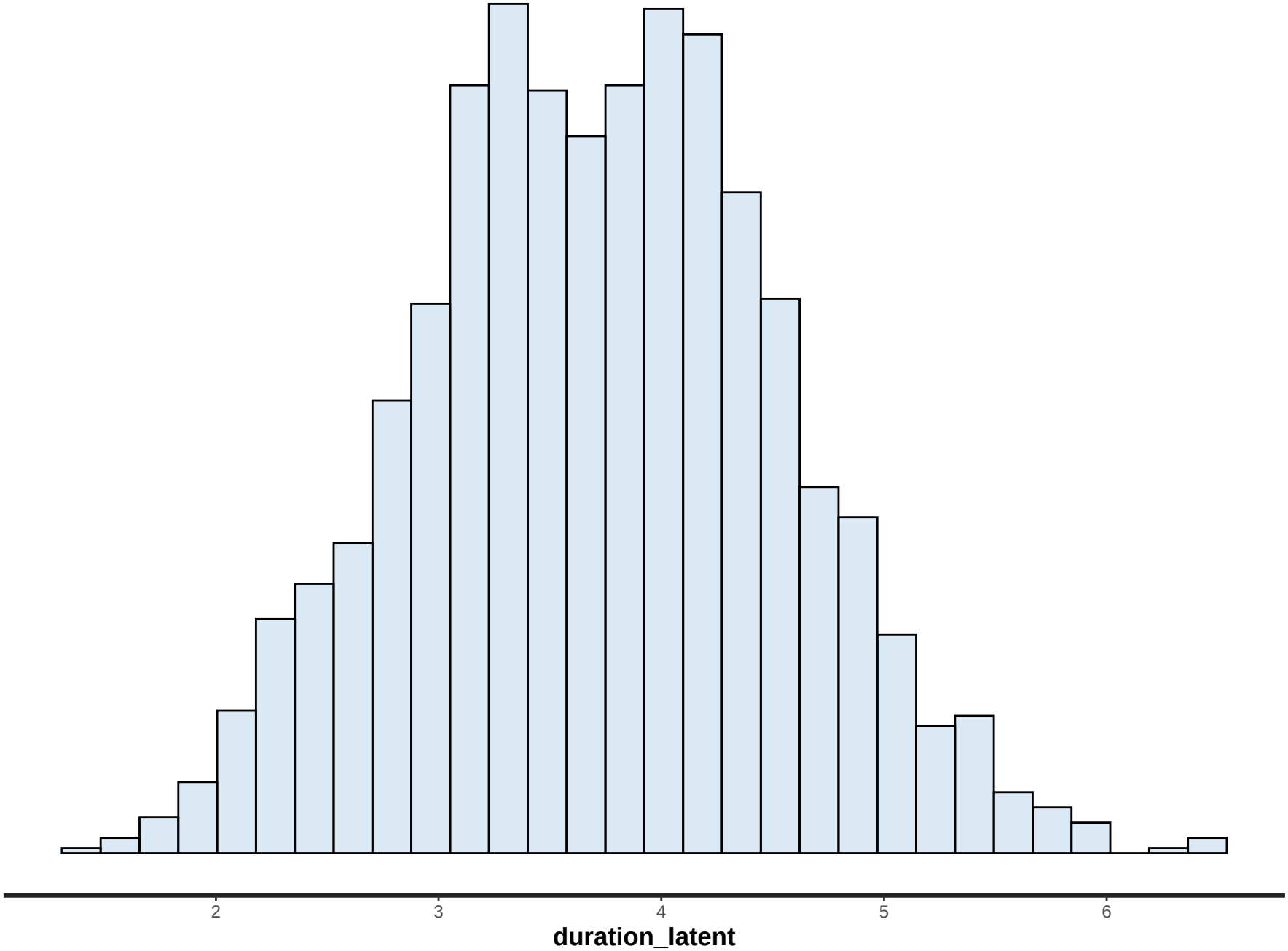

Effective Reproduction Number
Re
2.0
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

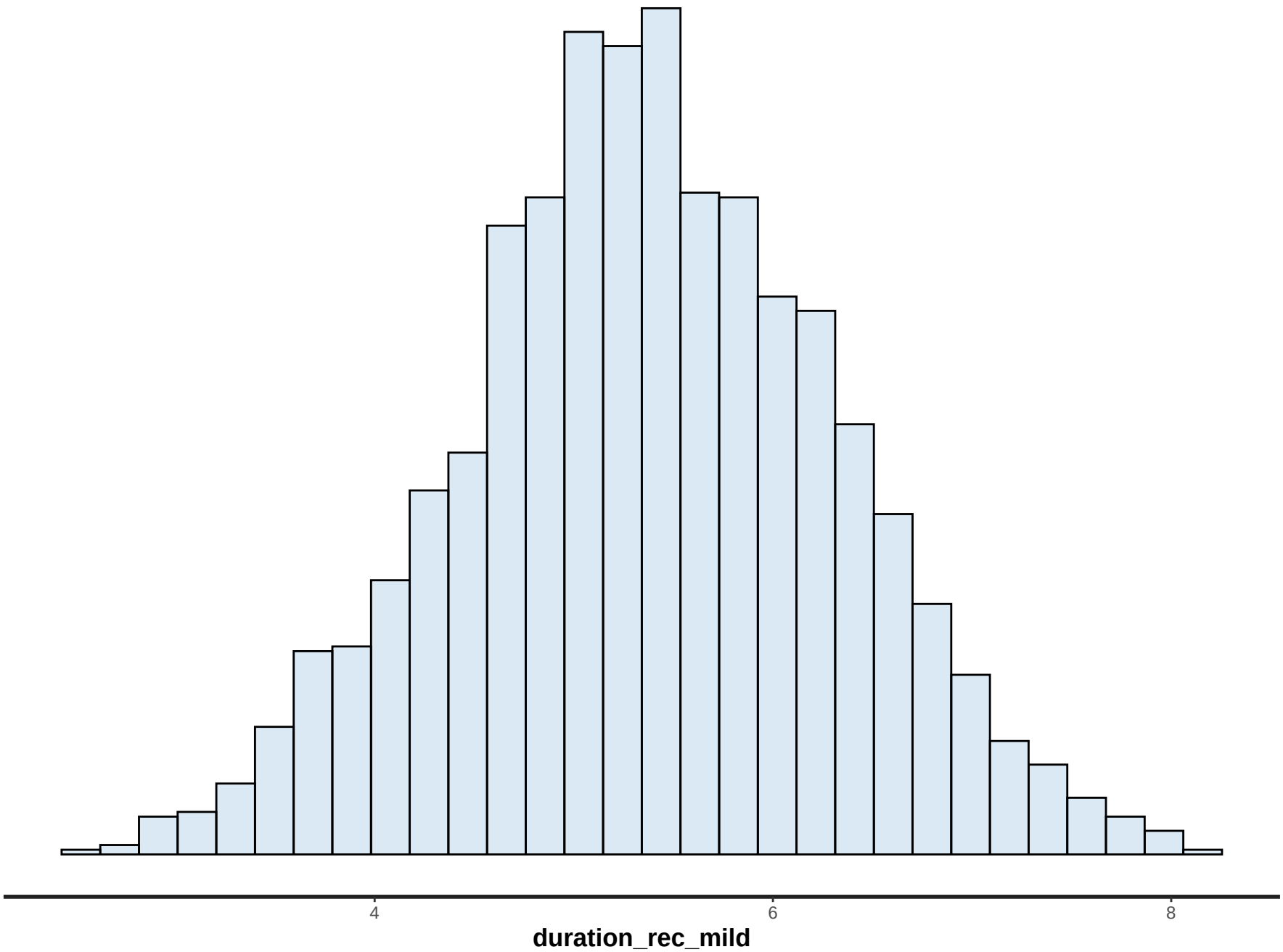
Rt as of 2020−12−09

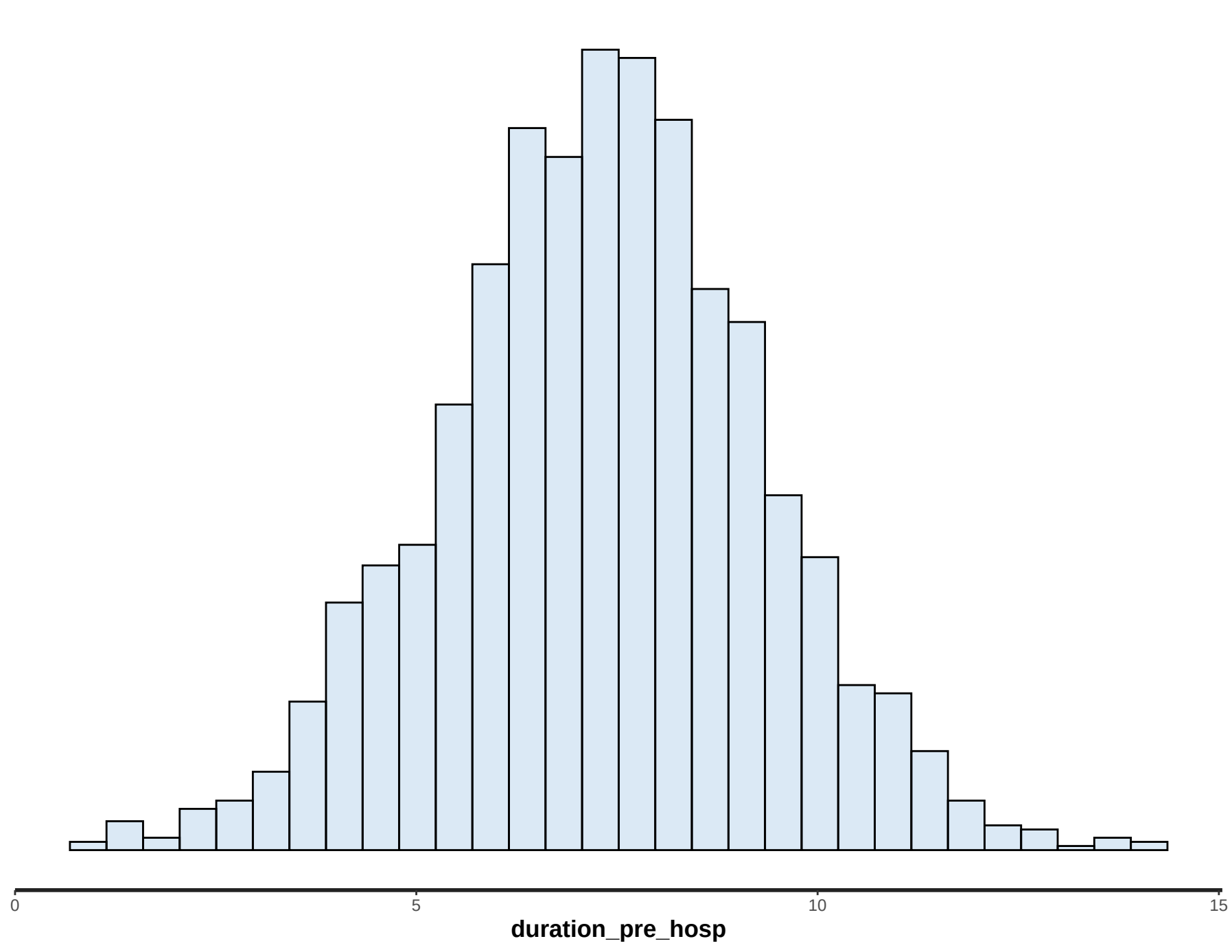
5%	10%	25%	50%	75%	90%	95%
1.28	1.29	1.33	1.37	1.41	1.46	1.49

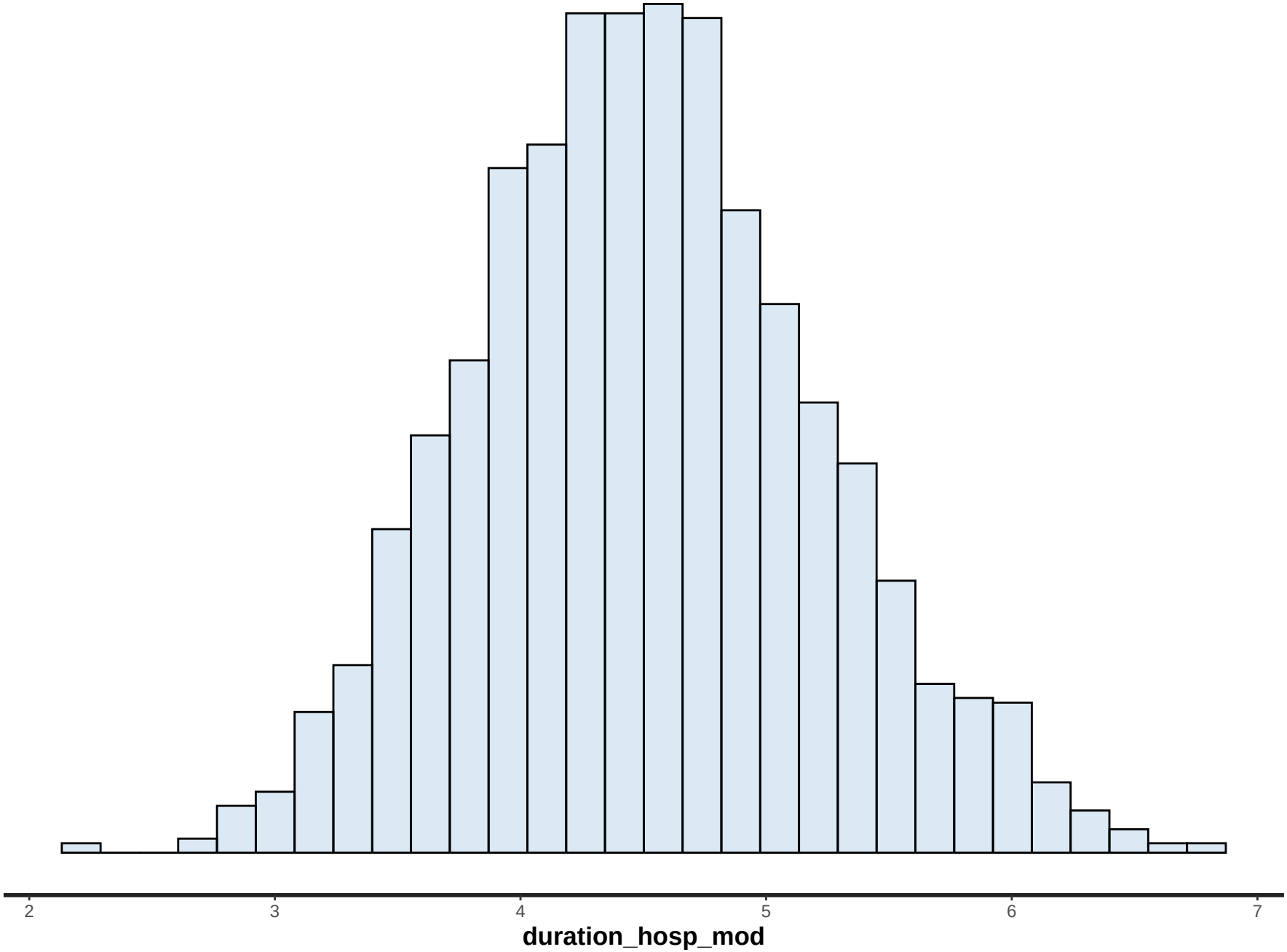


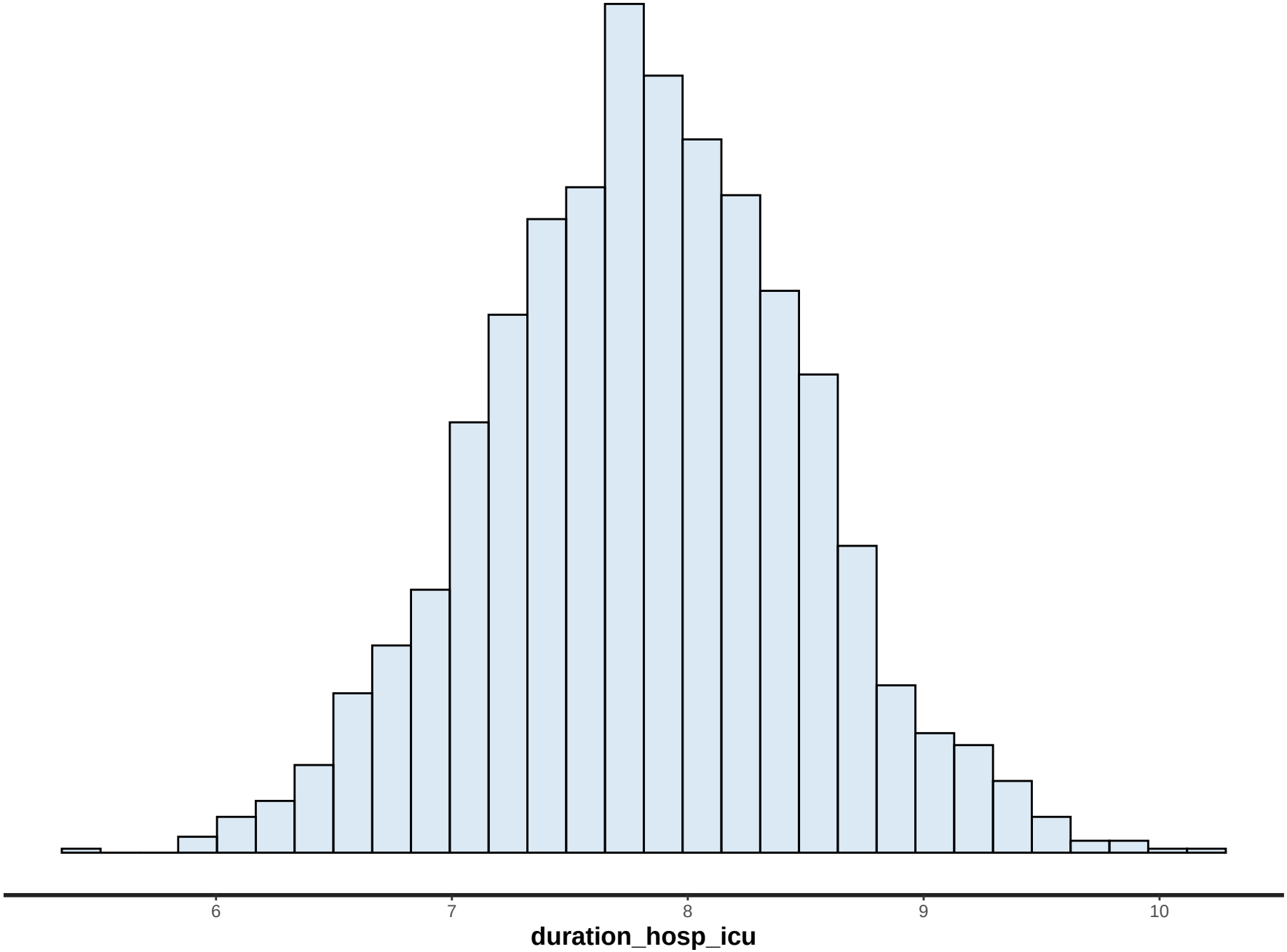

2
3
4
r0

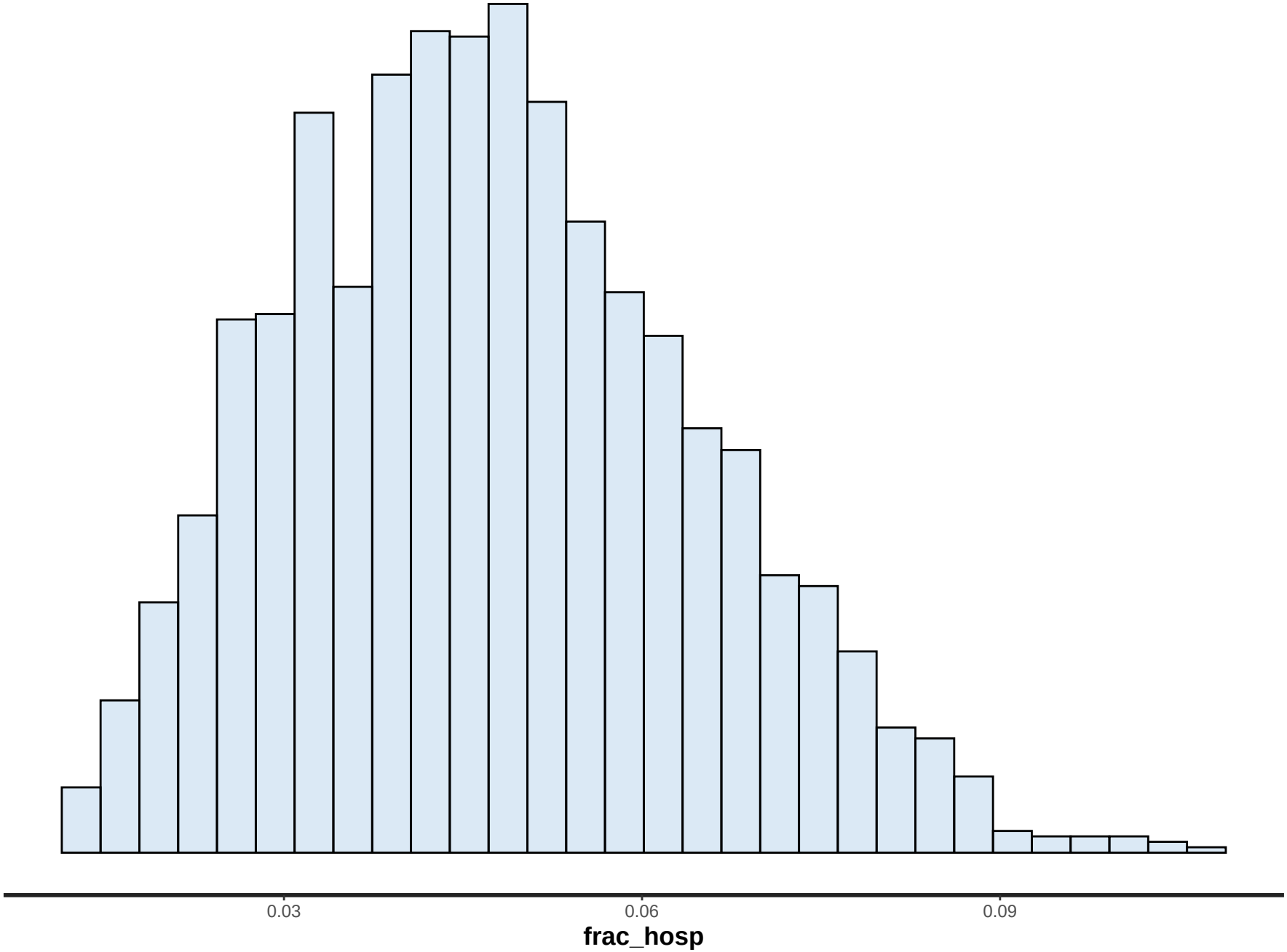

2
3
4
5
6
duration_latent

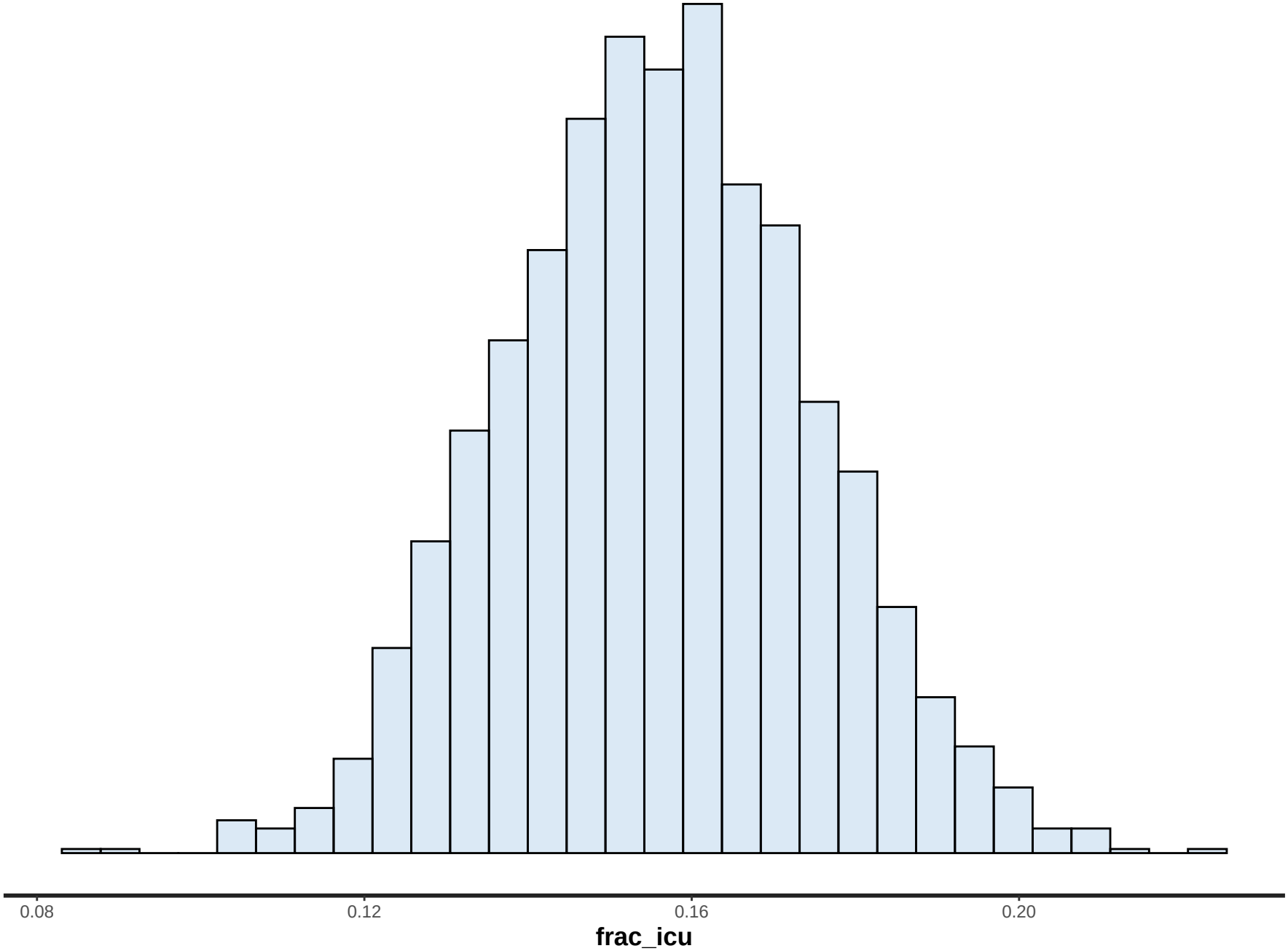

4
6
8
duration_rec_mild

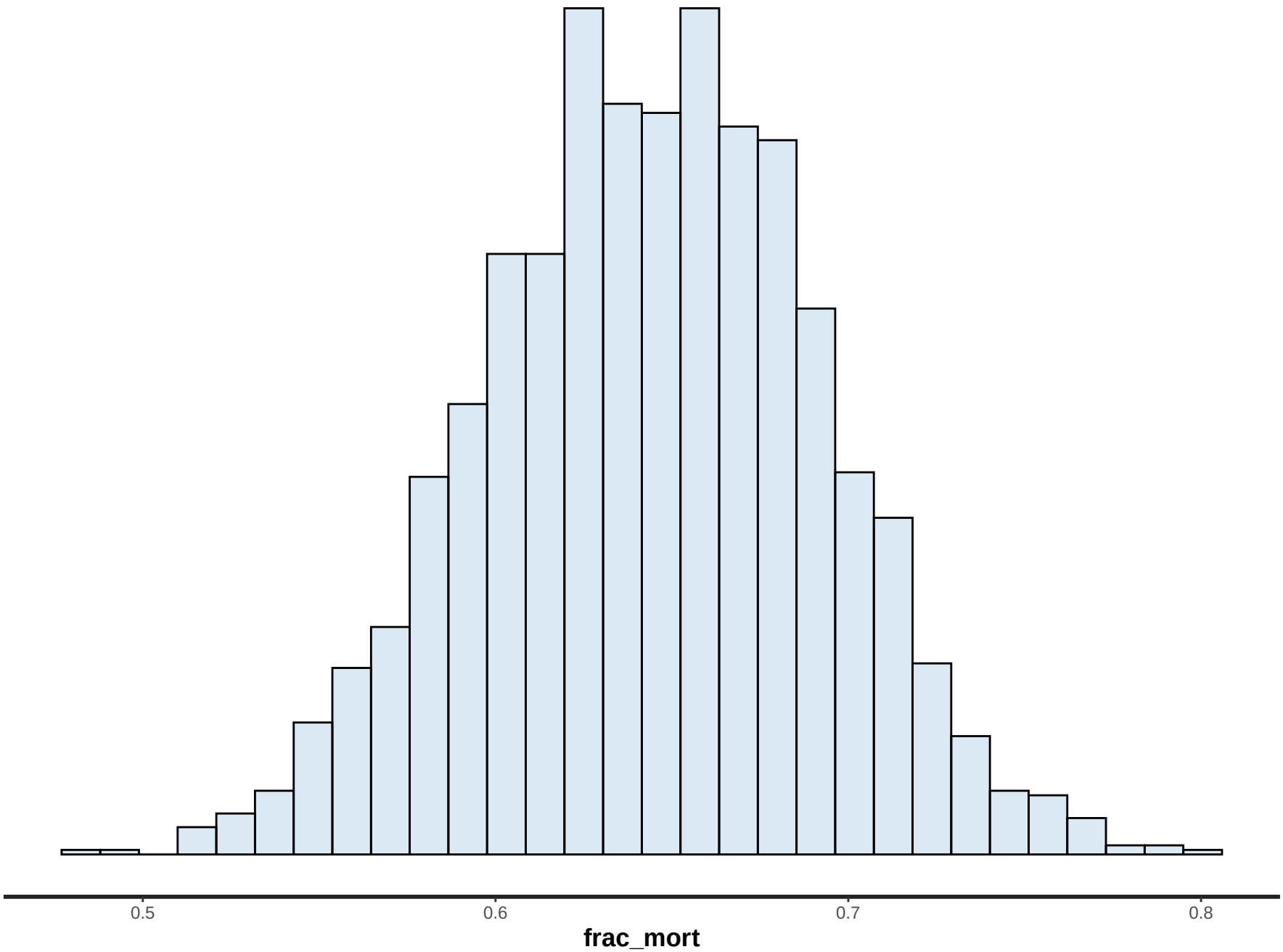

0
5
10
15
duration_pre_hosp

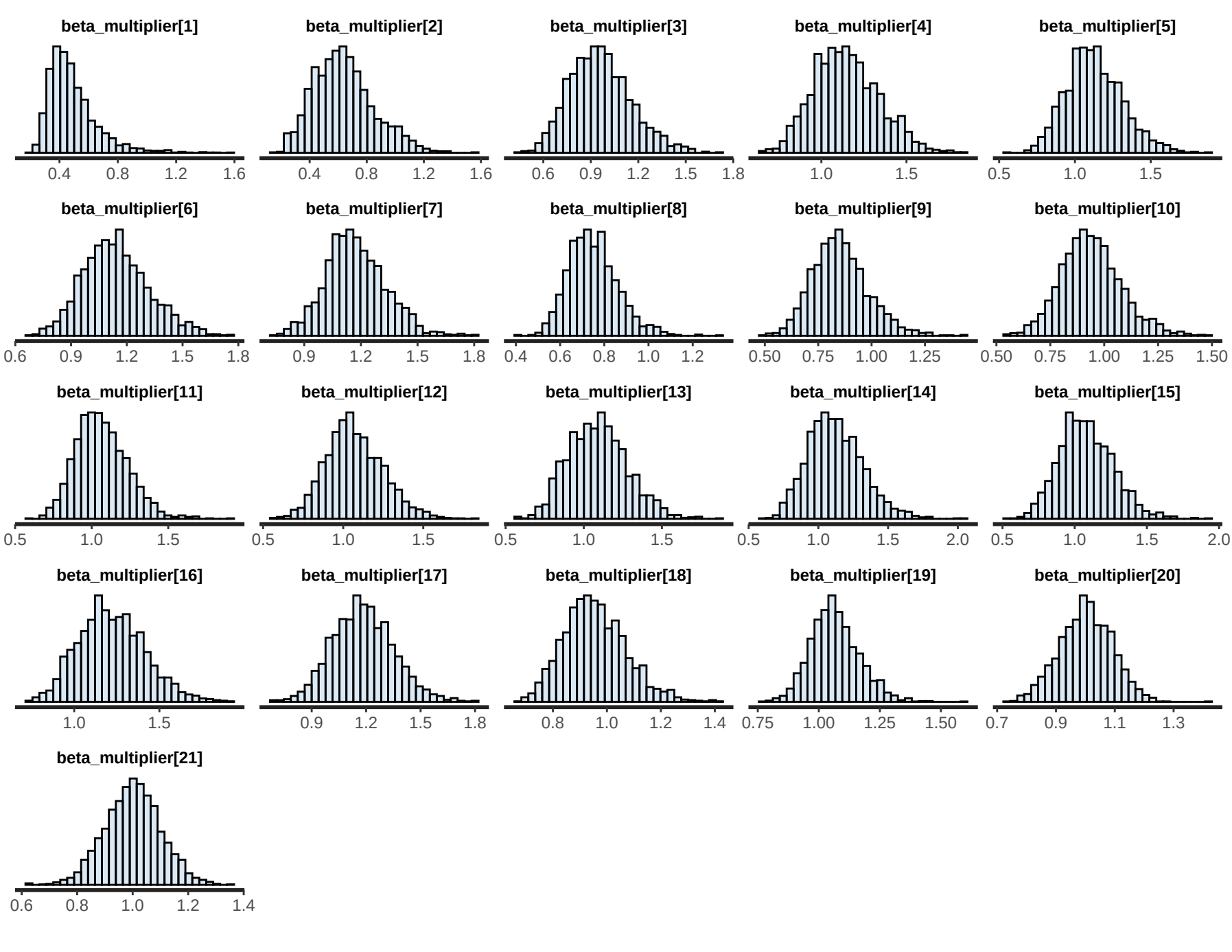

2
3
4
5
6
7
duration_hosp_mod


6
7
8
9
10
duration_hosp_icu


0.03
0.06
0.09
frac_hosp


0.08
0.12
0.16
0.20
frac_icu


0.5
0.6
0.7
0.8
frac_mort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0.4 0.8 1.2 1.6
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
beta_multiplier[5]
0.5 1.0 1.5
beta_multiplier[6]
0.6 0.9 1.2 1.5 1.8
beta_multiplier[7]
0.9 1.2 1.5 1.8
beta_multiplier[8]
0.4 0.6 0.8 1.0 1.2
beta_multiplier[9]
0.50 0.75 1.00 1.25
beta_multiplier[10]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[11]
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beta_multiplier[12]
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beta_multiplier[13]
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beta_multiplier[14]
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beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
1.0 1.5
beta_multiplier[17]
0.9 1.2 1.5 1.8
beta_multiplier[18]
0.8 1.0 1.2 1.4
beta_multiplier[19]
0.75 1.00 1.25 1.50
beta_multiplier[20]
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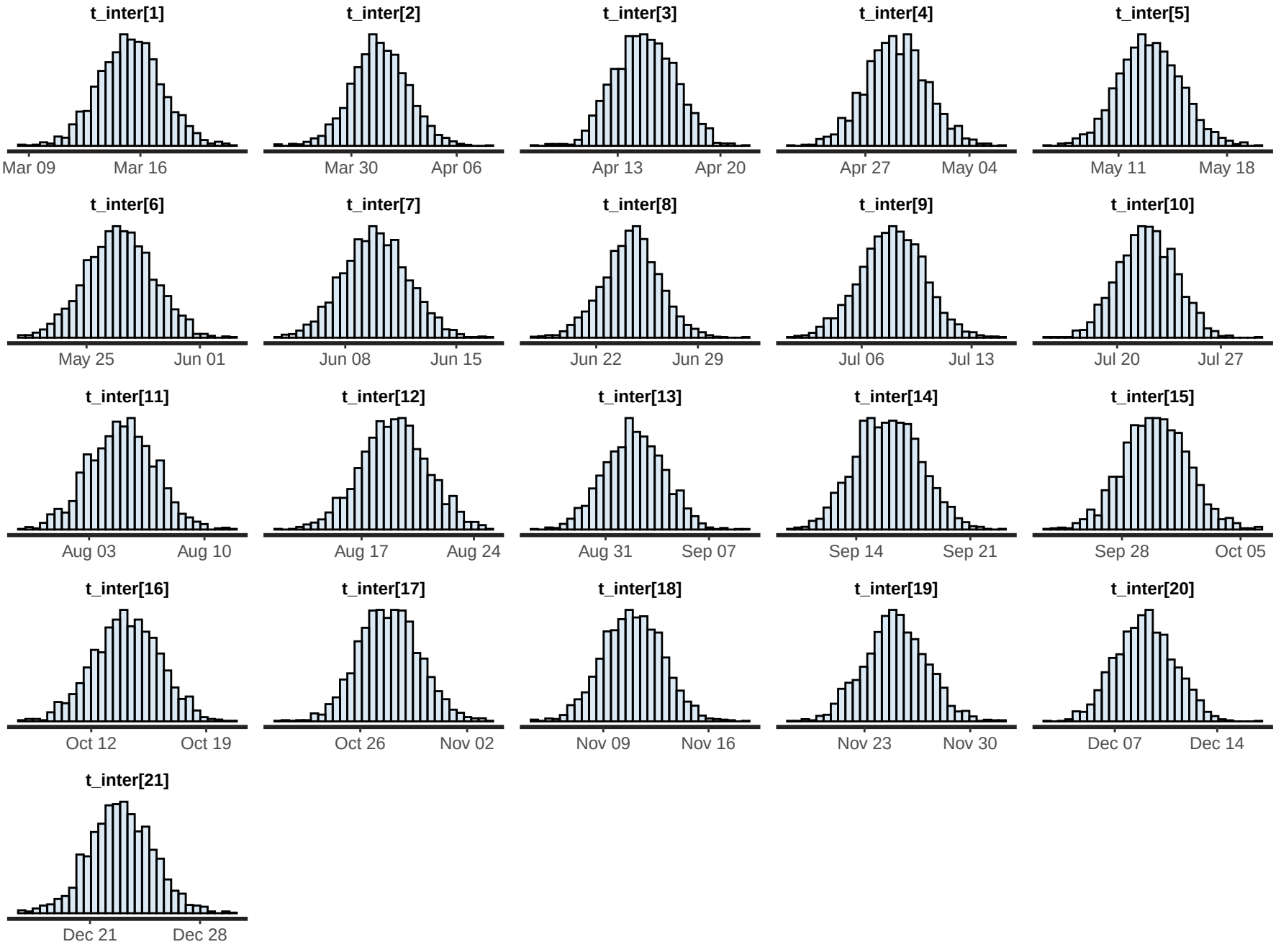
beta_multiplier[21]
0.6 0.8 1.0 1.2 1.4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Mar 09
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Mar 30
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Apr 13
Apr 20
t_inter[4]
Apr 27
May 04
t_inter[5]
May 11
May 18
t_inter[6]
May 25
Jun 01
t_inter[7]
Jun 08
Jun 15
t_inter[8]
Jun 22
Jun 29
t_inter[9]
Jul 06
Jul 13
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Jul 20
Jul 27
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Aug 03
Aug 10
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Aug 17
Aug 24
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Aug 31
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Sep 14
Sep 21
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Sep 28
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Oct 19
t_inter[17]
Oct 26
Nov 02
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Nov 09
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Nov 23
Nov 30
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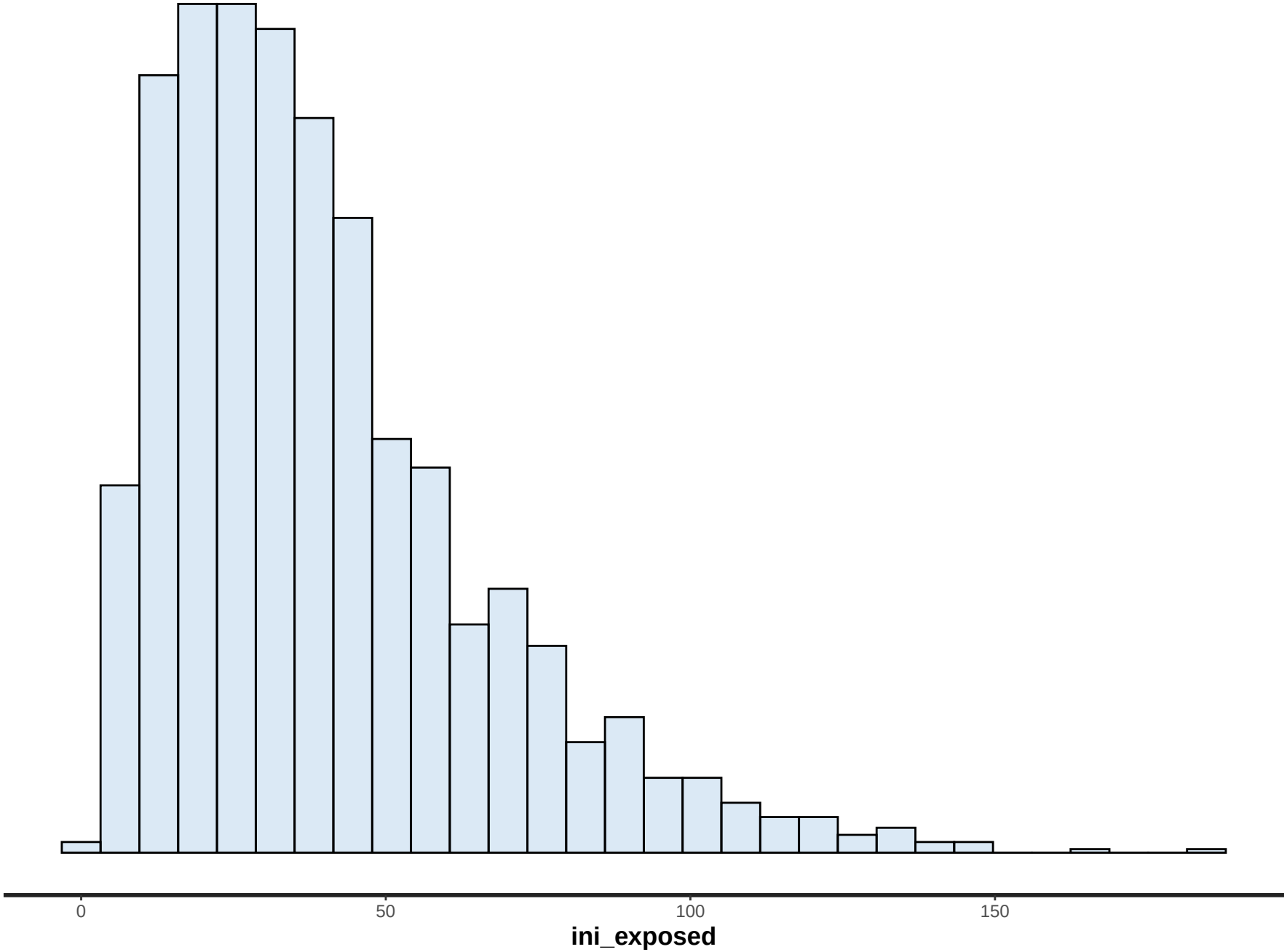
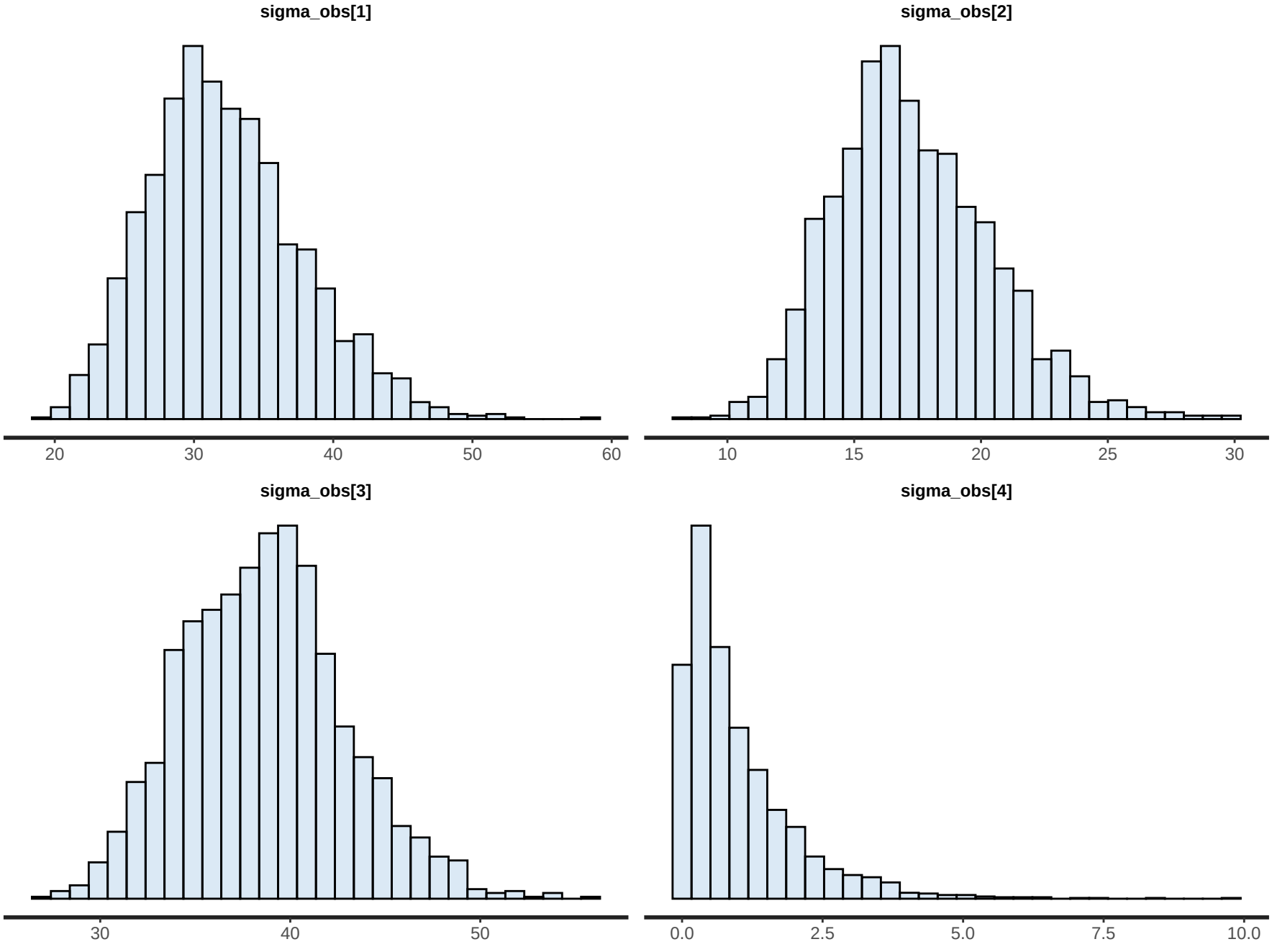
Dec 07
Dec 14
t_inter[21]
Dec 21
Dec 28


0
50
100
150
ini_exposed


sigma_obs[1]
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30
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sigma_obs[2]
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50
sigma_obs[4]
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5.0
7.5
10.0