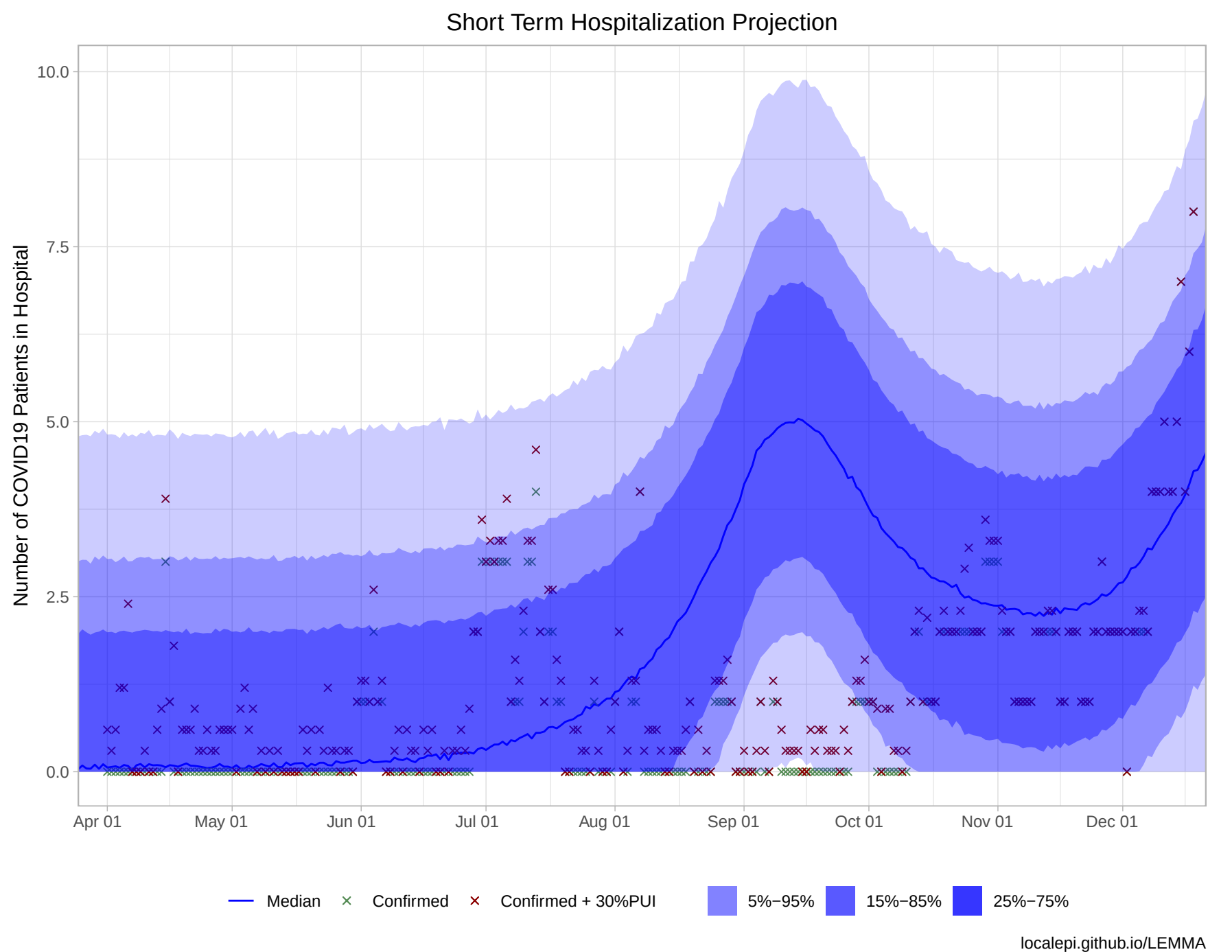
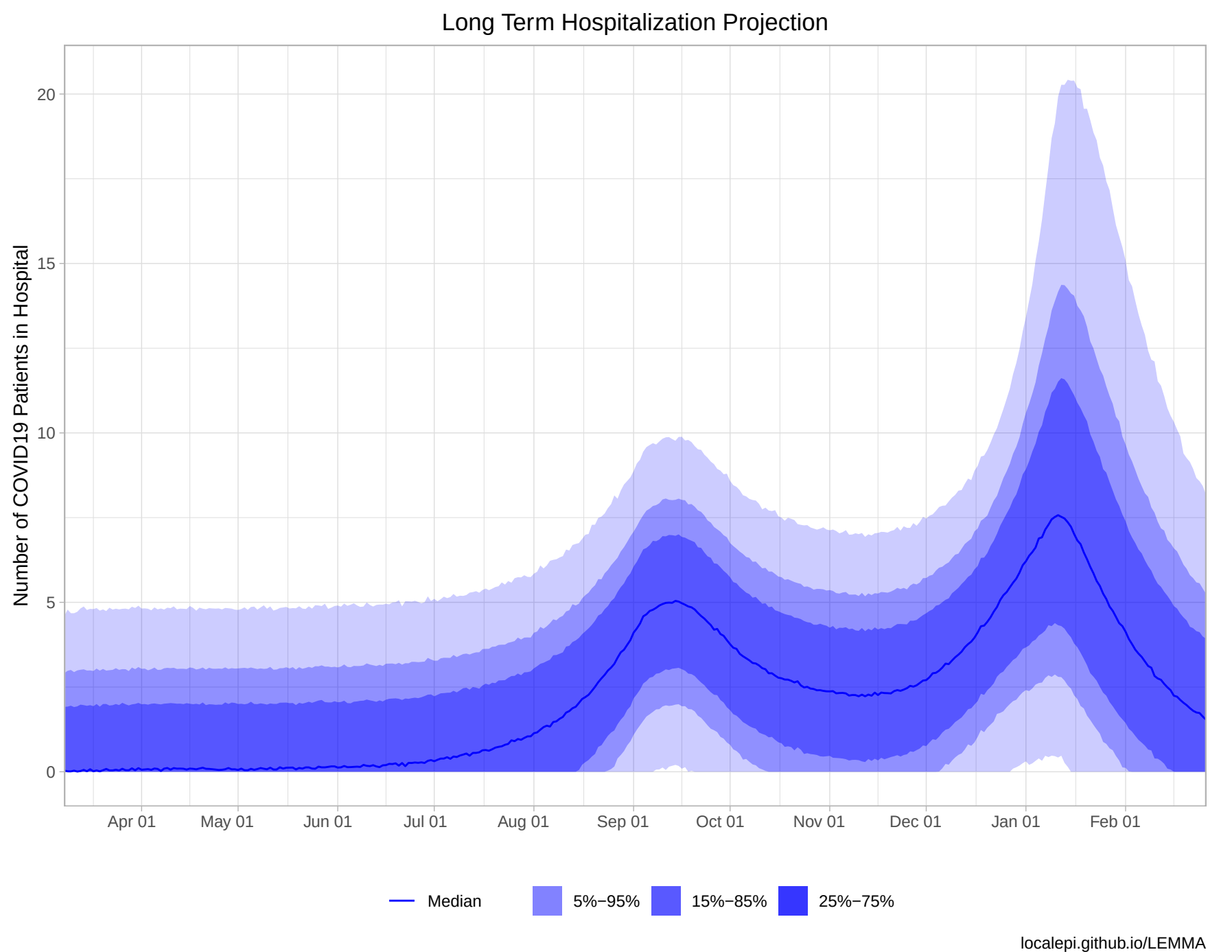
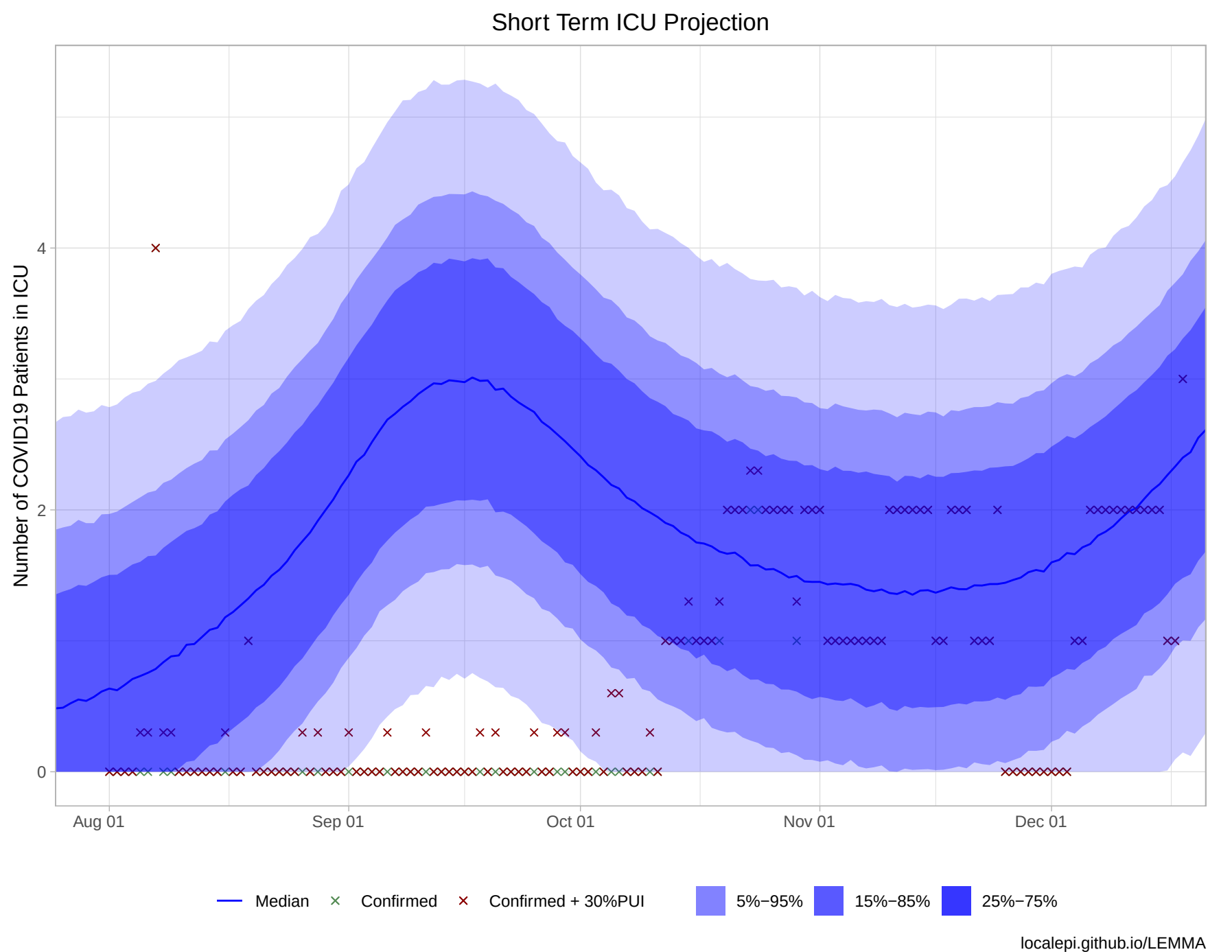
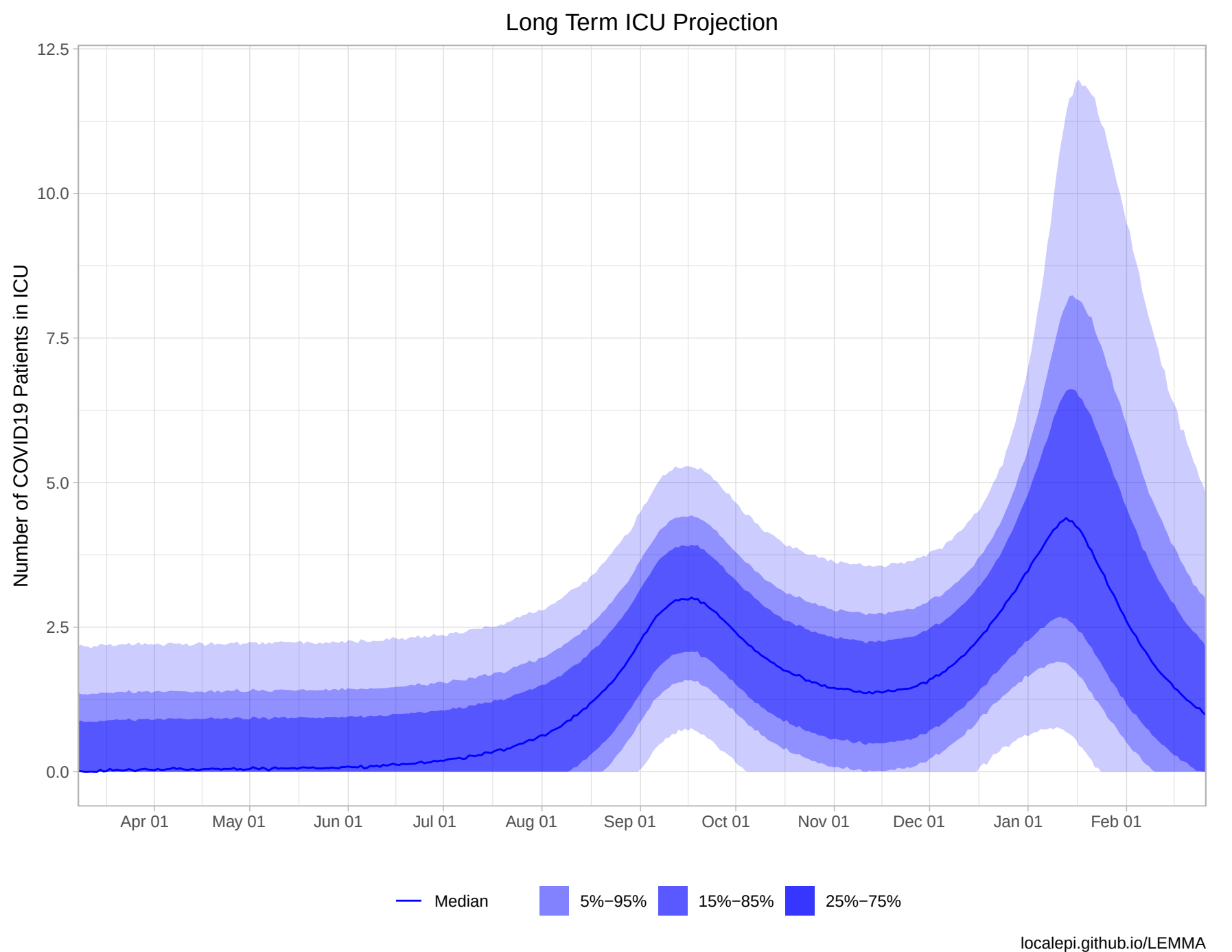
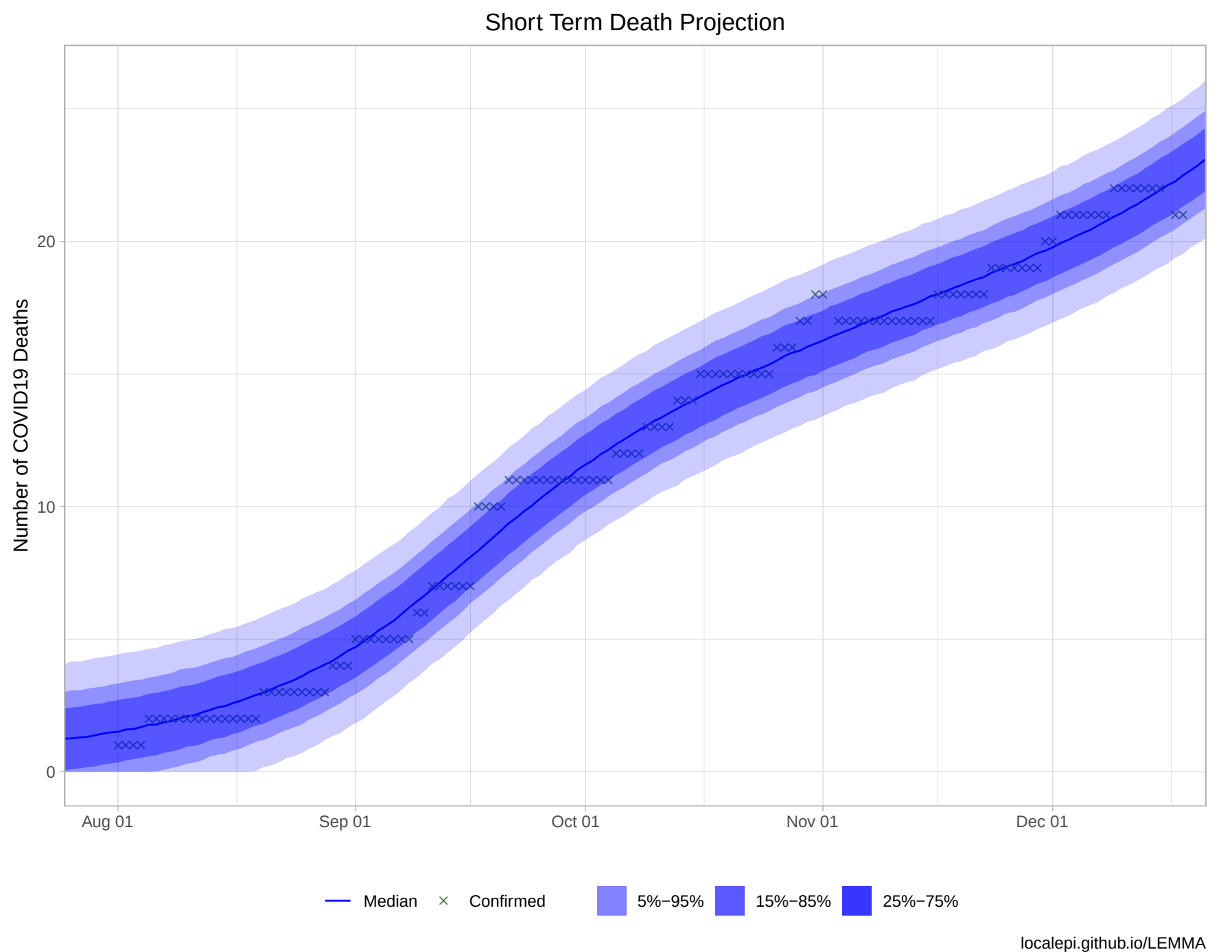
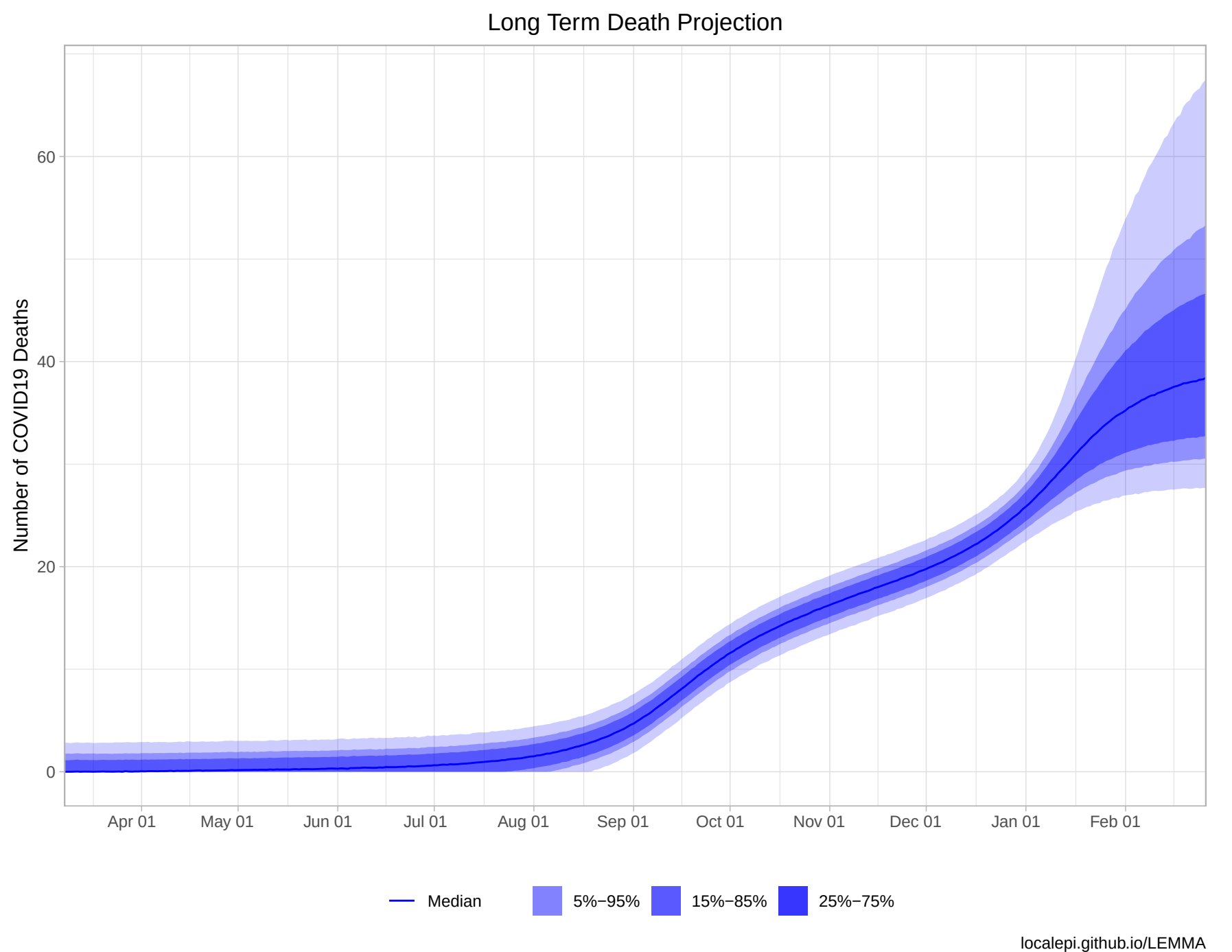

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
10.0
7.5
5.0
2.5
0.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

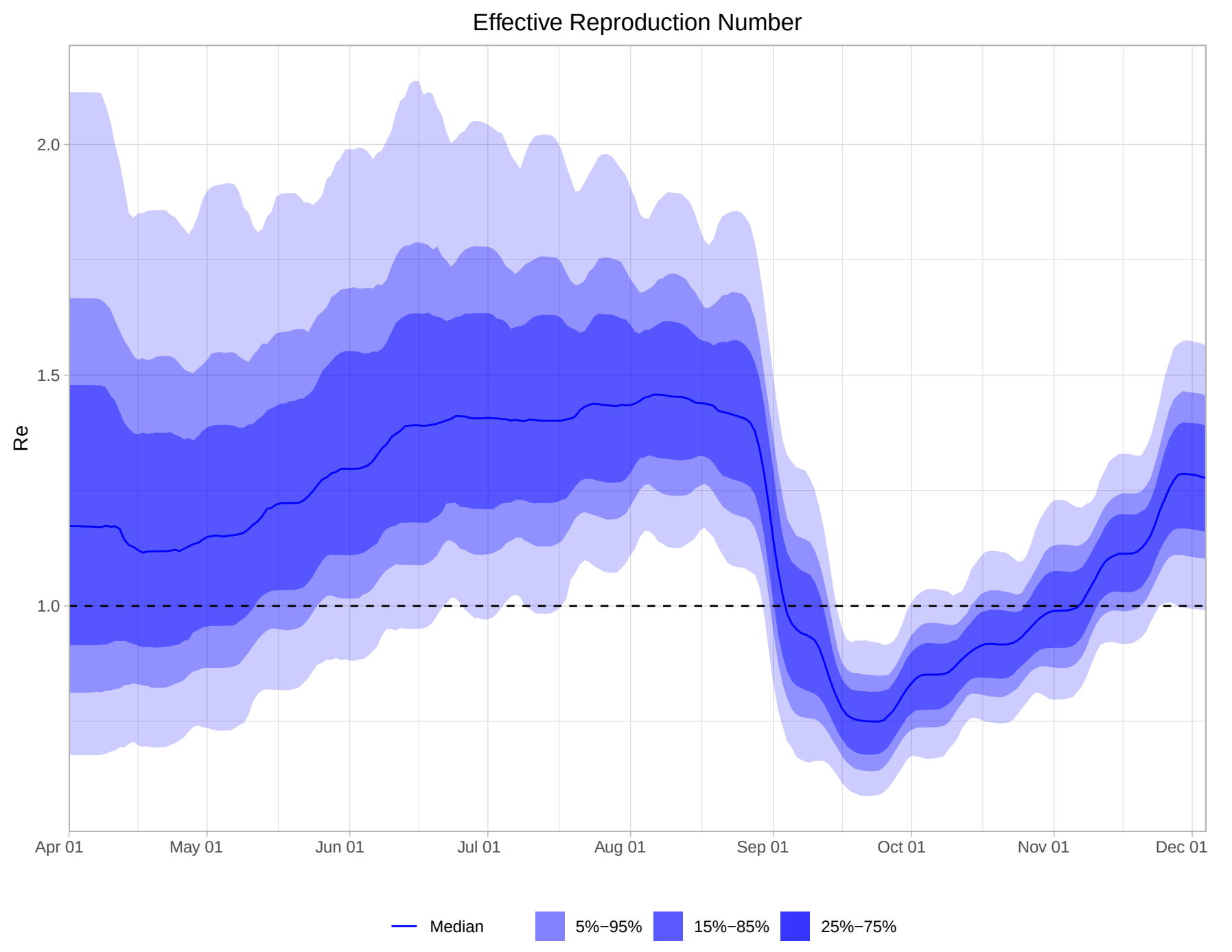

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
5
10
15
20
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
0
2
4
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
12.5
10.0
7.5
5.0
2.5
0.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

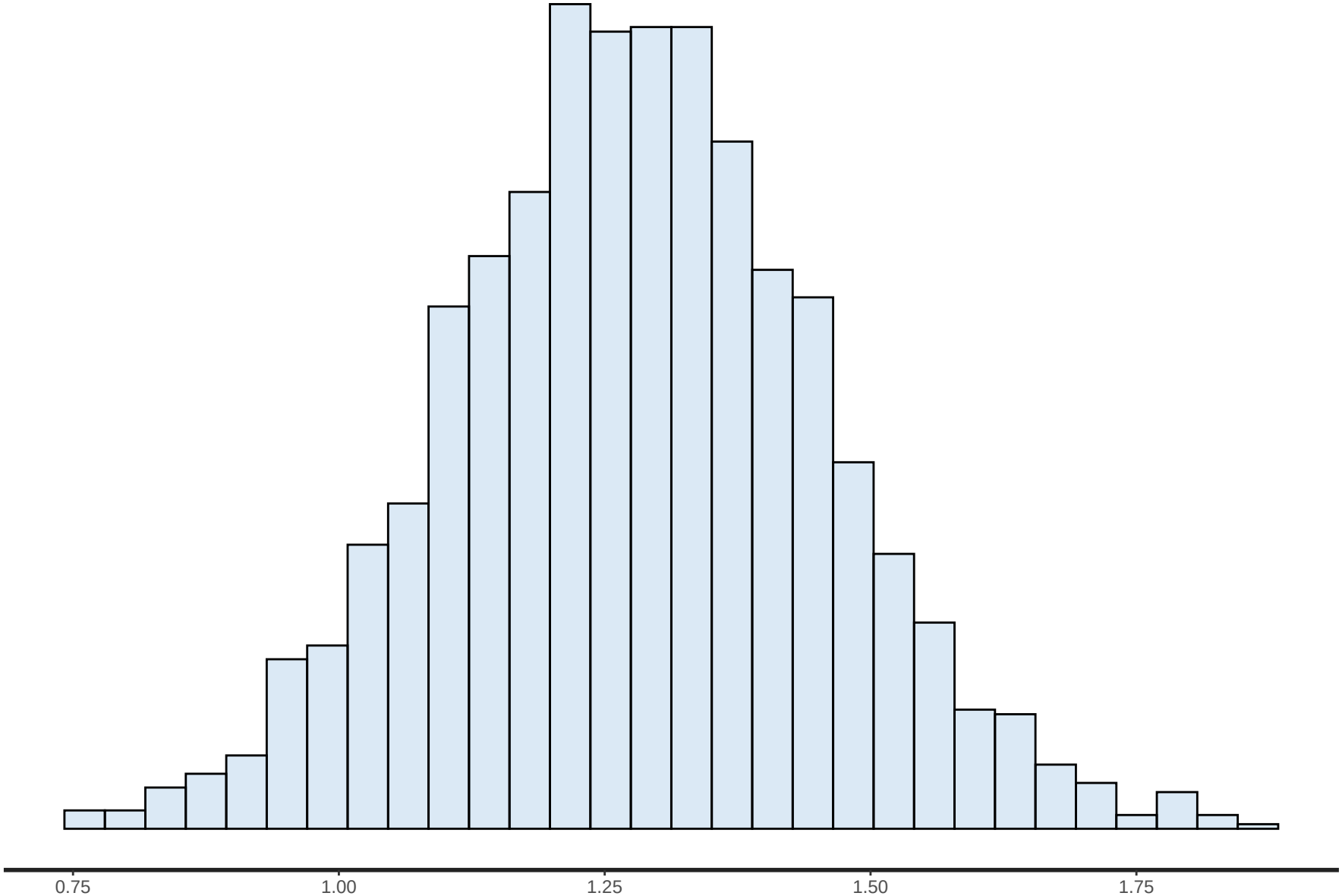

Short Term Death Projection
Number of COVID19 Deaths
0
10
20
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

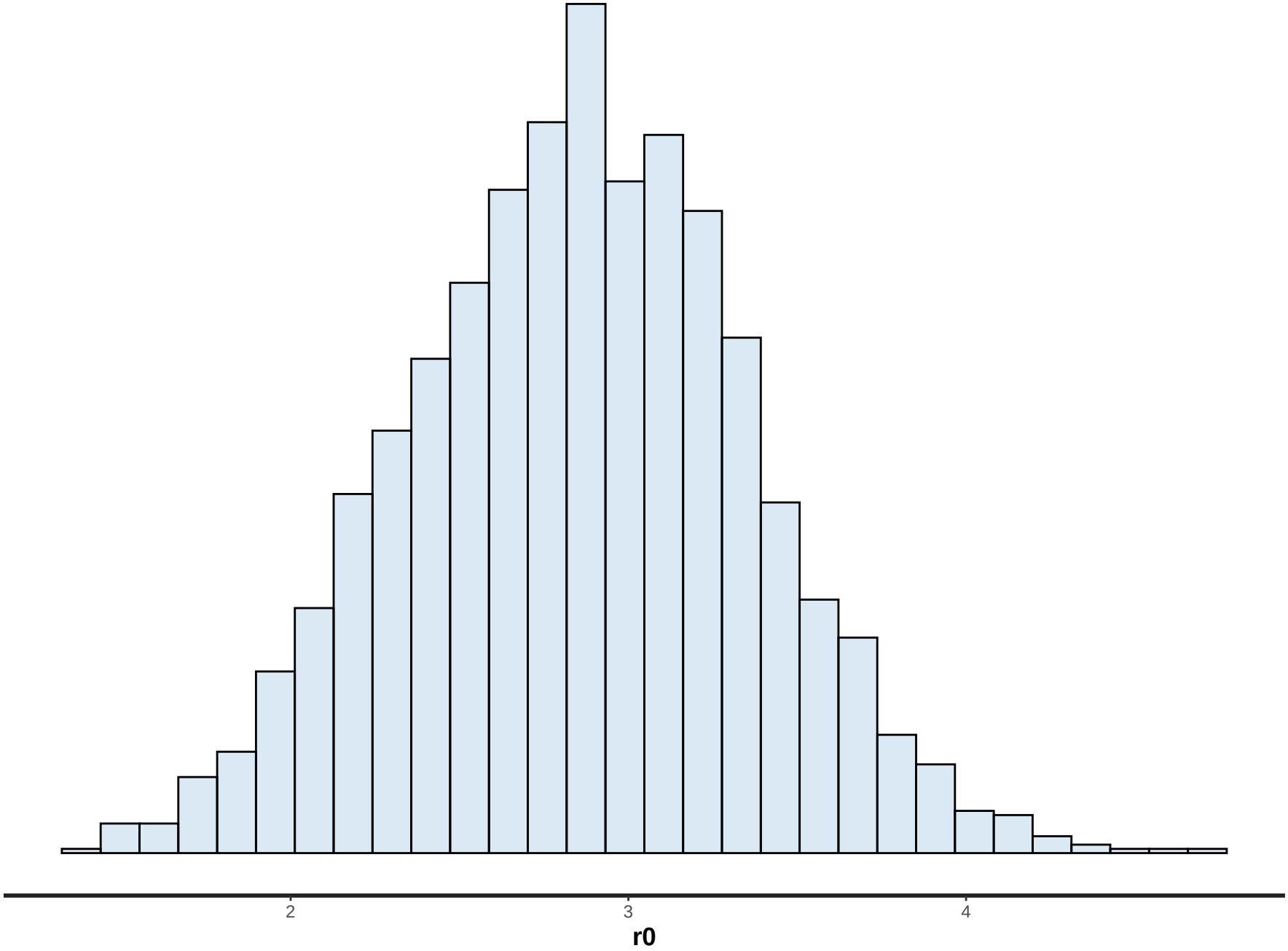

Long Term Death Projection
Number of COVID19 Deaths
0
20
40
60
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

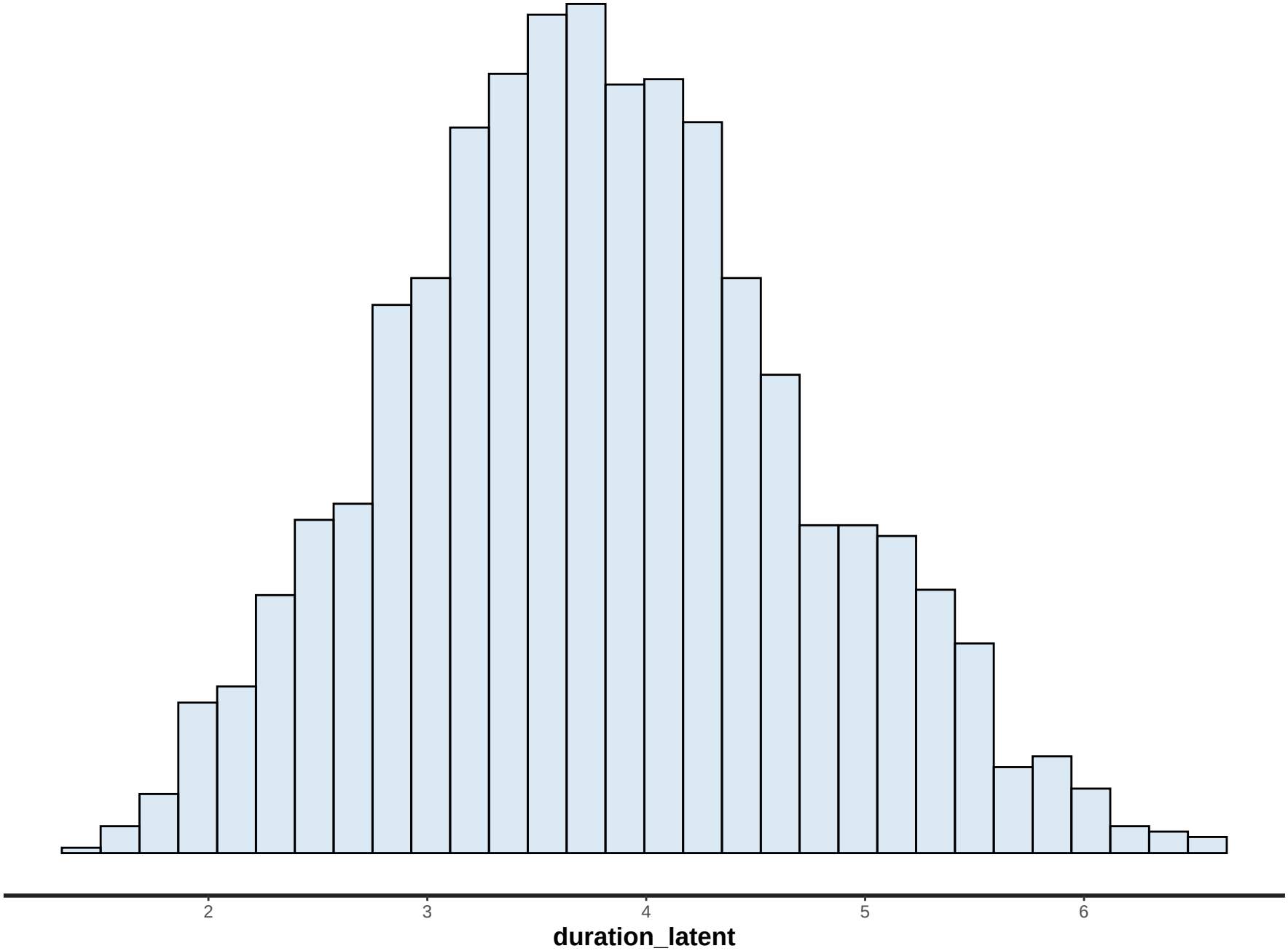

Effective Reproduction Number
Re
2.0
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

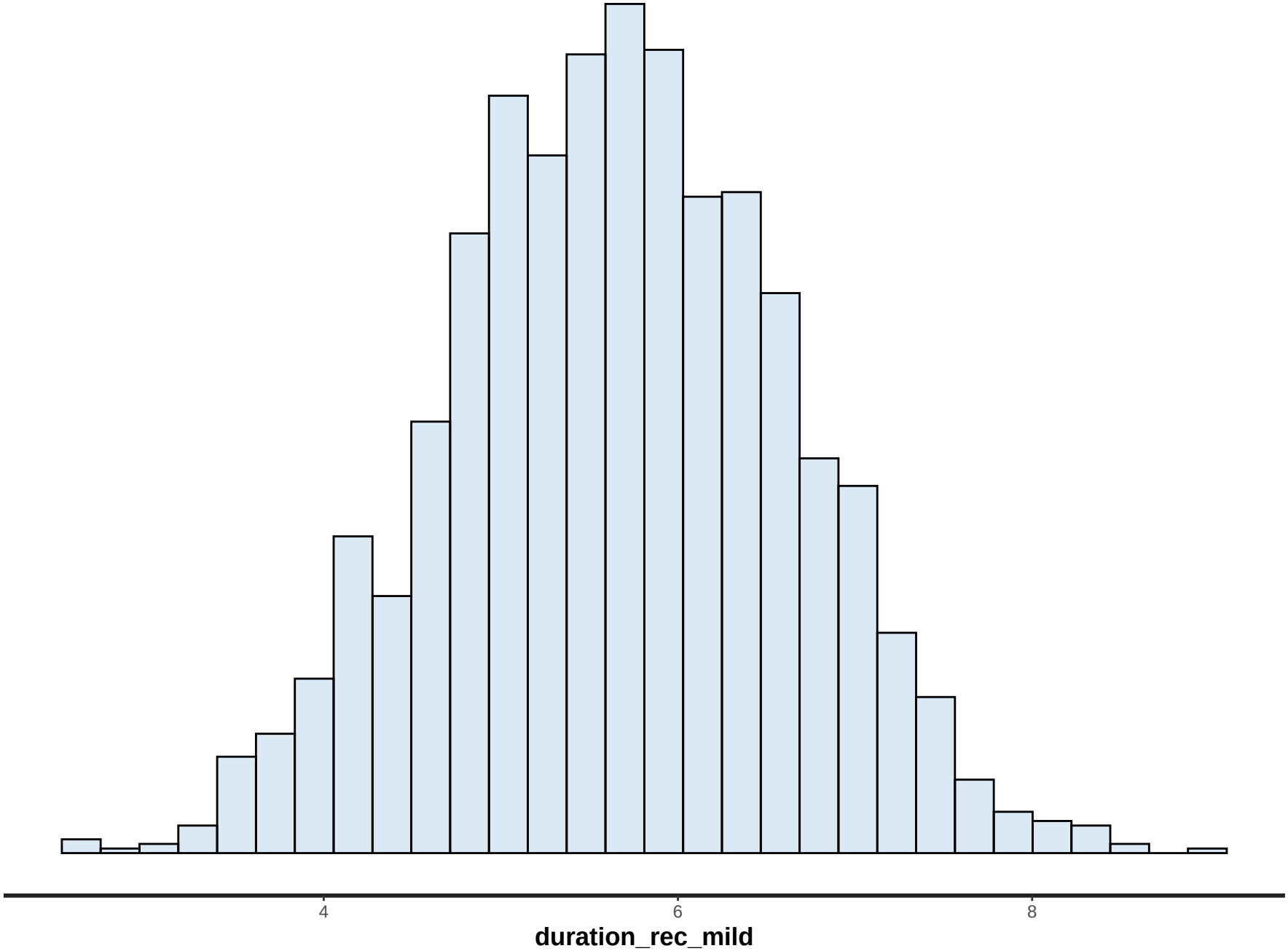
Rt as of 2020−12−04

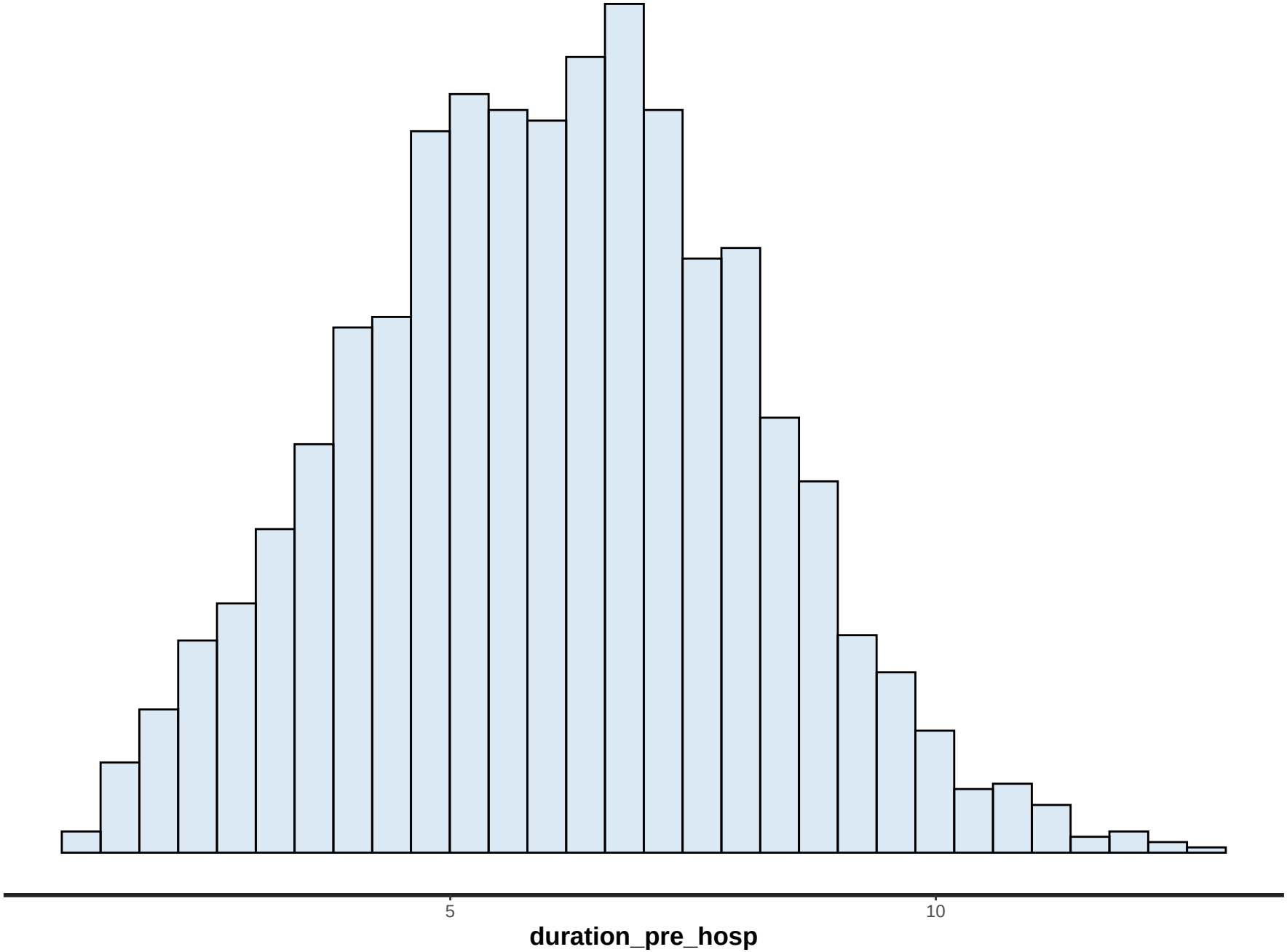
5%	10%	25%	50%	75%	90%	95%
0.99	1.05	1.16	1.28	1.39	1.50	1.56

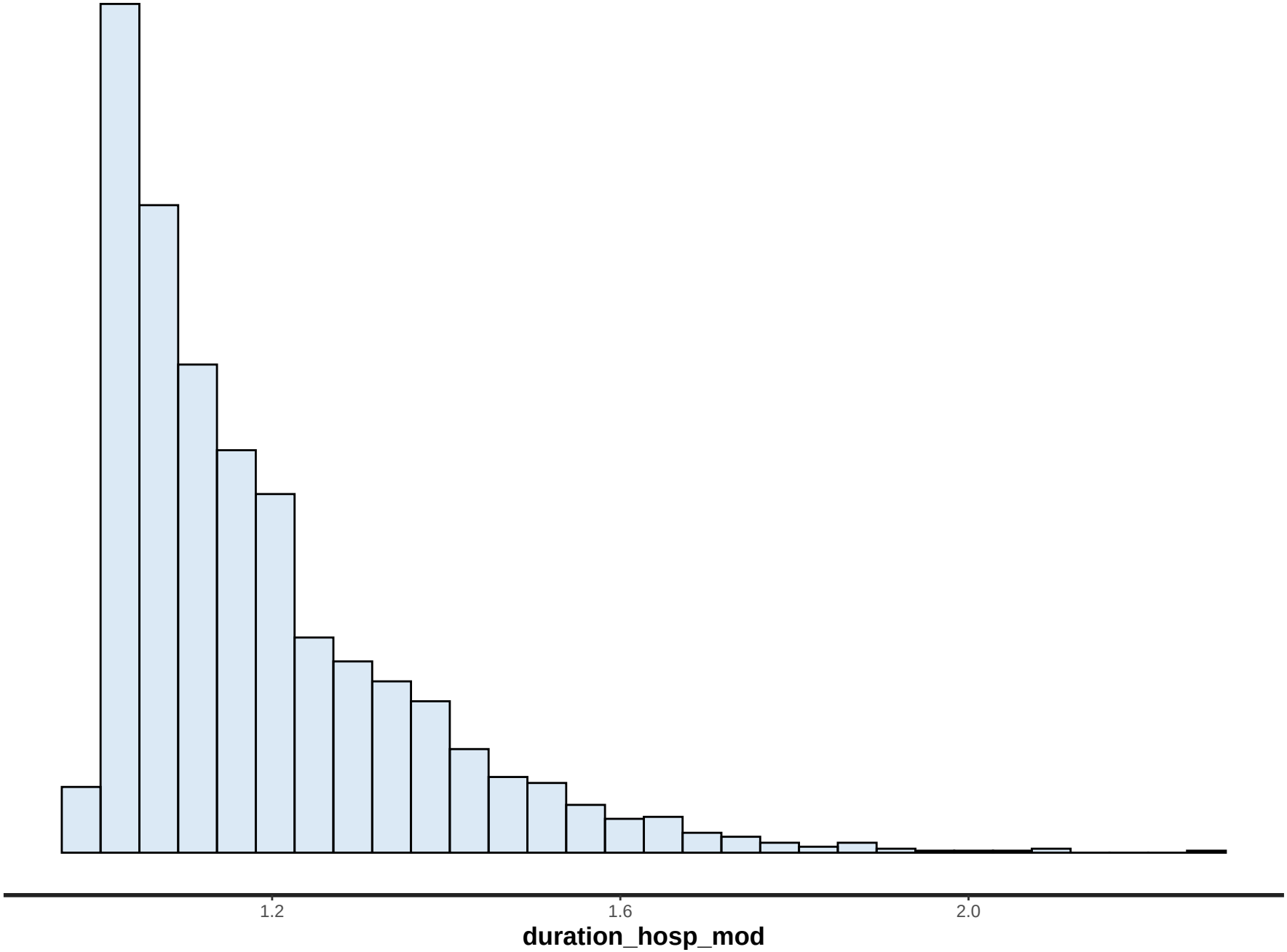


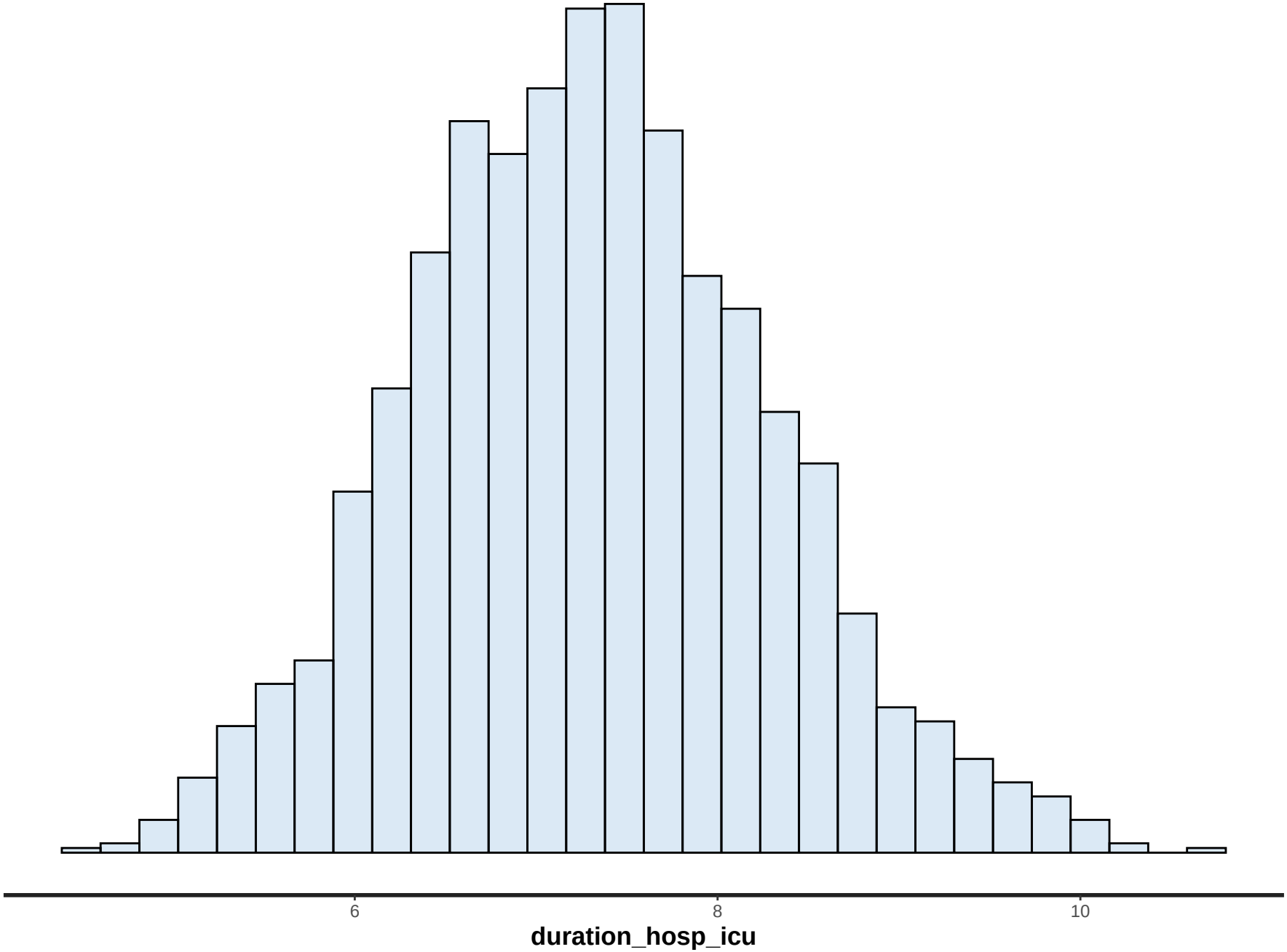

2
3
4
r0

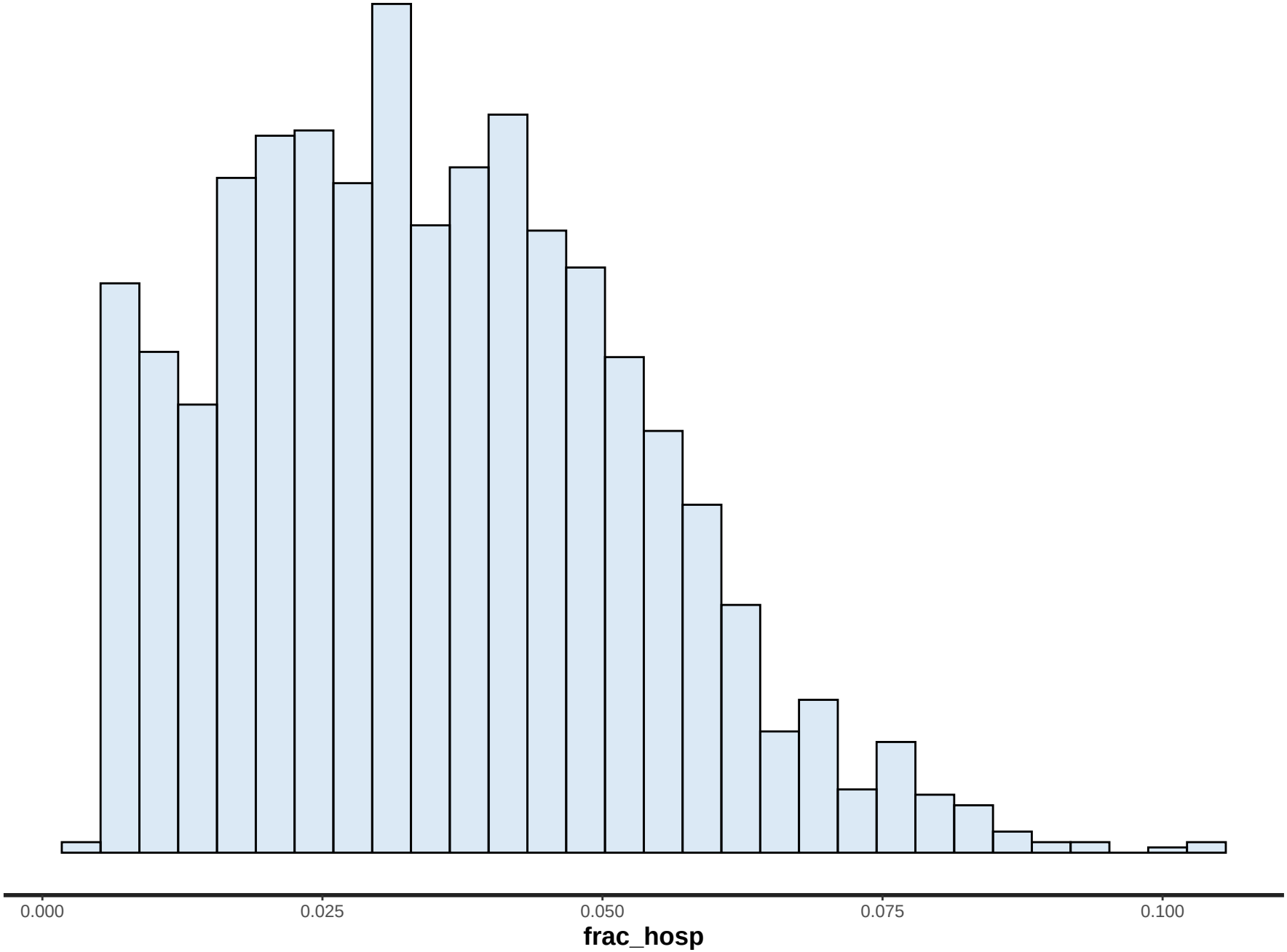

2
3
4
5
6
duration_latent

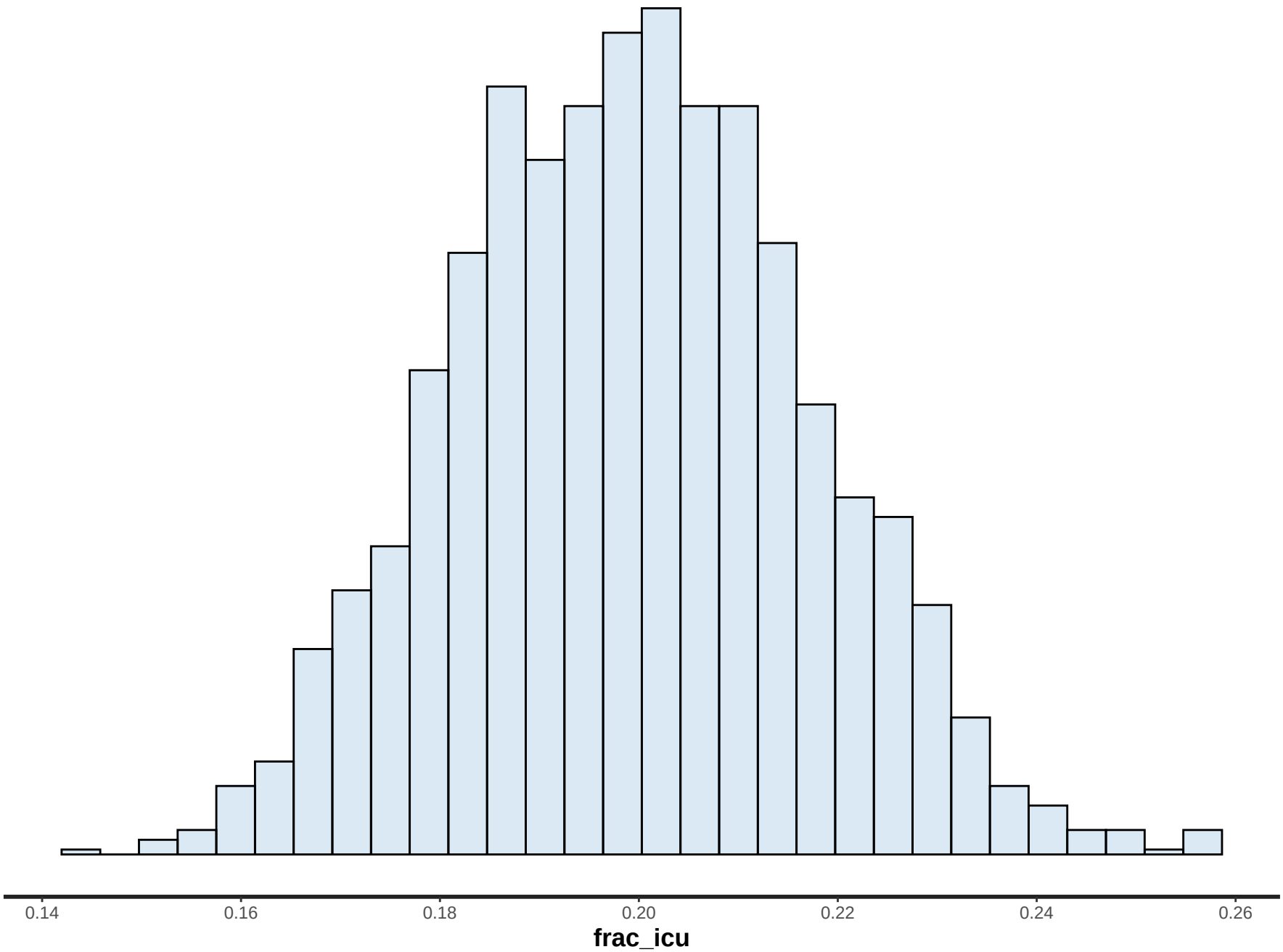

4
6
8
duration_rec_mild

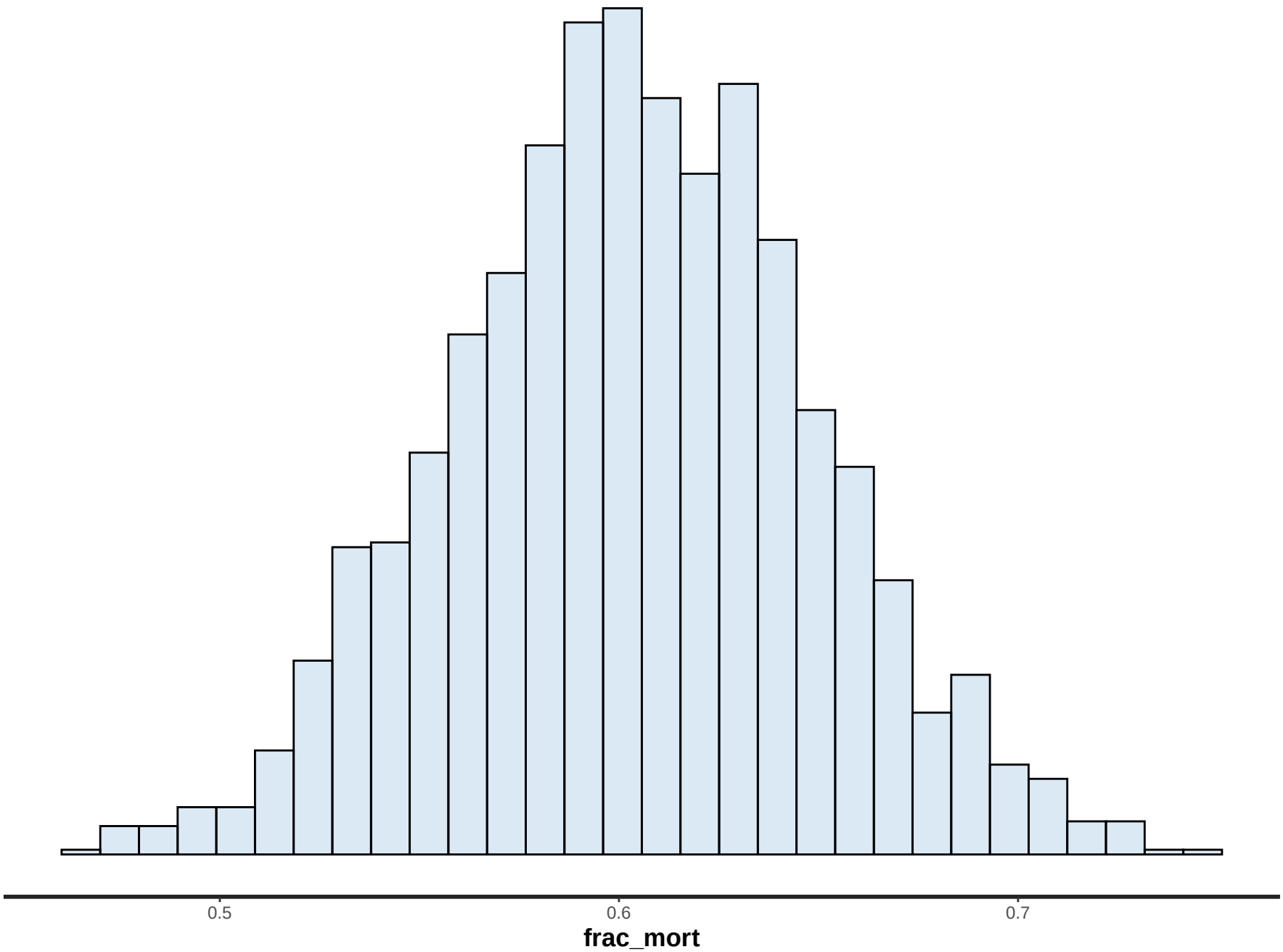

5
10
duration_pre_hosp

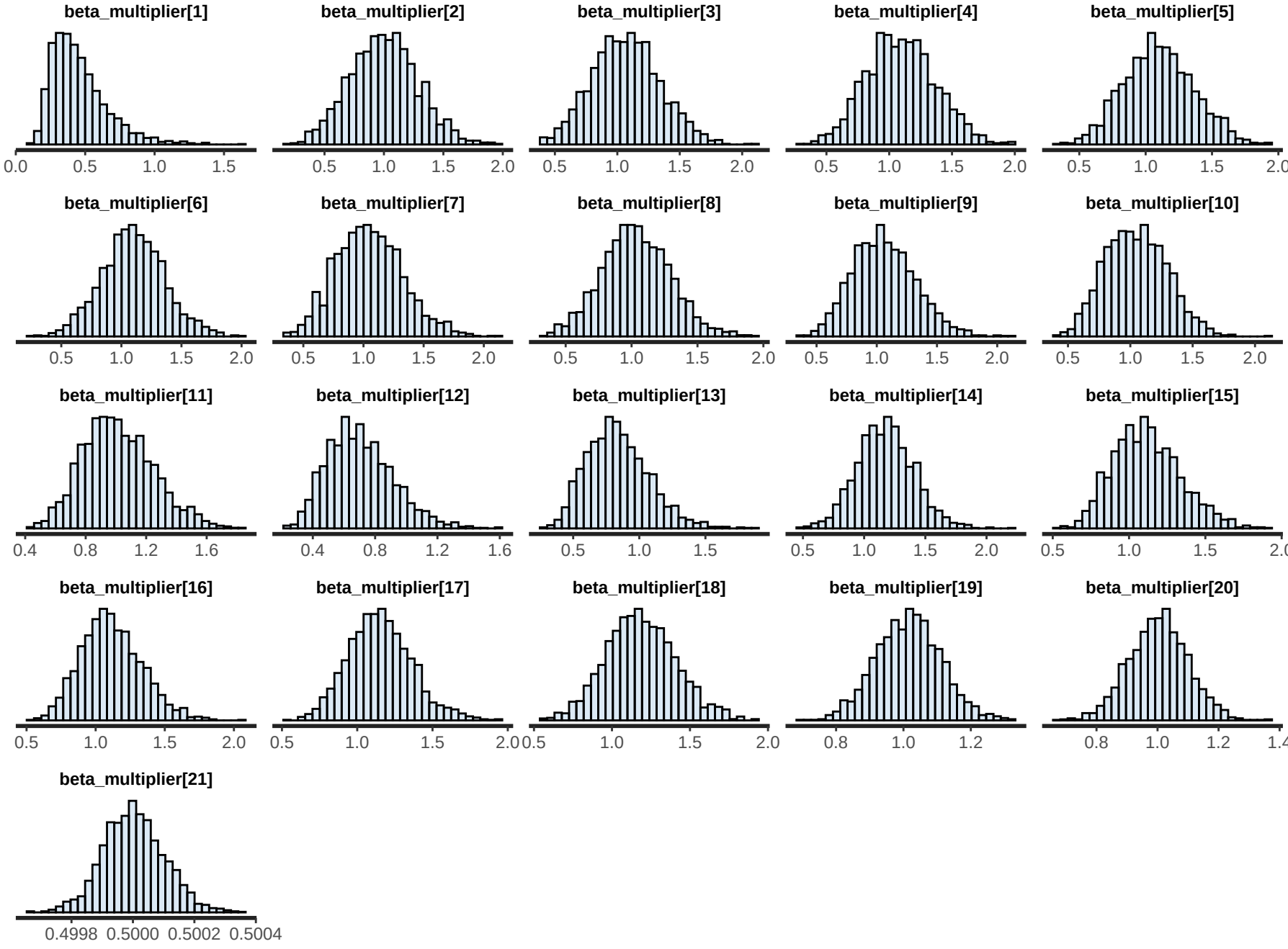

1.2
1.6
2.0
duration_hosp_mod


6
8
10
duration_hosp_icu


0.000
0.025
0.050
0.075
0.100
frac_hosp


0.14
0.16
0.18
0.20
0.22
0.24
0.26
frac_icu


0.5
0.6
0.7
frac_mort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beta_multiplier[2]
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beta_multiplier[3]
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beta_multiplier[4]
0.5 1.0 1.5 2.0
beta_multiplier[5]
0.5 1.0 1.5 2.0
beta_multiplier[6]
0.5 1.0 1.5 2.0
beta_multiplier[7]
0.5 1.0 1.5 2.0
beta_multiplier[8]
0.5 1.0 1.5 2.0
beta_multiplier[9]
0.5 1.0 1.5 2.0
beta_multiplier[10]
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beta_multiplier[11]
0.4 0.8 1.2 1.6
beta_multiplier[12]
0.4 0.8 1.2 1.6
beta_multiplier[13]
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beta_multiplier[14]
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beta_multiplier[15]
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beta_multiplier[16]
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beta_multiplier[18]
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beta_multiplier[19]
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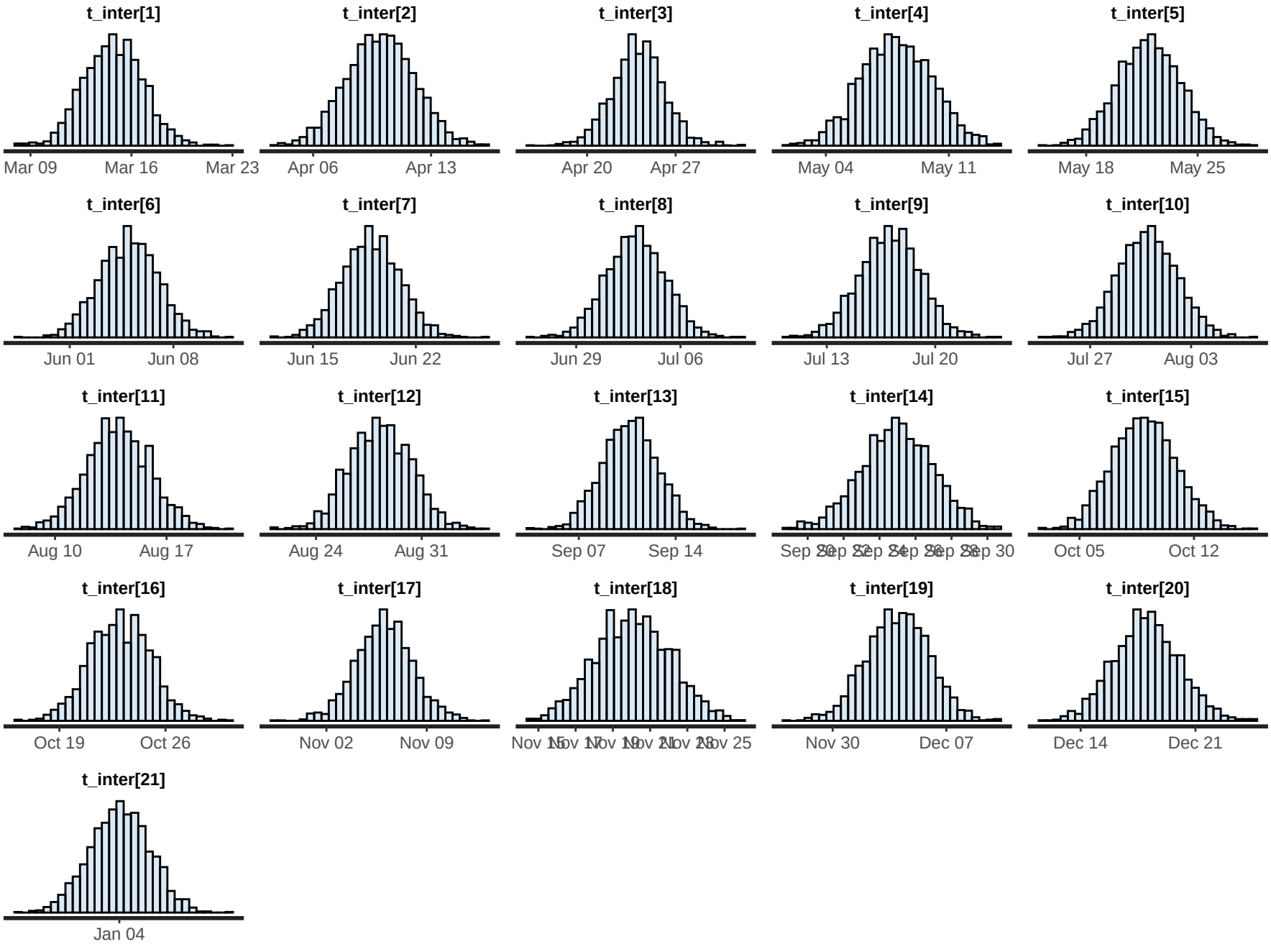
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Mar 09
Mar 16
Mar 23
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Apr 20
Apr 27
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May 04
May 11
t_inter[5]
May 18
May 25
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Jun 01
Jun 08
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Jun 15
Jun 22
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Jun 29
Jul 06
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Jul 27
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Aug 17
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Aug 31
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Oct 05
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Nov 02
Nov 09
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Nov 30
Dec 07
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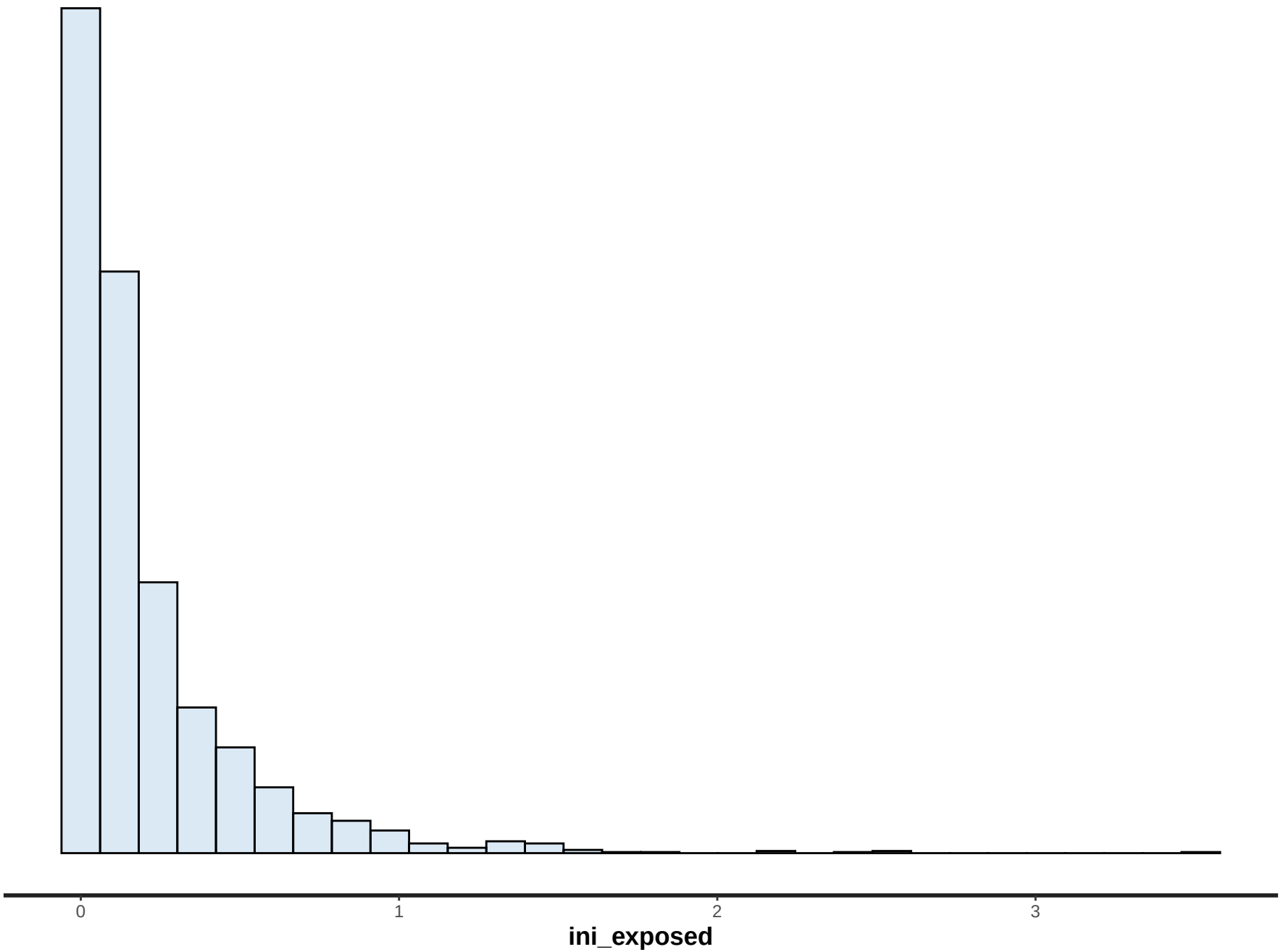
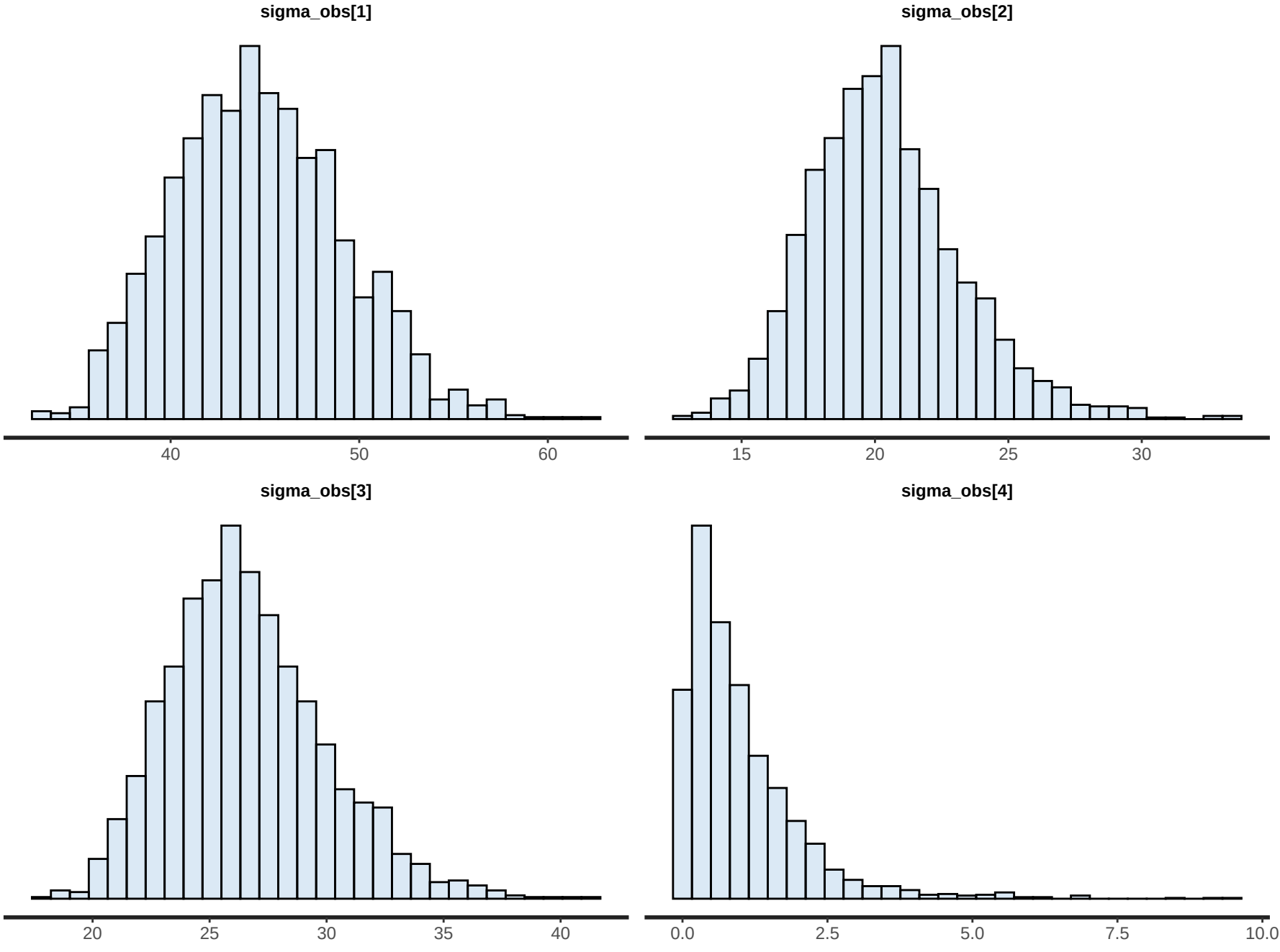
Dec 14
Dec 21
t_inter[21]
Jan 04


0
1
2
3
ini_exposed


sigma_obs[1]
40
50
60
sigma_obs[2]
15
20
25
30
sigma_obs[3]
20
25
30
35
40
sigma_obs[4]
0.0
2.5
5.0
7.5
10.0