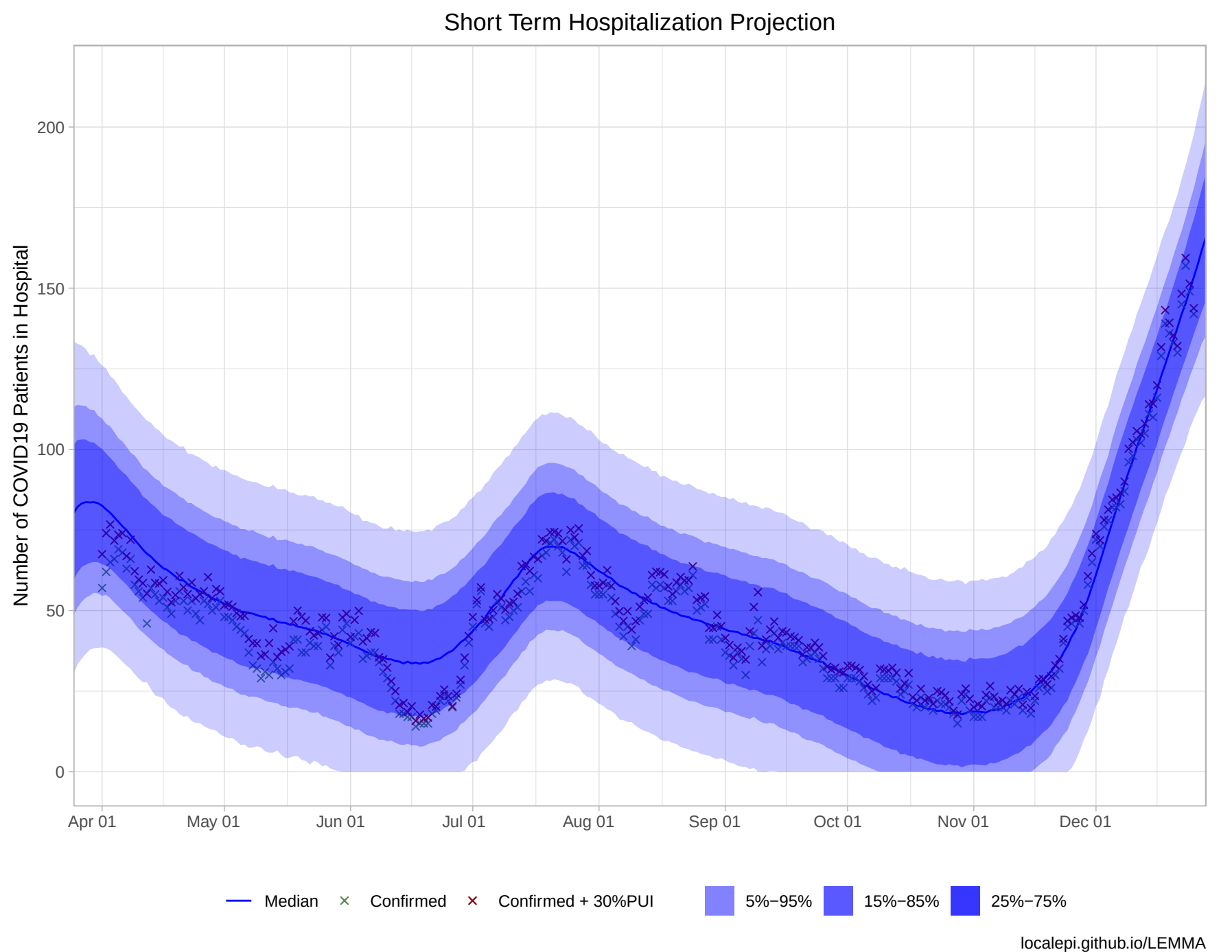
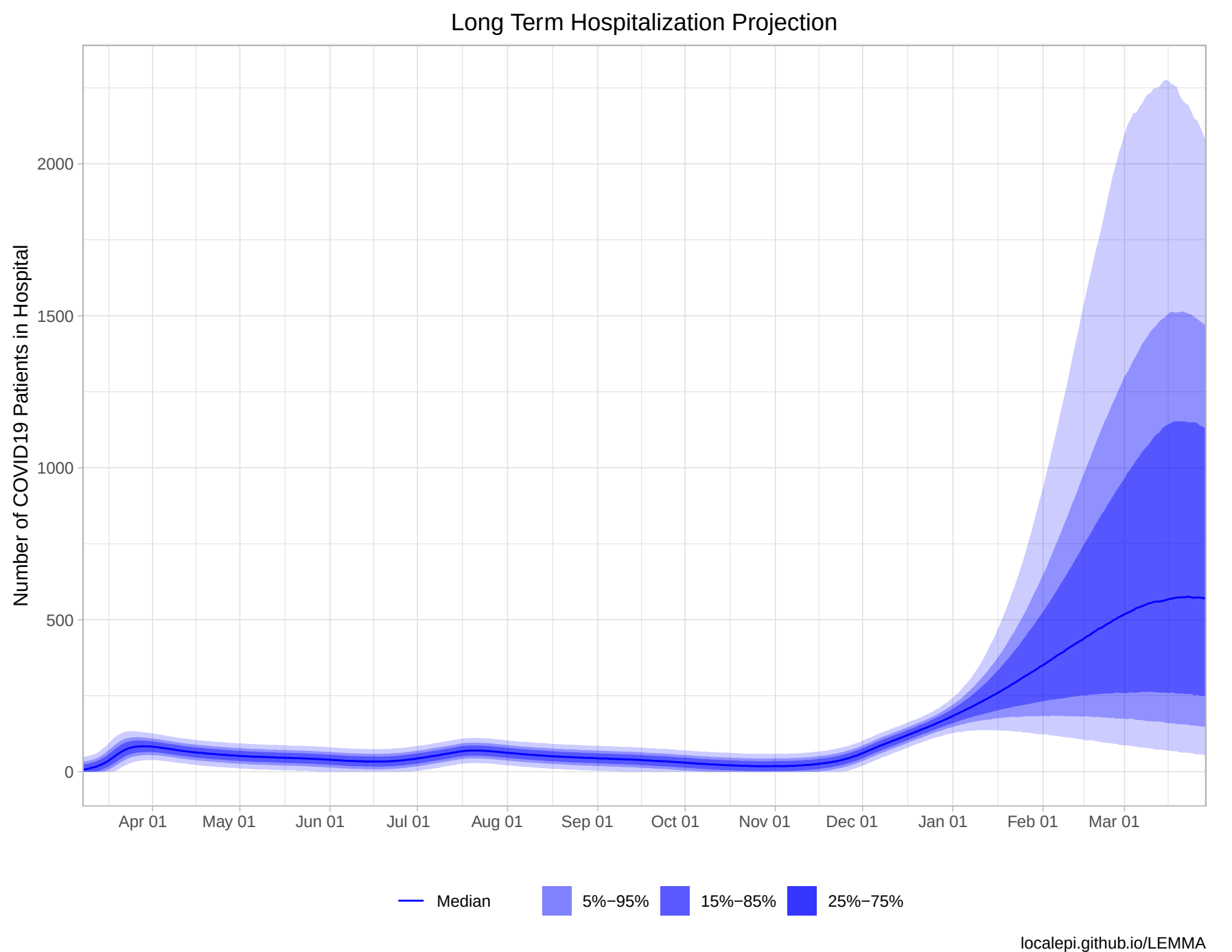
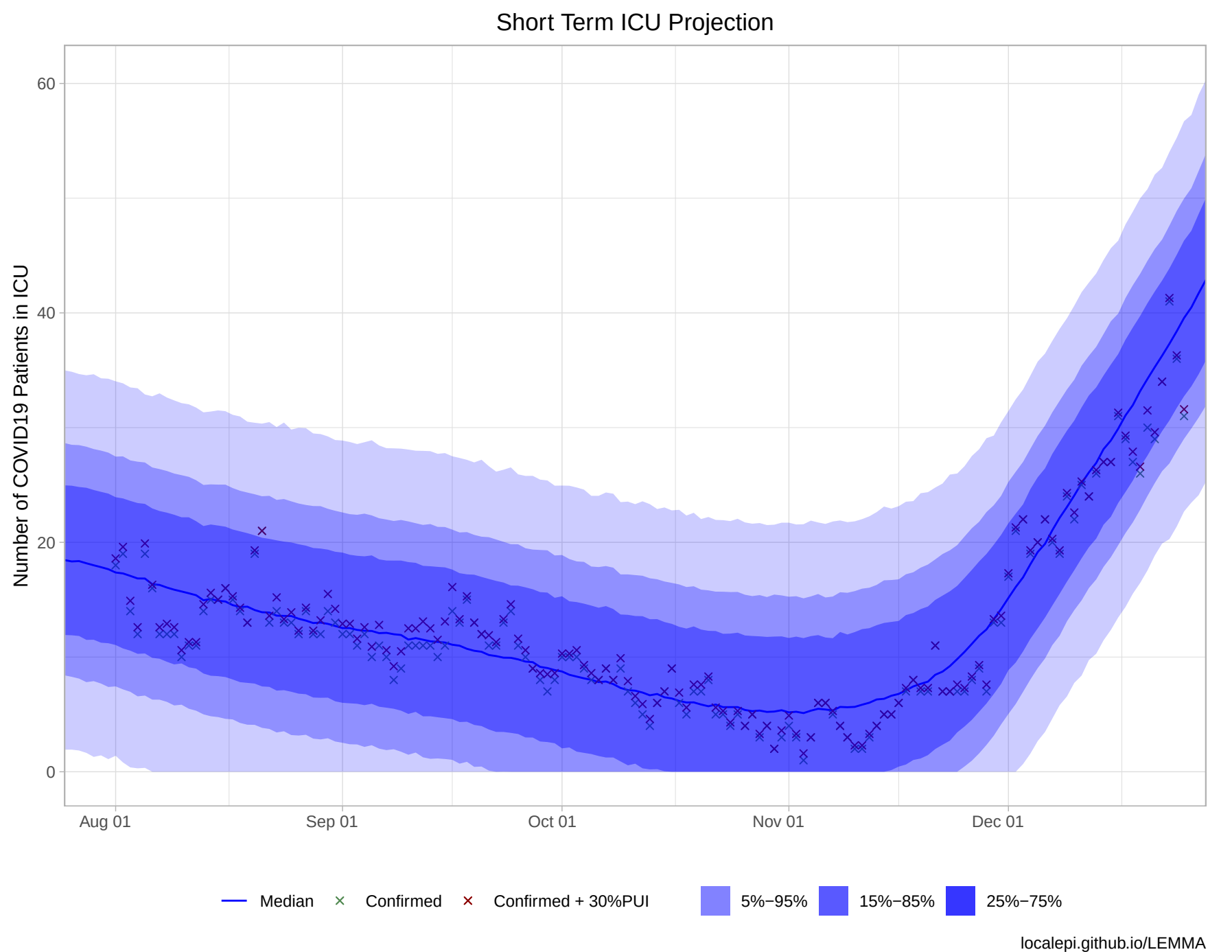
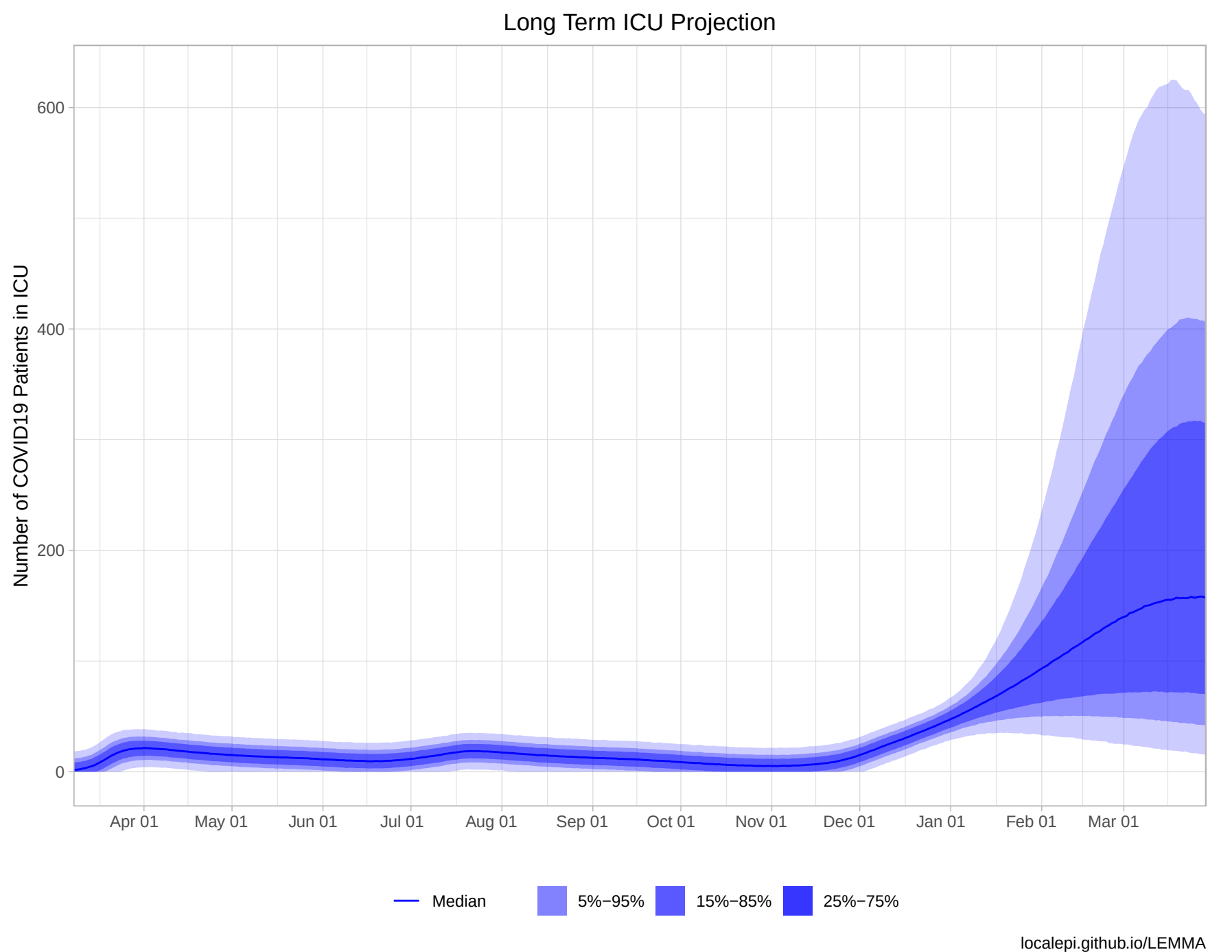
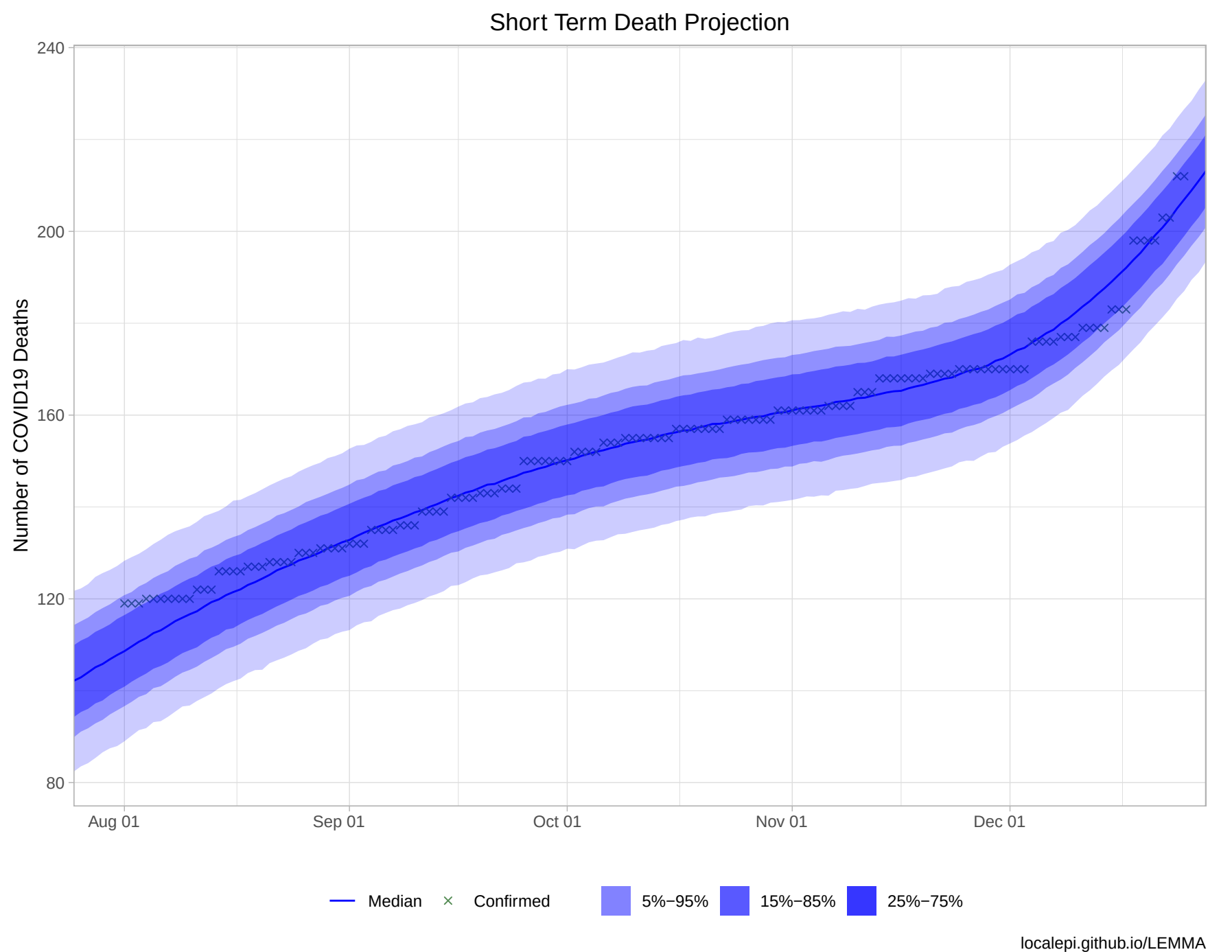
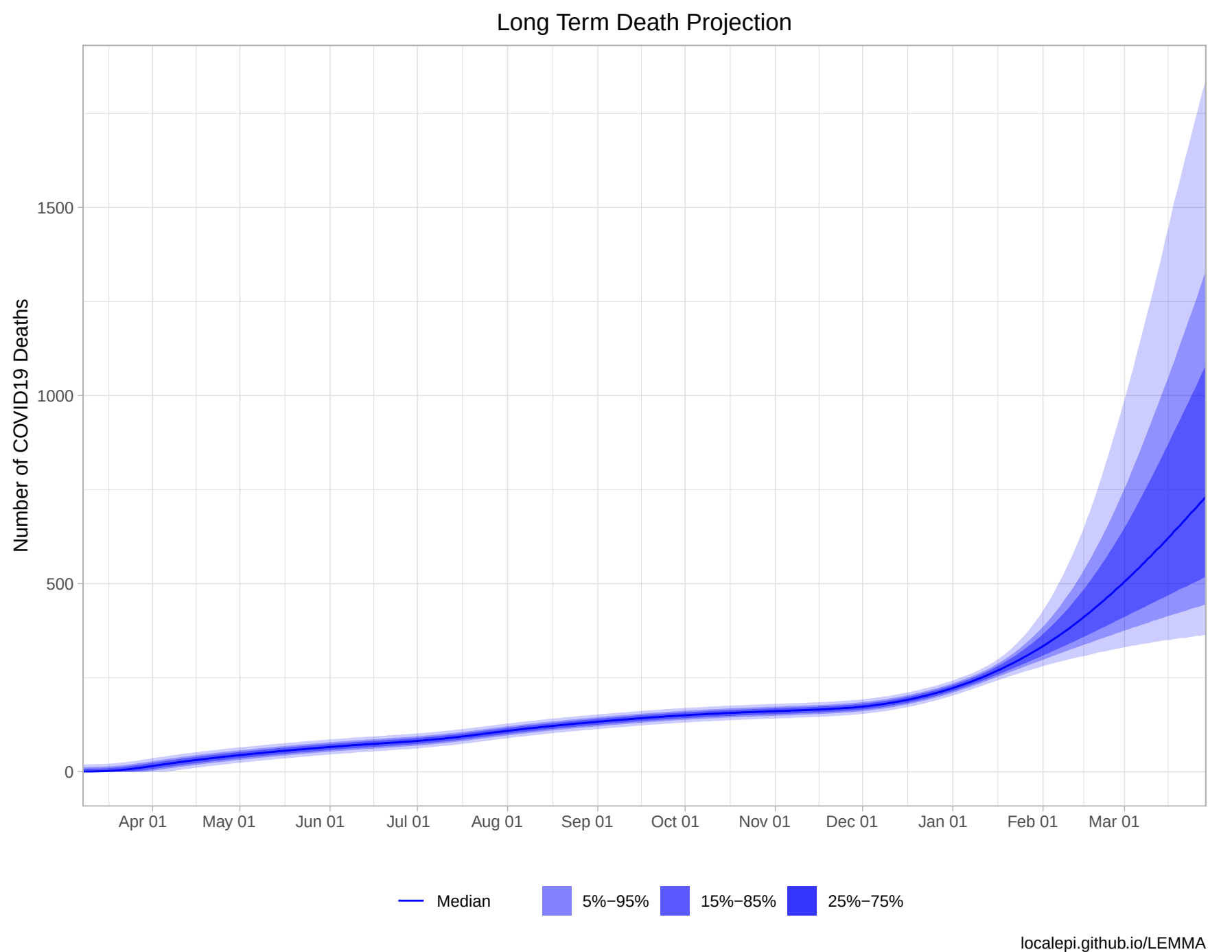

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
200
150
100
50
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

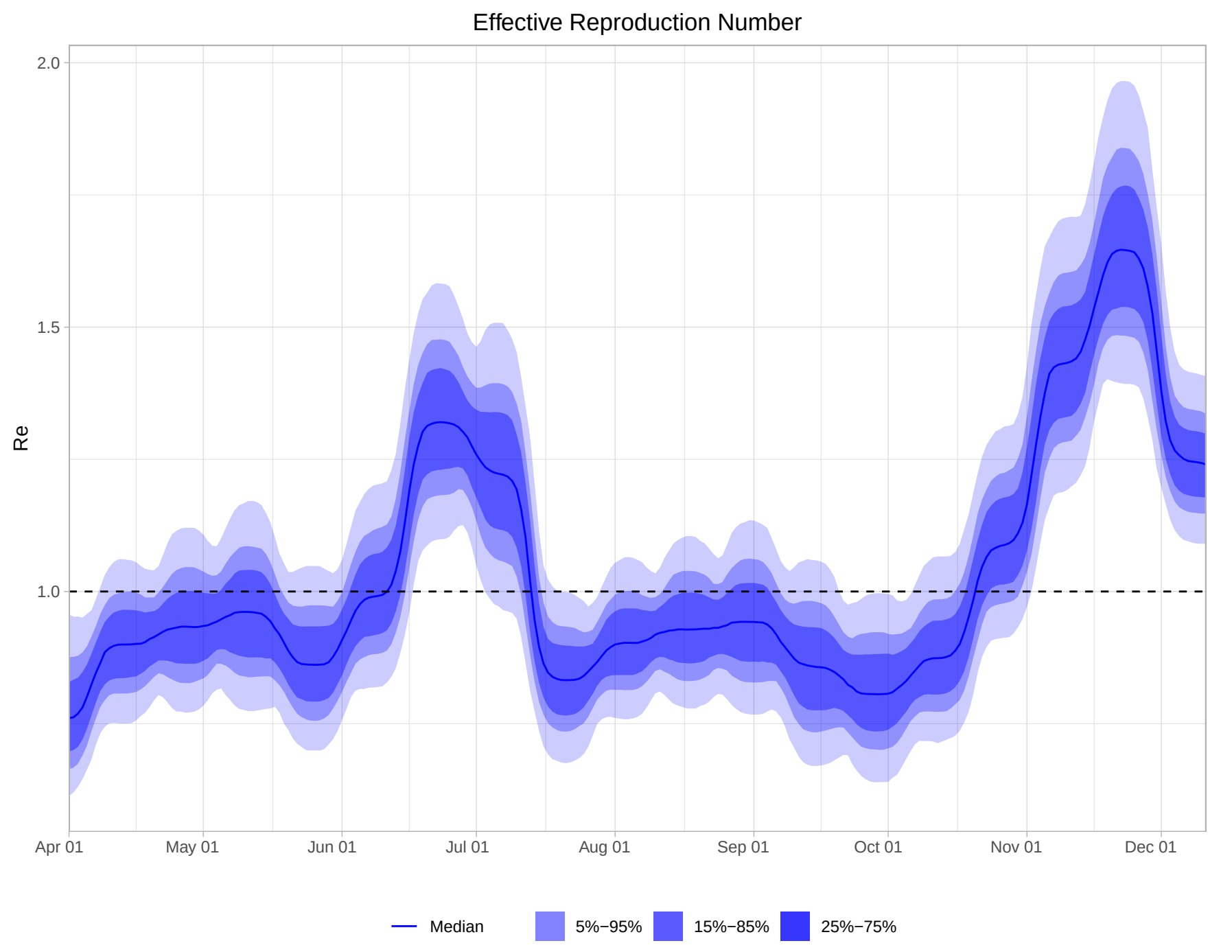

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
2000
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
60
40
20
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
600
400
200
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

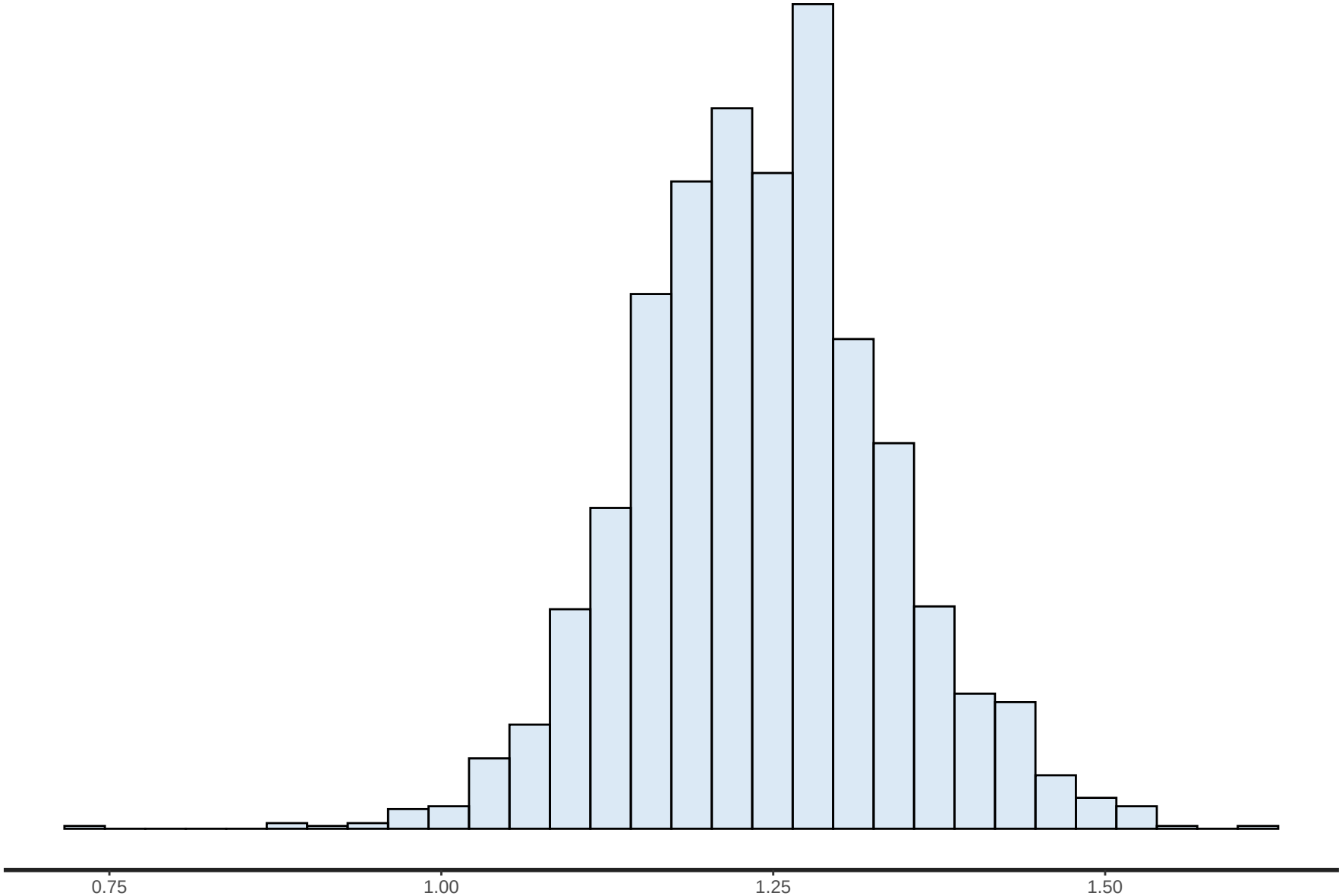

Short Term Death Projection
Number of COVID19 Deaths
240
200
160
120
80
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

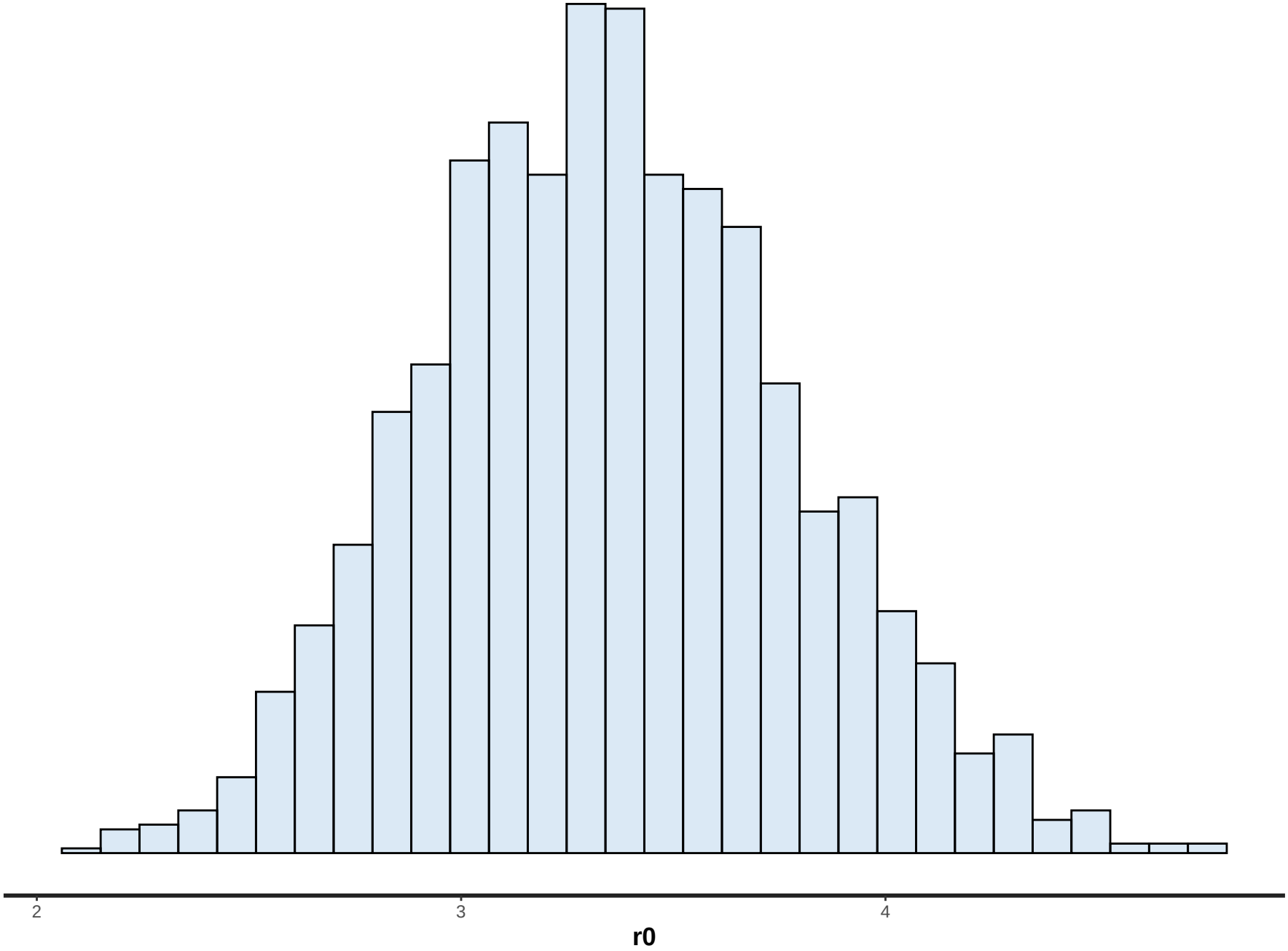

Long Term Death Projection
Number of COVID19 Deaths
0
500
1000
1500
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

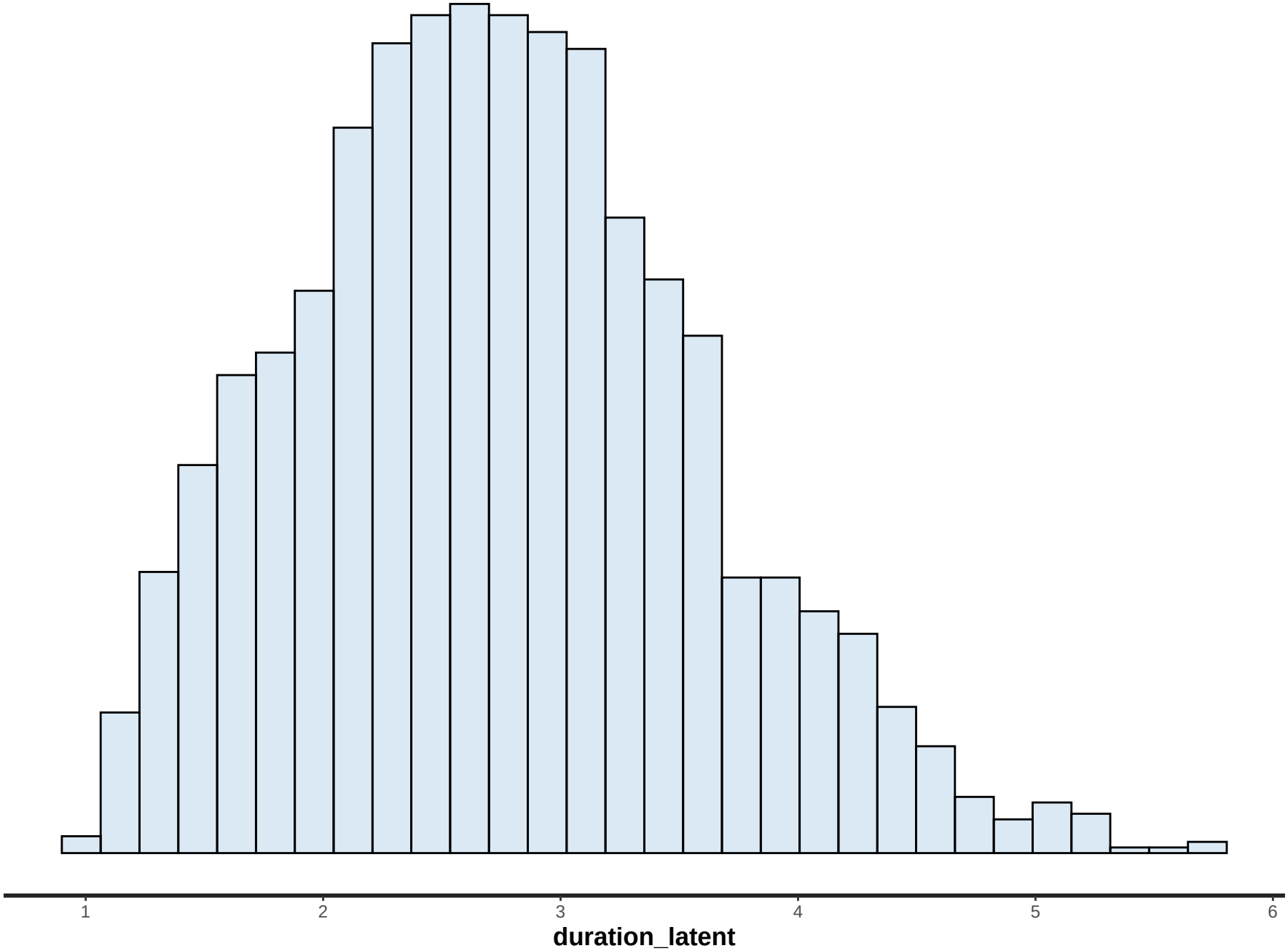

Effective Reproduction Number
Re
2.0
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

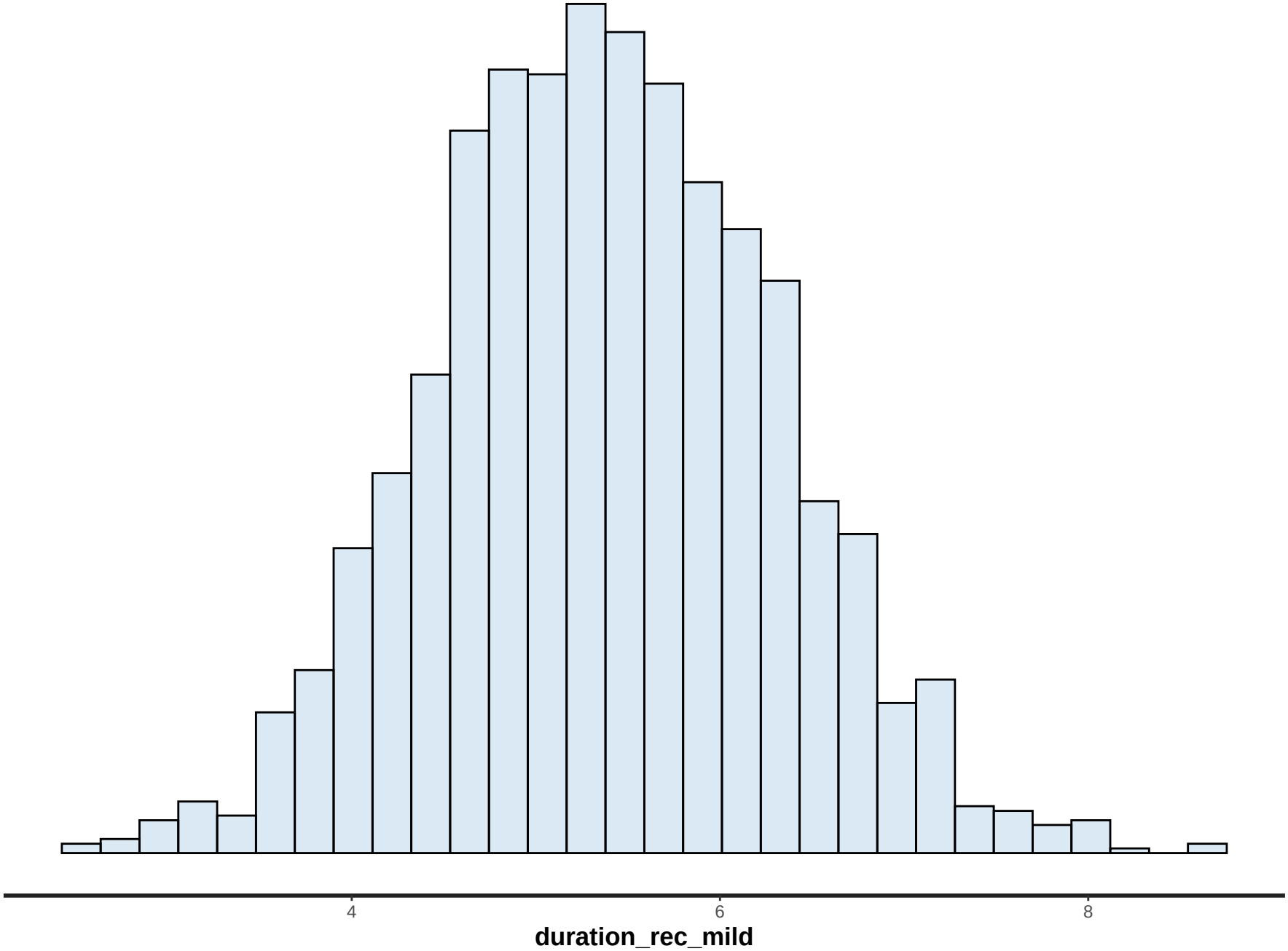
Rt as of 2020−12−11

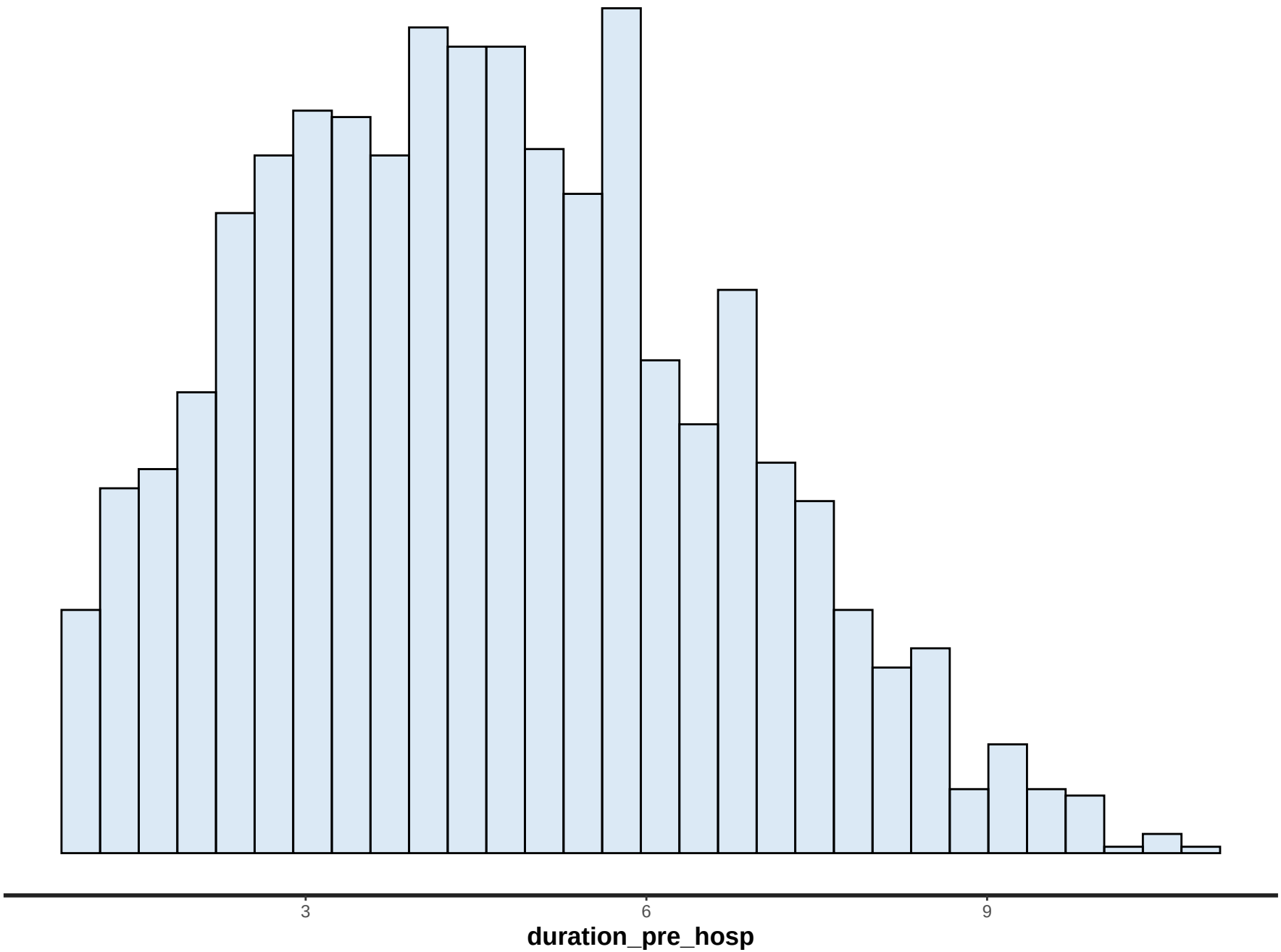
5%	10%	25%	50%	75%	90%	95%
1.09	1.13	1.18	1.24	1.30	1.36	1.41

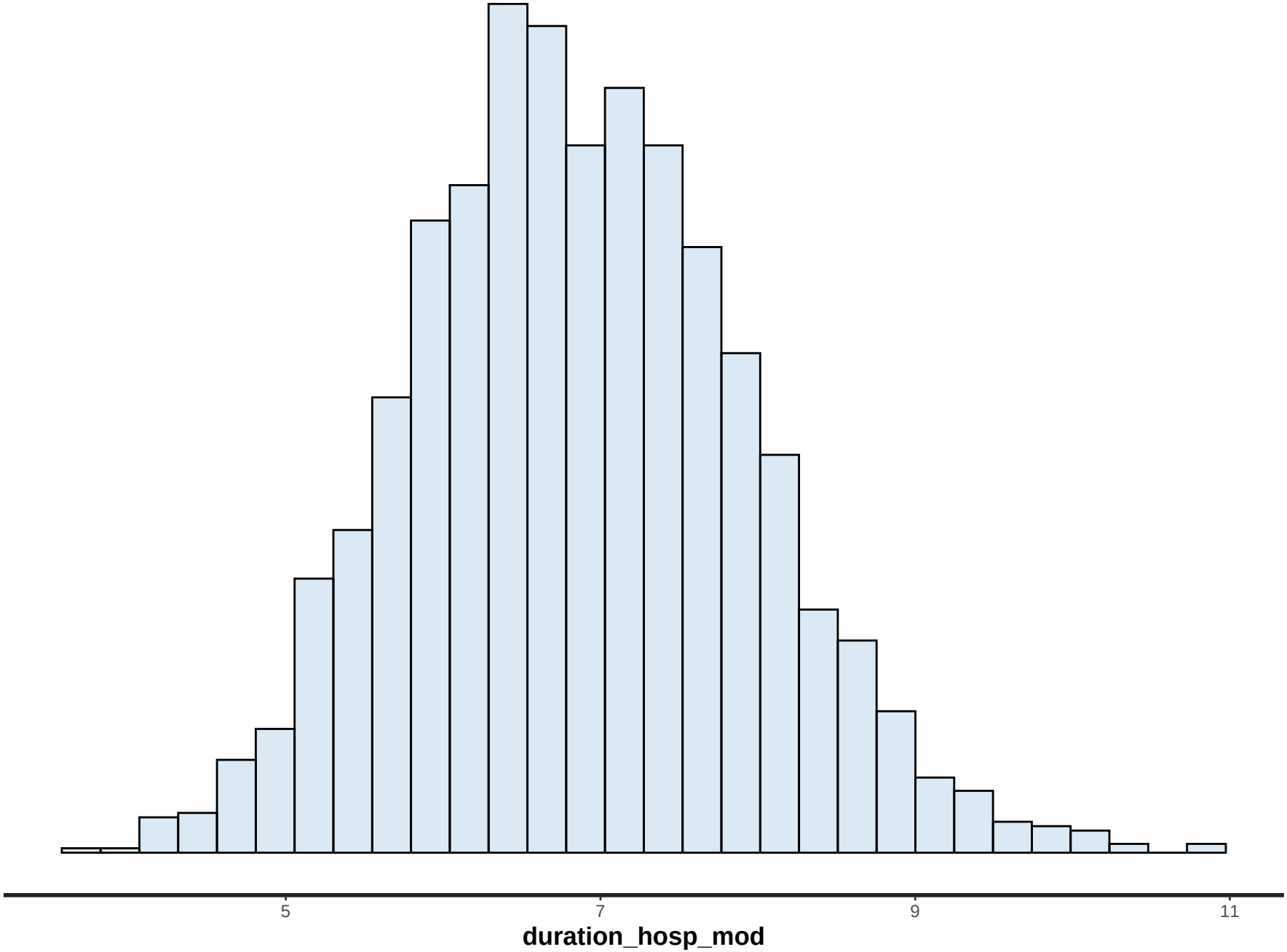


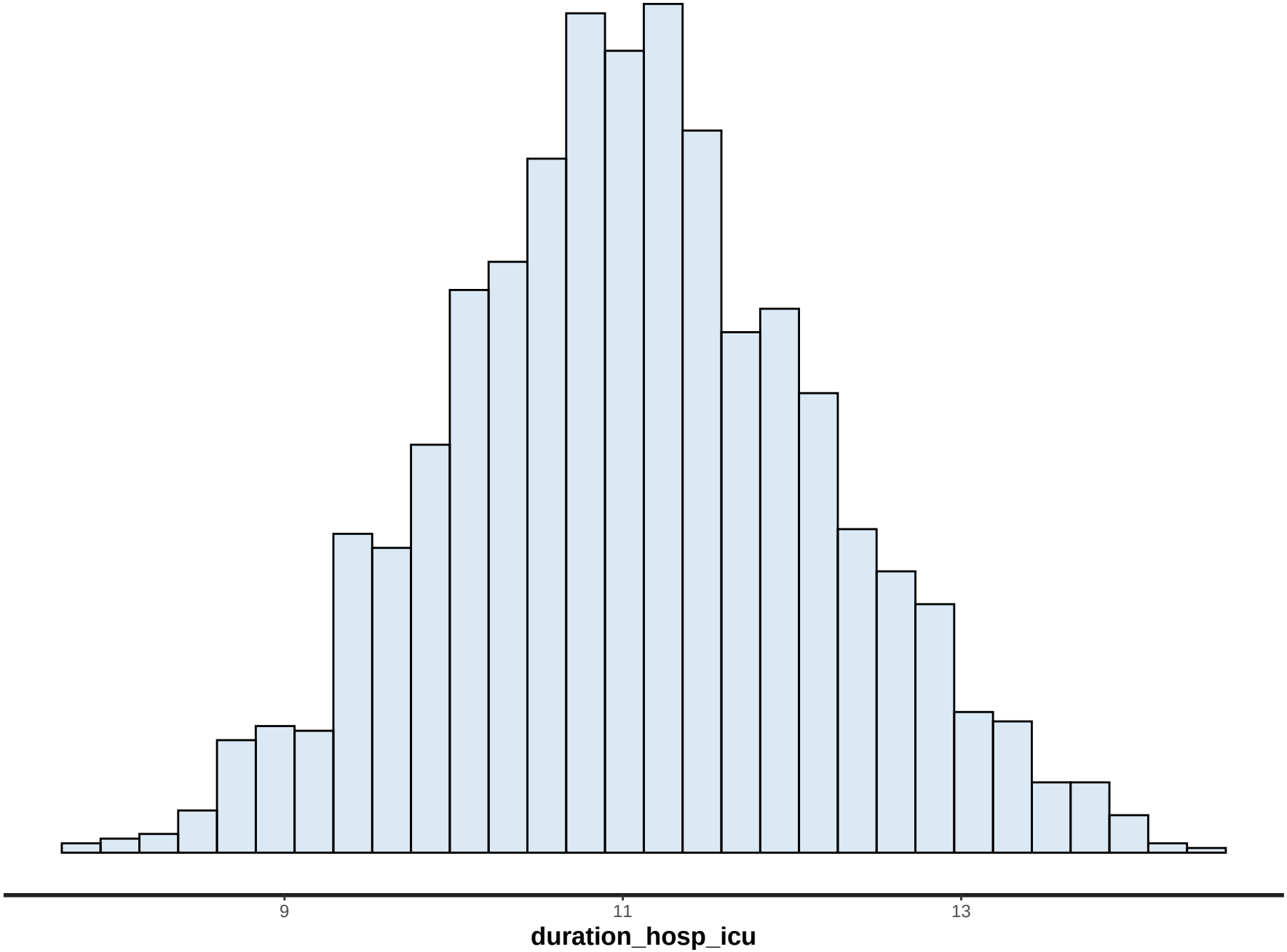

2
3
4
r0

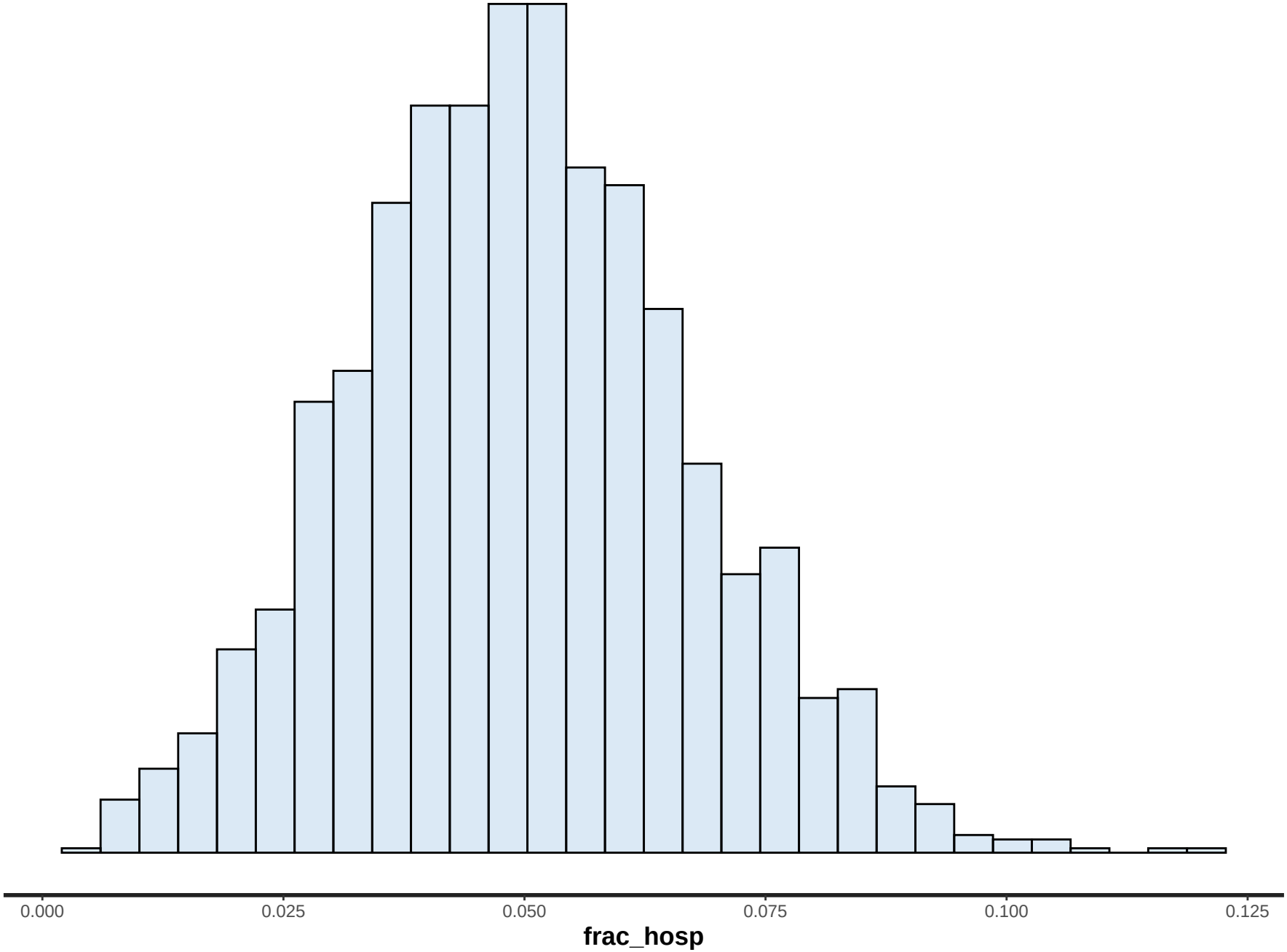

1
2
3
4
5
6
duration_latent

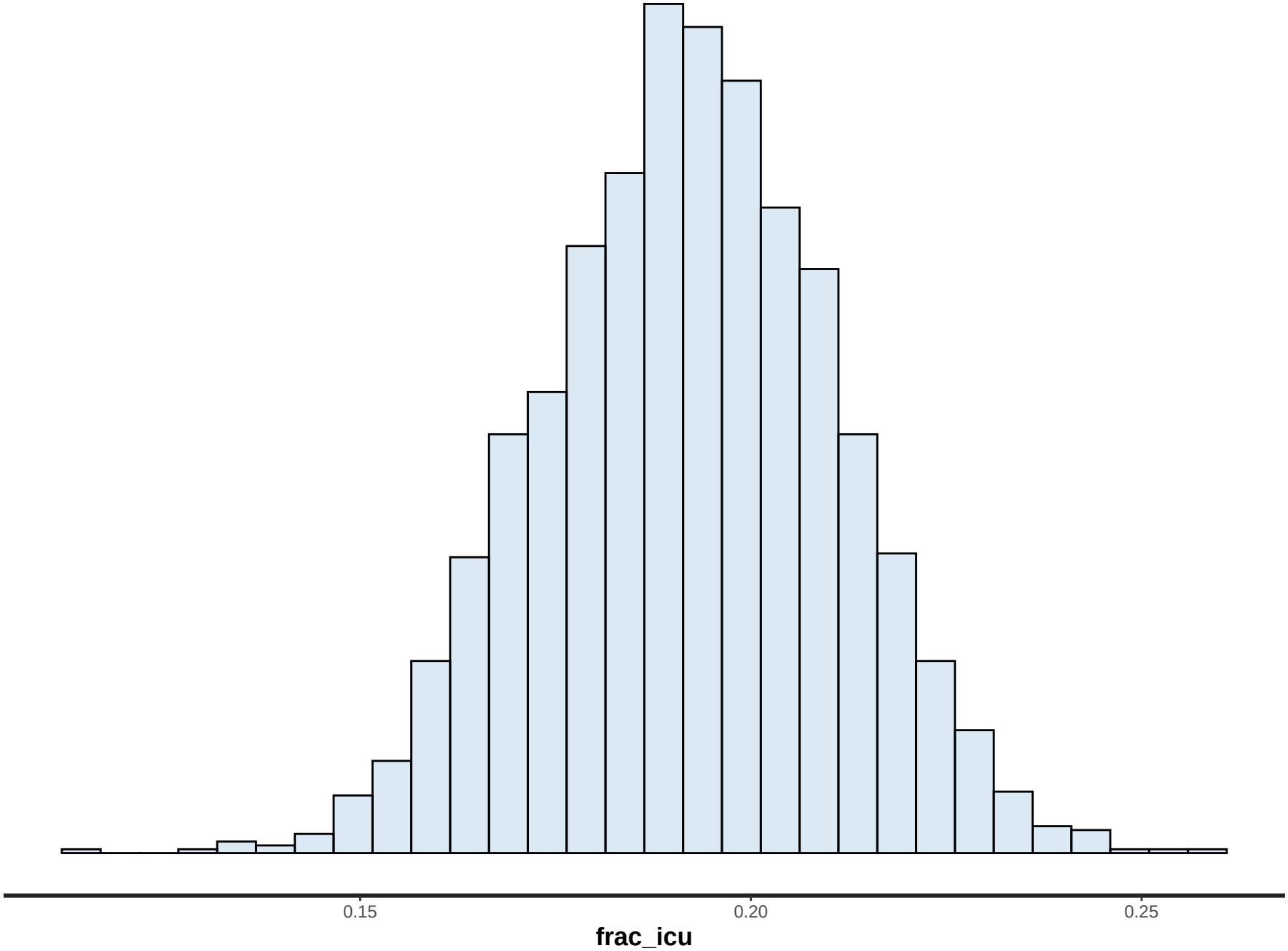

4
6
8
duration_rec_mild

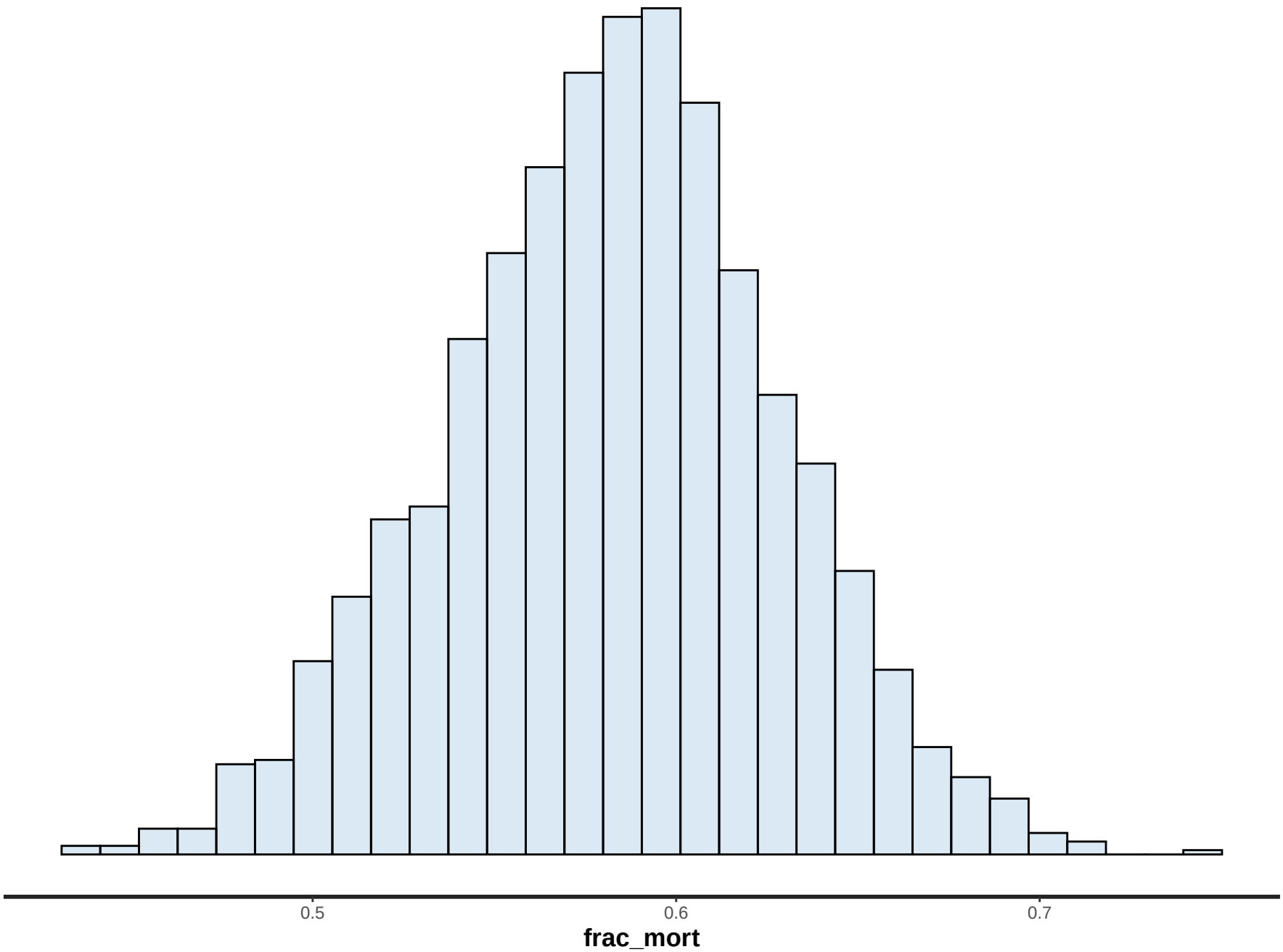

3
6
9
duration_pre_hosp

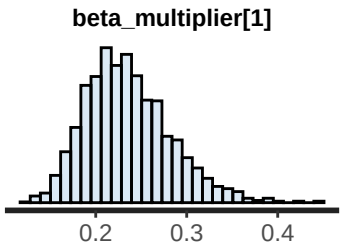

5
7
9
11
duration_hosp_mod


9
11
13
duration_hosp_icu


0.000
0.025
0.050
0.075
0.100
0.125
frac_hosp


0.15
0.20
0.25
frac_icu


0.5
0.6
0.7
frac_mort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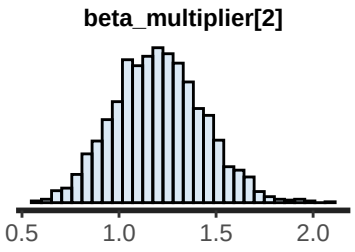
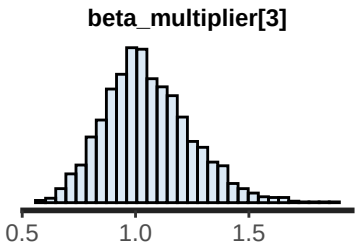
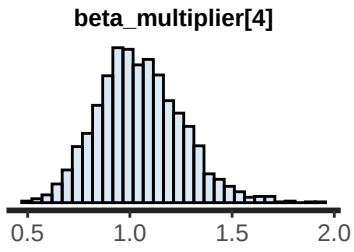
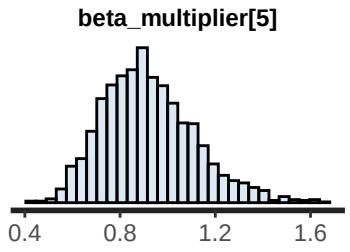
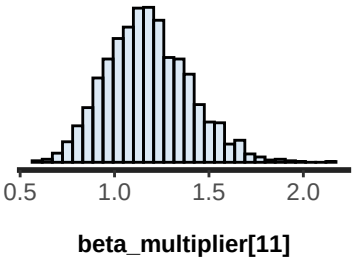
0.3
0.4

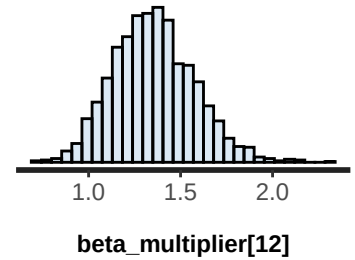

beta_multiplier[2]
0.5
1.0
1.5
2.0

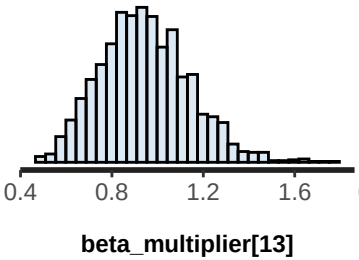

beta_multiplier[3]
0.5
1.0
1.5

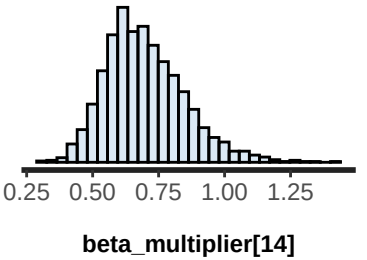

beta_multiplier[4]
0.5
1.0
1.5
2.0

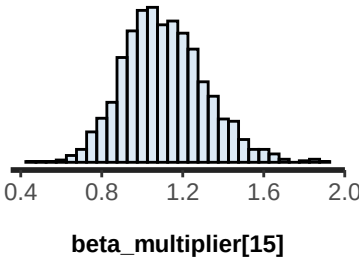

beta_multiplier[5]
0.4
0.8
1.2
1.6


beta_multiplier[6]
0.5
1.0
1.5
2.0


beta_multiplier[7]
1.0
1.5
2.0


beta_multiplier[8]
0.4
0.8
1.2
1.6


beta_multiplier[9]
0.25
0.50
0.75
1.00
1.25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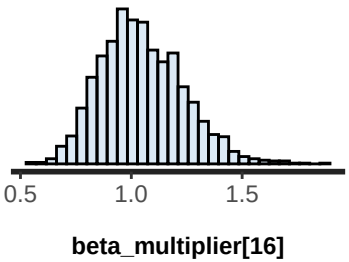
0.4
0.8
1.2
1.6
2.0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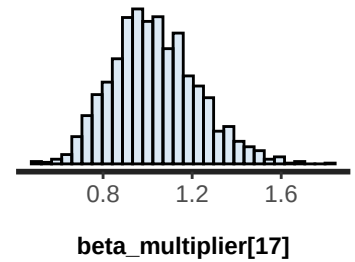
1.5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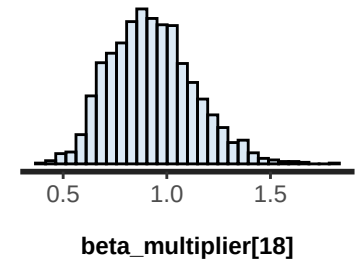
1.2
1.6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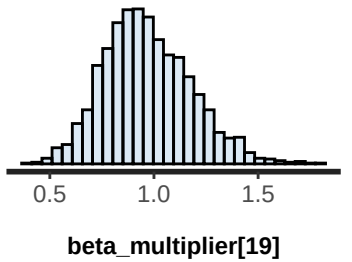
1.5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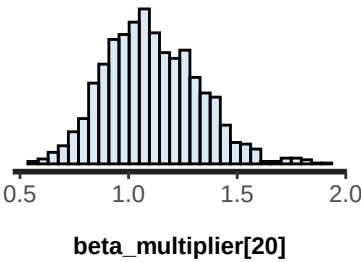
1.5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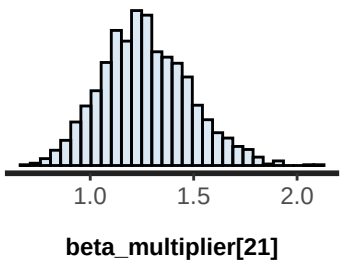
1.5
2.0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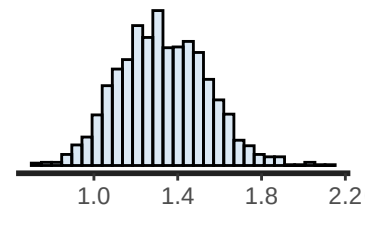
2.0


beta_multiplier[17]
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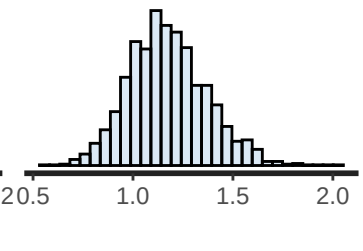
1.4
1.8
2.2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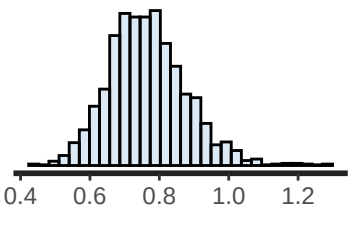
1.0
1.5
2.0


beta_multiplier[19]
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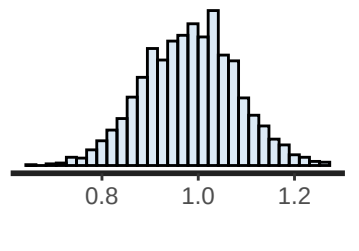
0.6
0.8
1.0
1.2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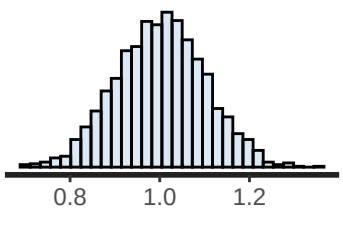
beta_multiplier[21]
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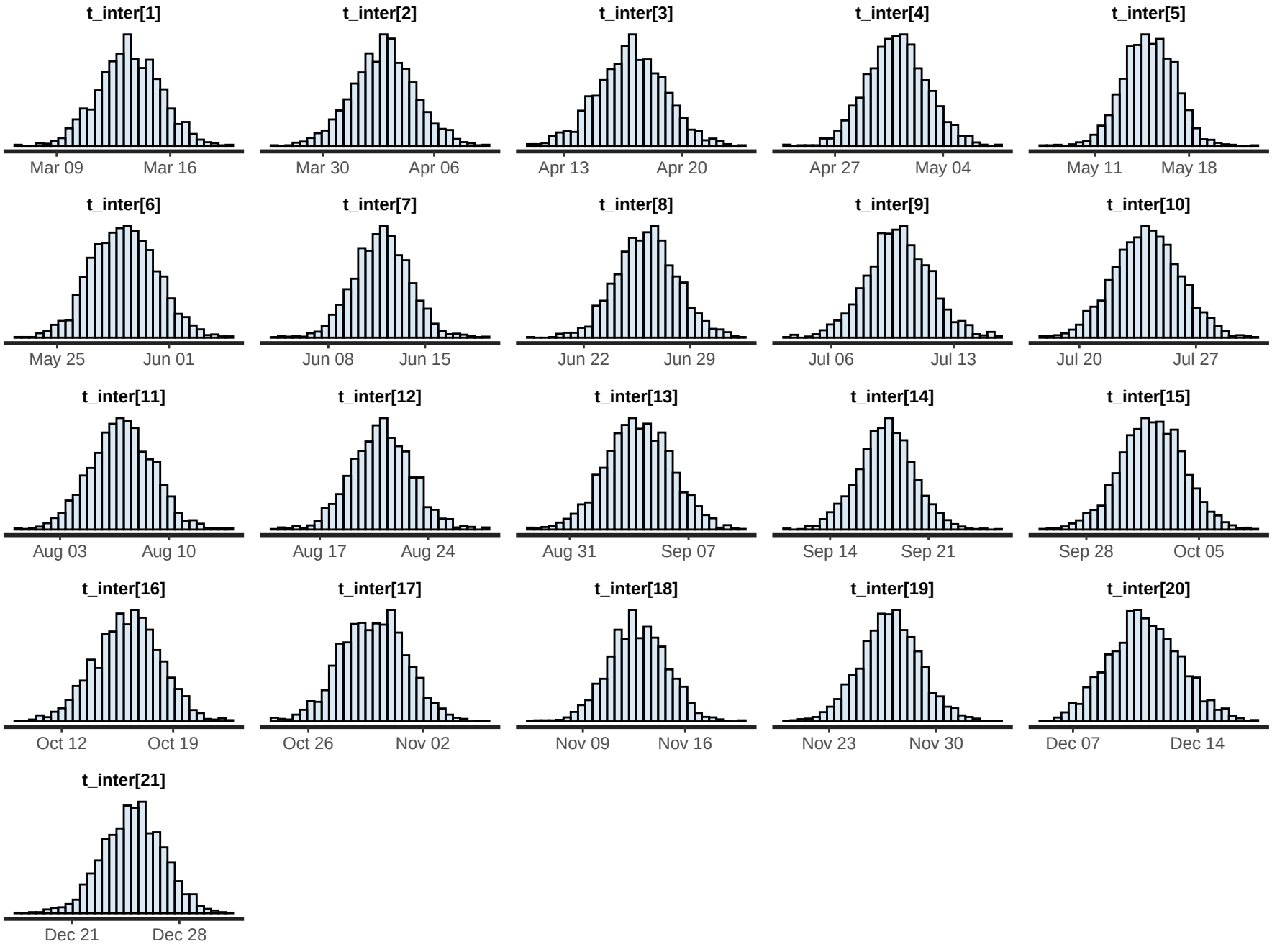
1.0
1.2


t_inter[1]
Mar 09
Mar 16
t_inter[2]
Mar 30
Apr 06
t_inter[3]
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
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Jun 08
Jun 15
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Jun 22
Jun 29
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Aug 10
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Sep 21
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Oct 12
Oct 19
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Nov 02
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Nov 09
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Nov 23
Nov 30
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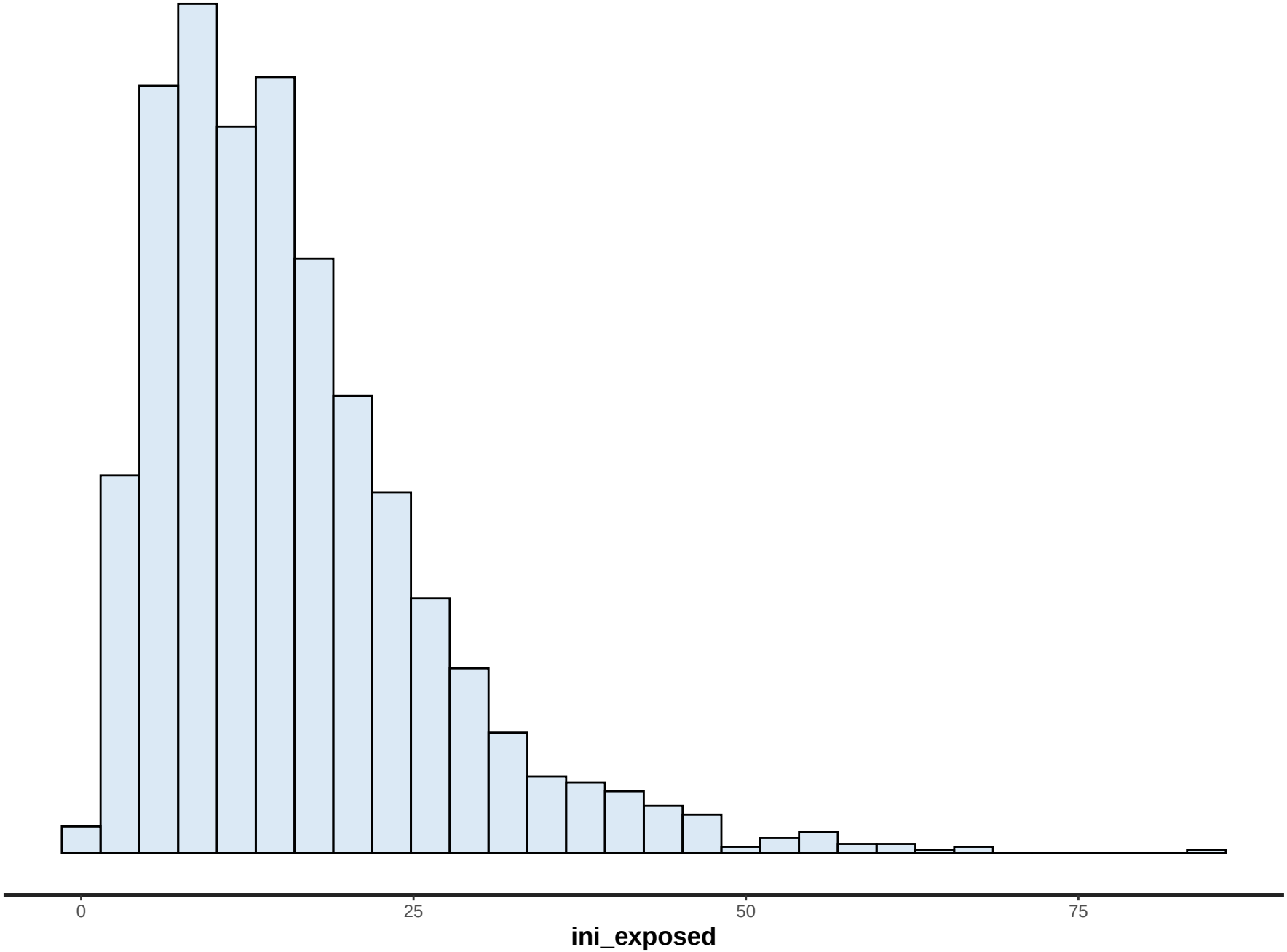
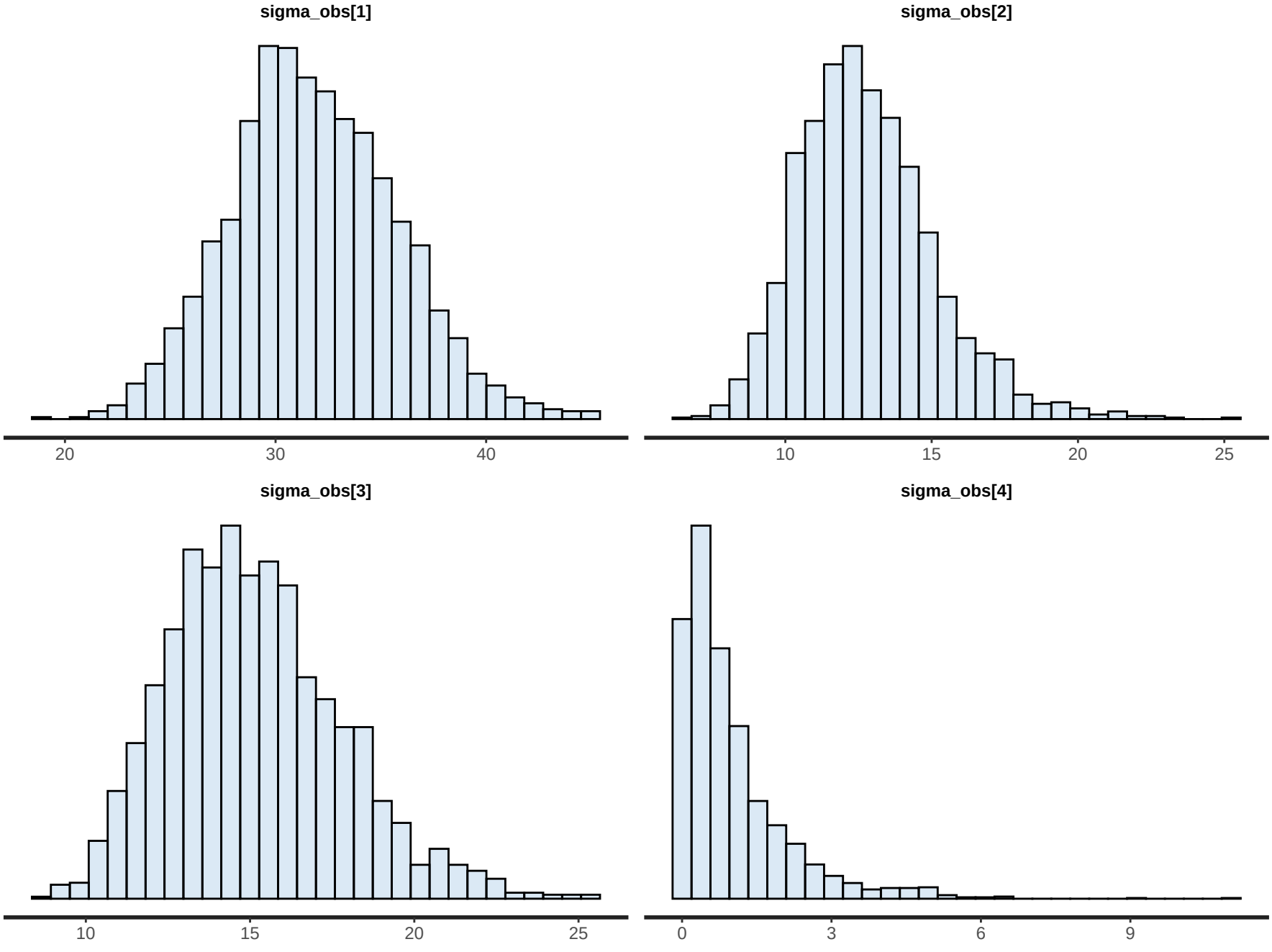
Dec 07
Dec 14
t_inter[21]
Dec 21
Dec 28


0
25
50
75
ini_exposed


sigma_obs[1]
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30
40
sigma_obs[2]
10
15
20
25
sigma_obs[3]
10
15
20
25
sigma_obs[4]
0
3
6
9