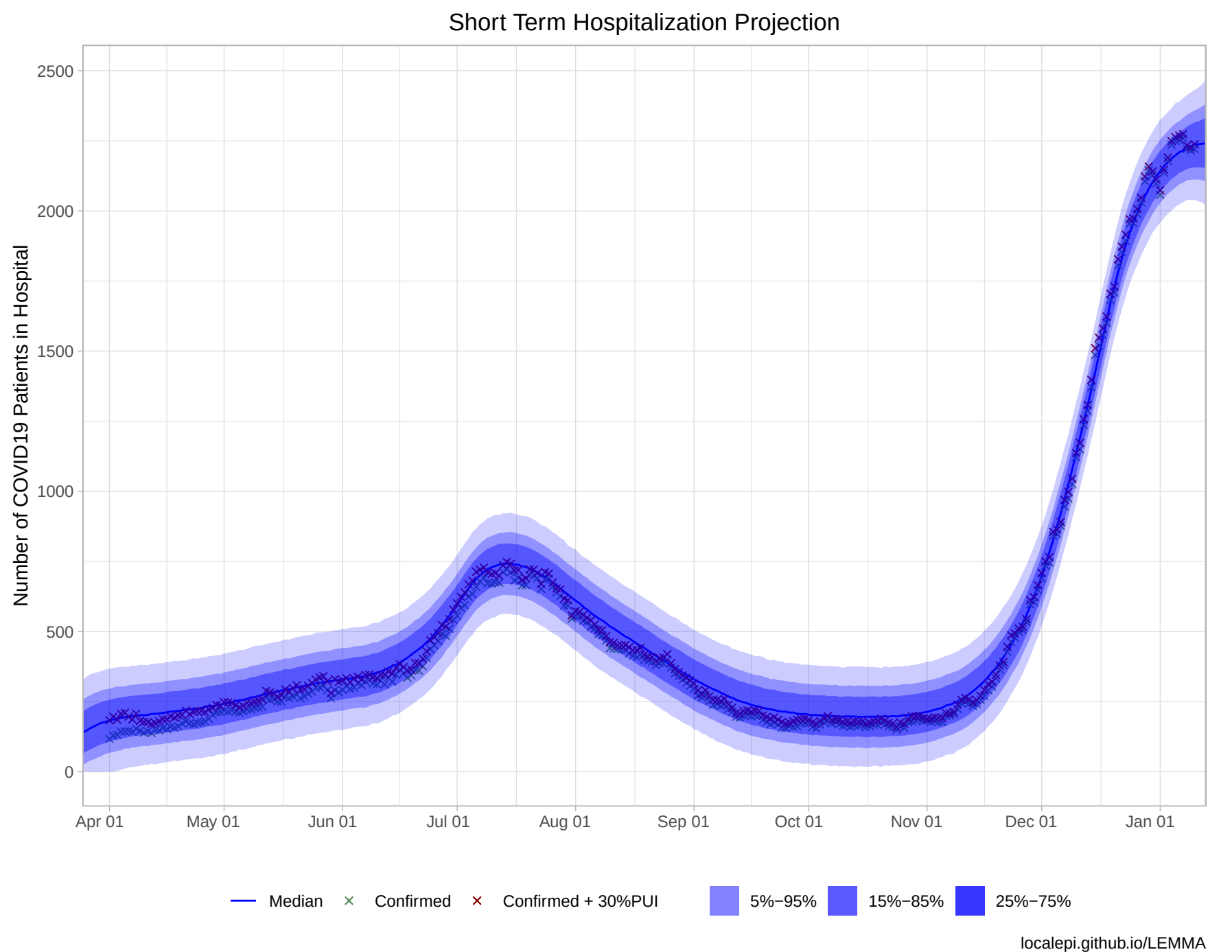
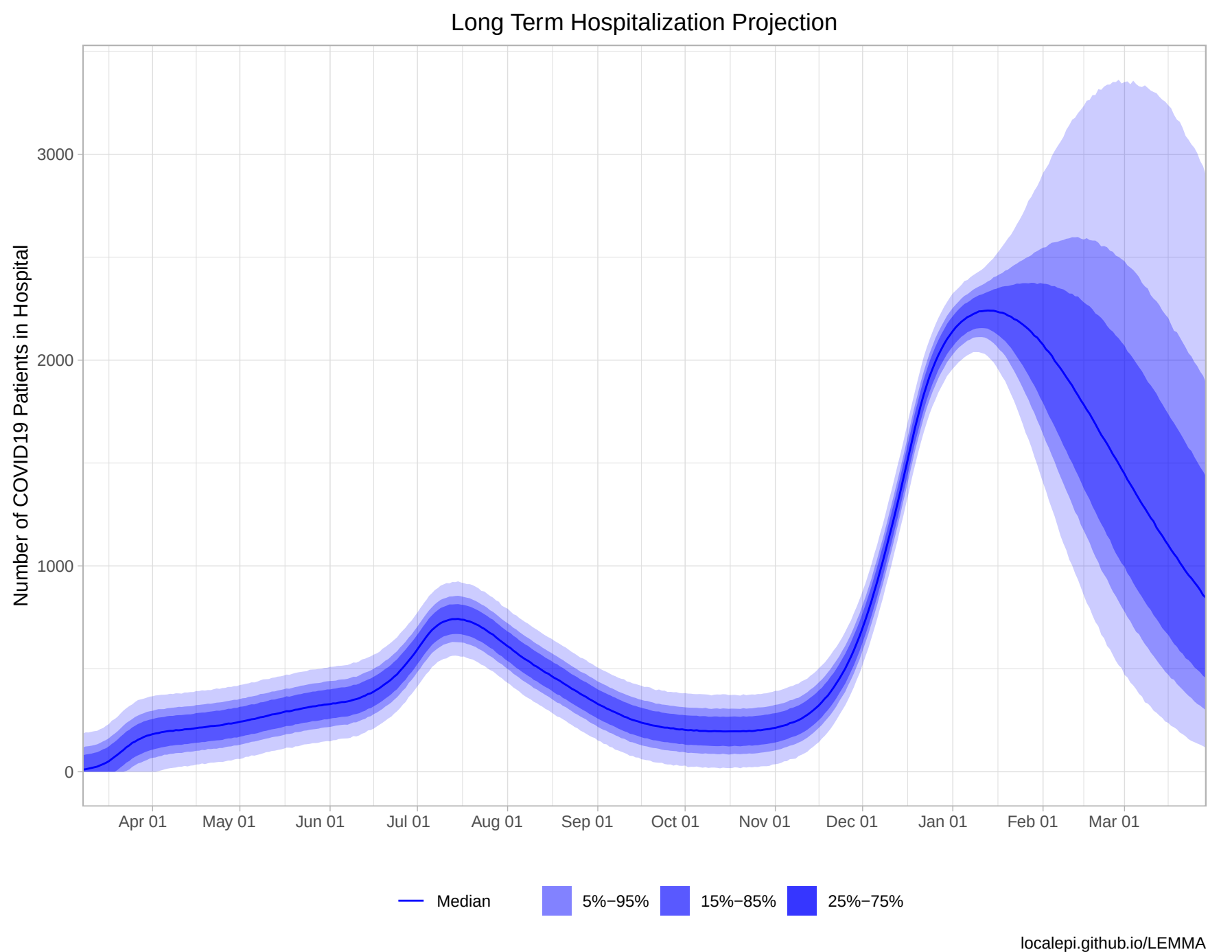
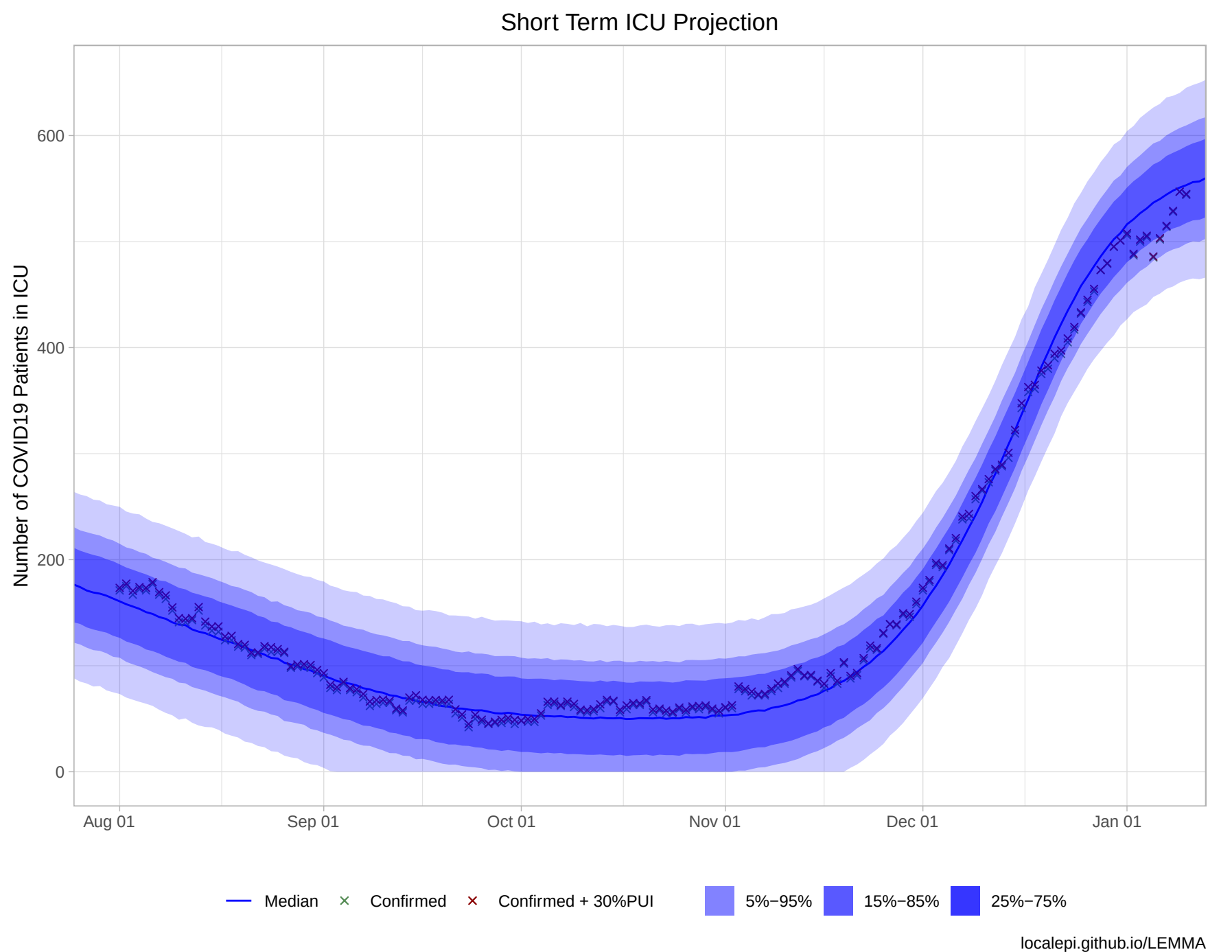
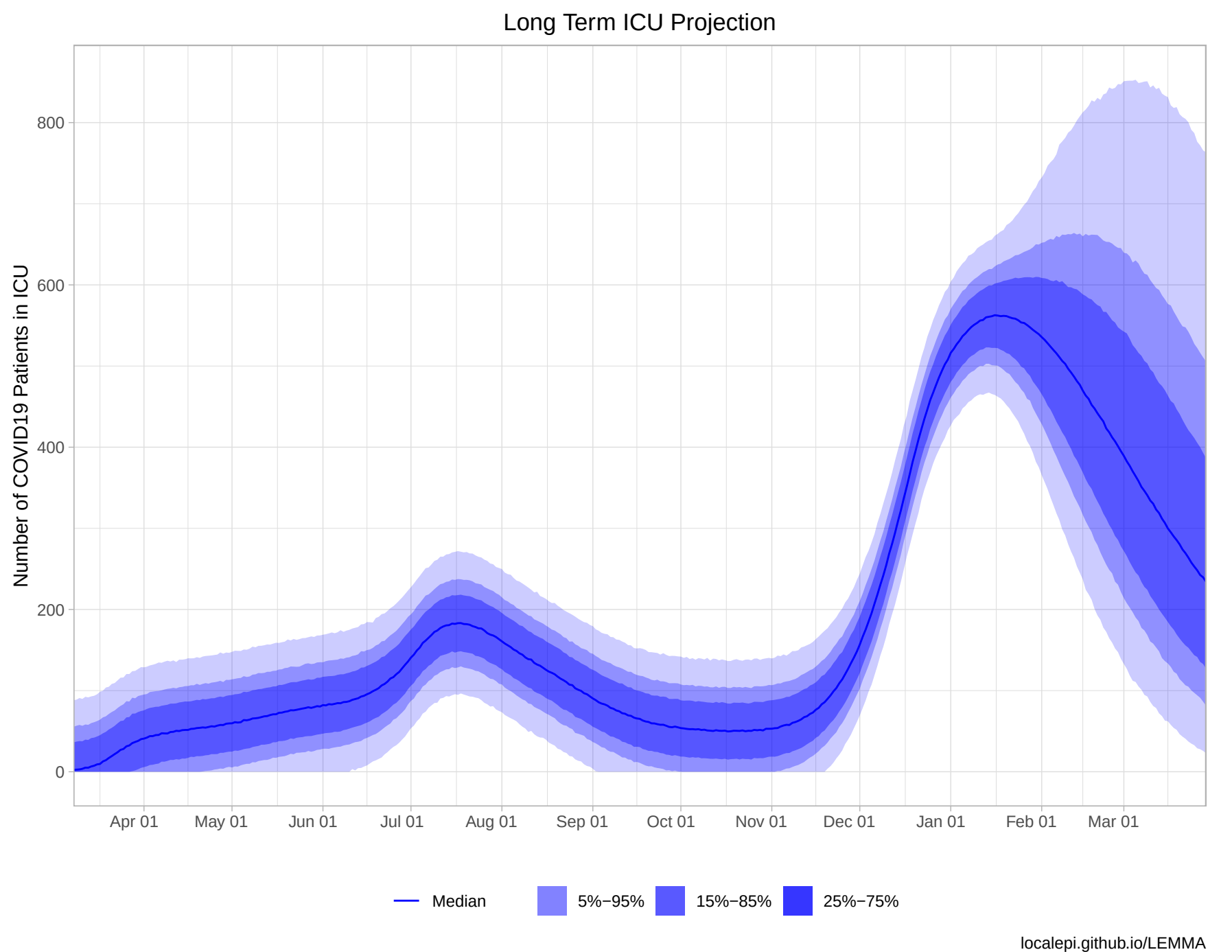
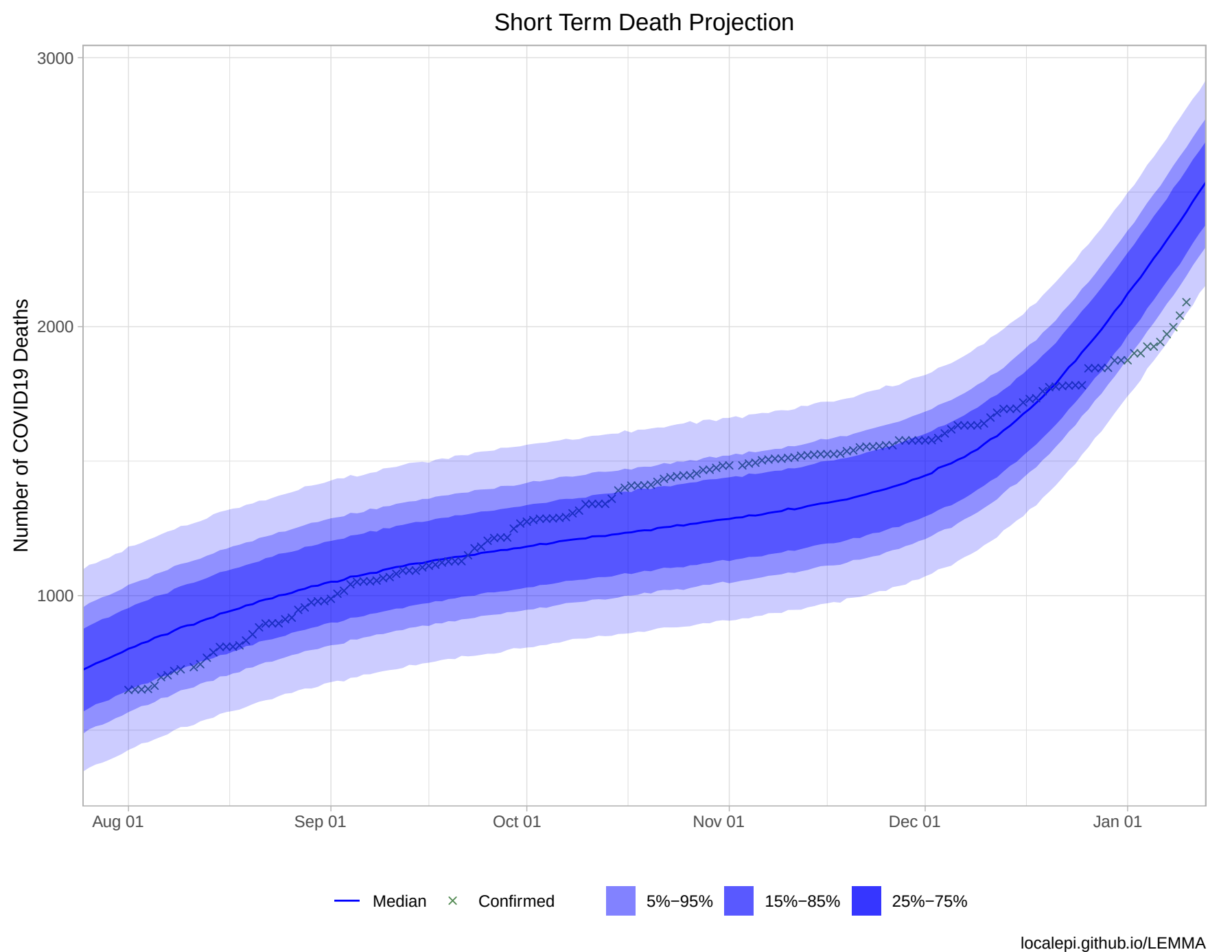
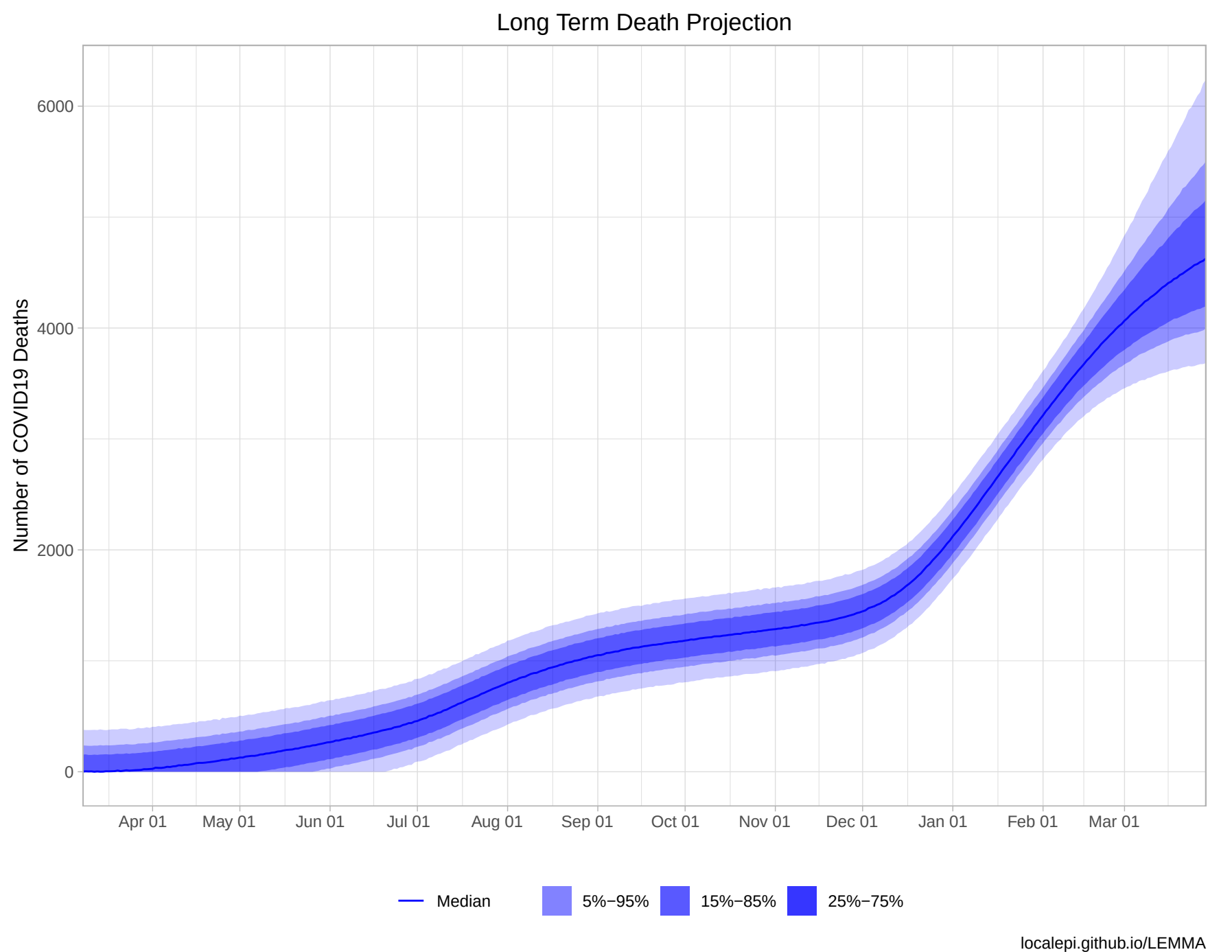

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
2500
2000
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

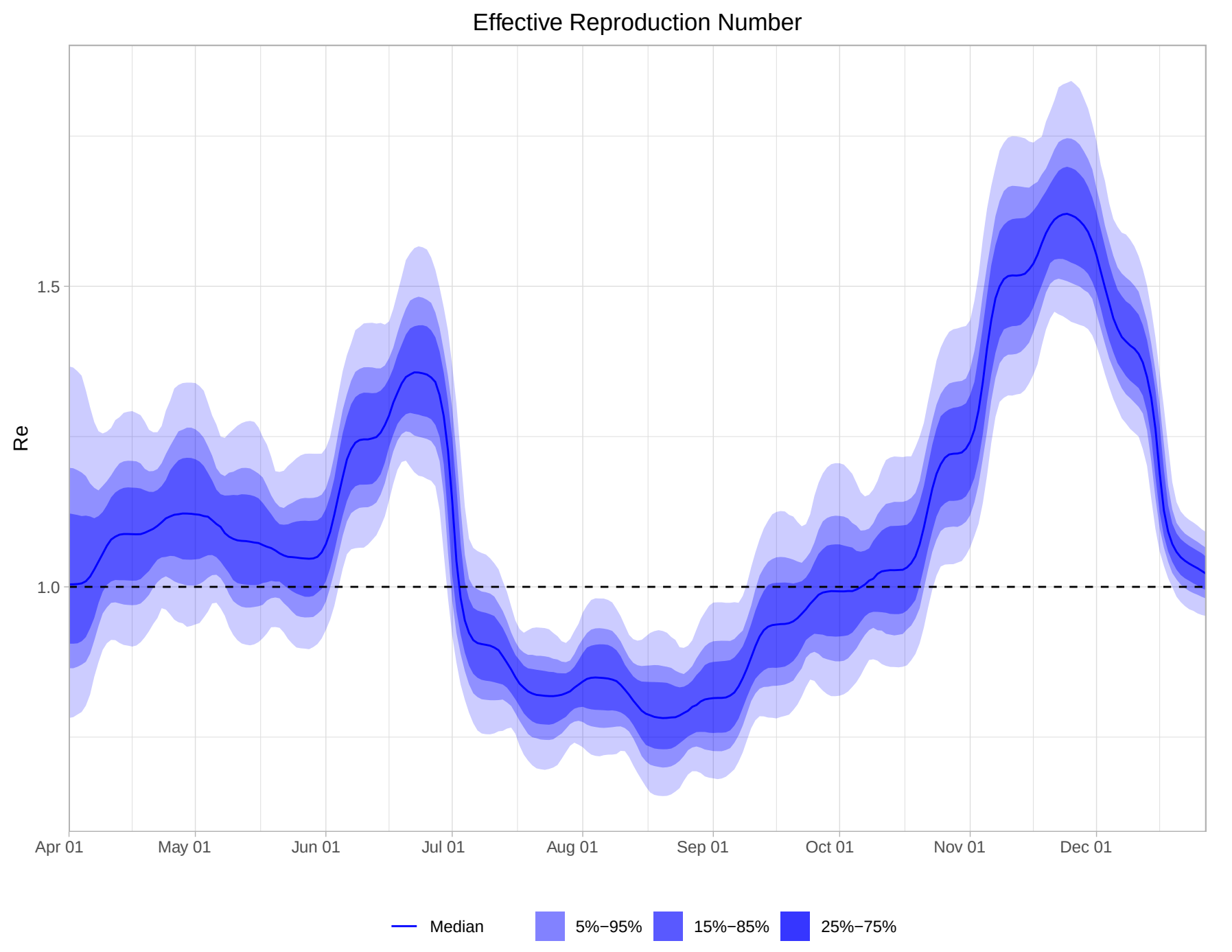

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
600
400
200
0
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
800
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

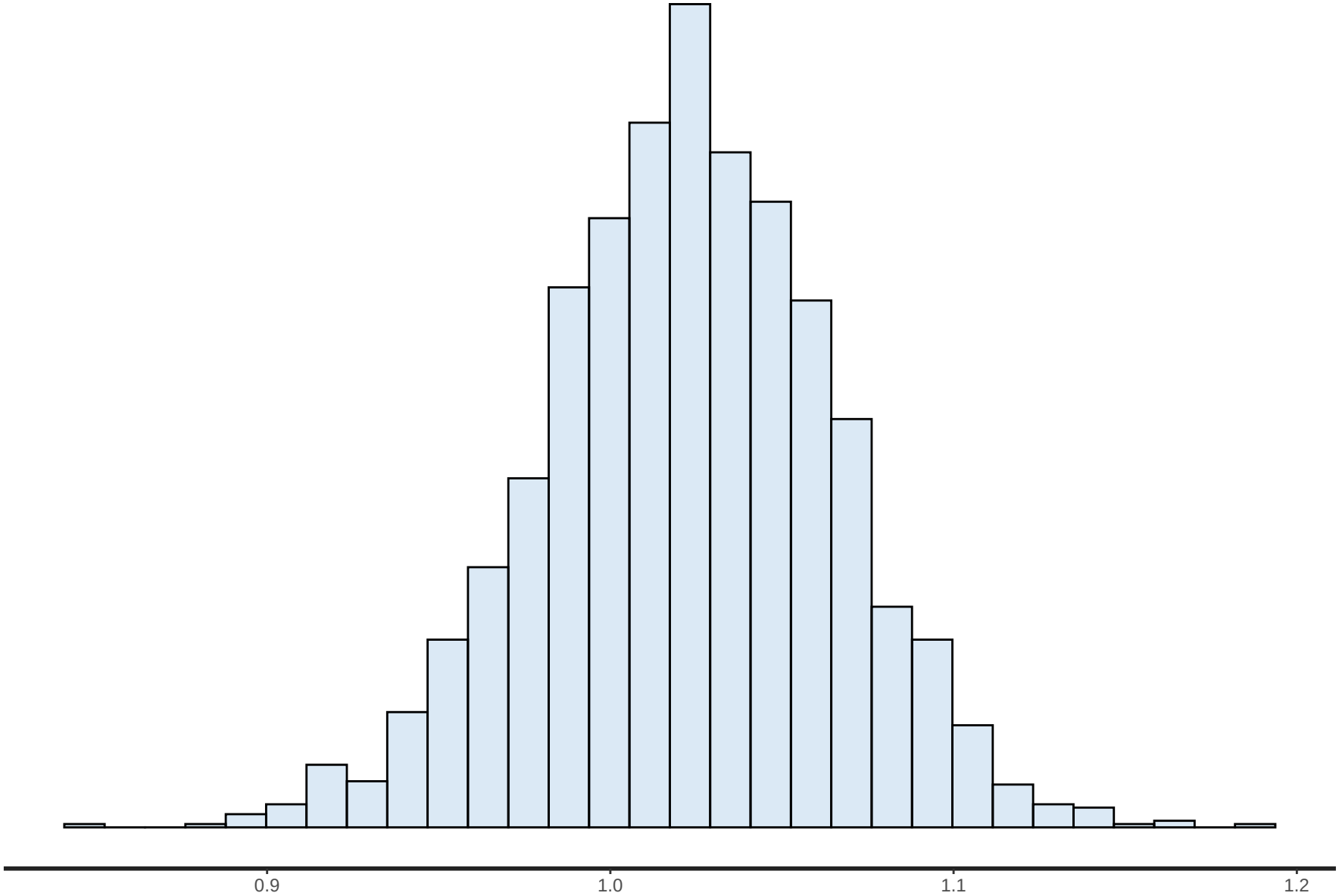

Short Term Death Projection
Number of COVID19 Deaths
3000
2000
1000
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

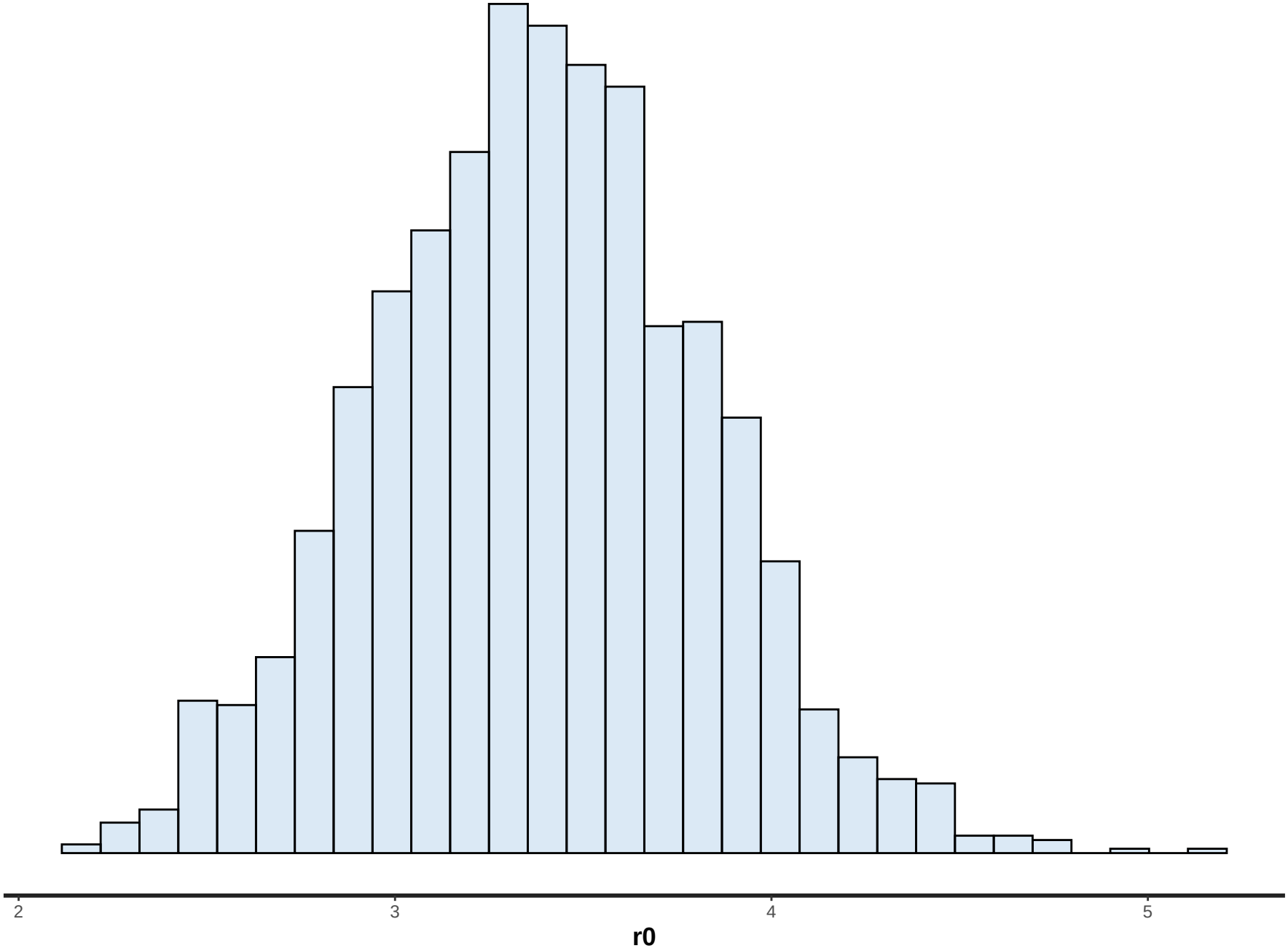

Long Term Death Projection
Number of COVID19 Deaths
6000
4000
2000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

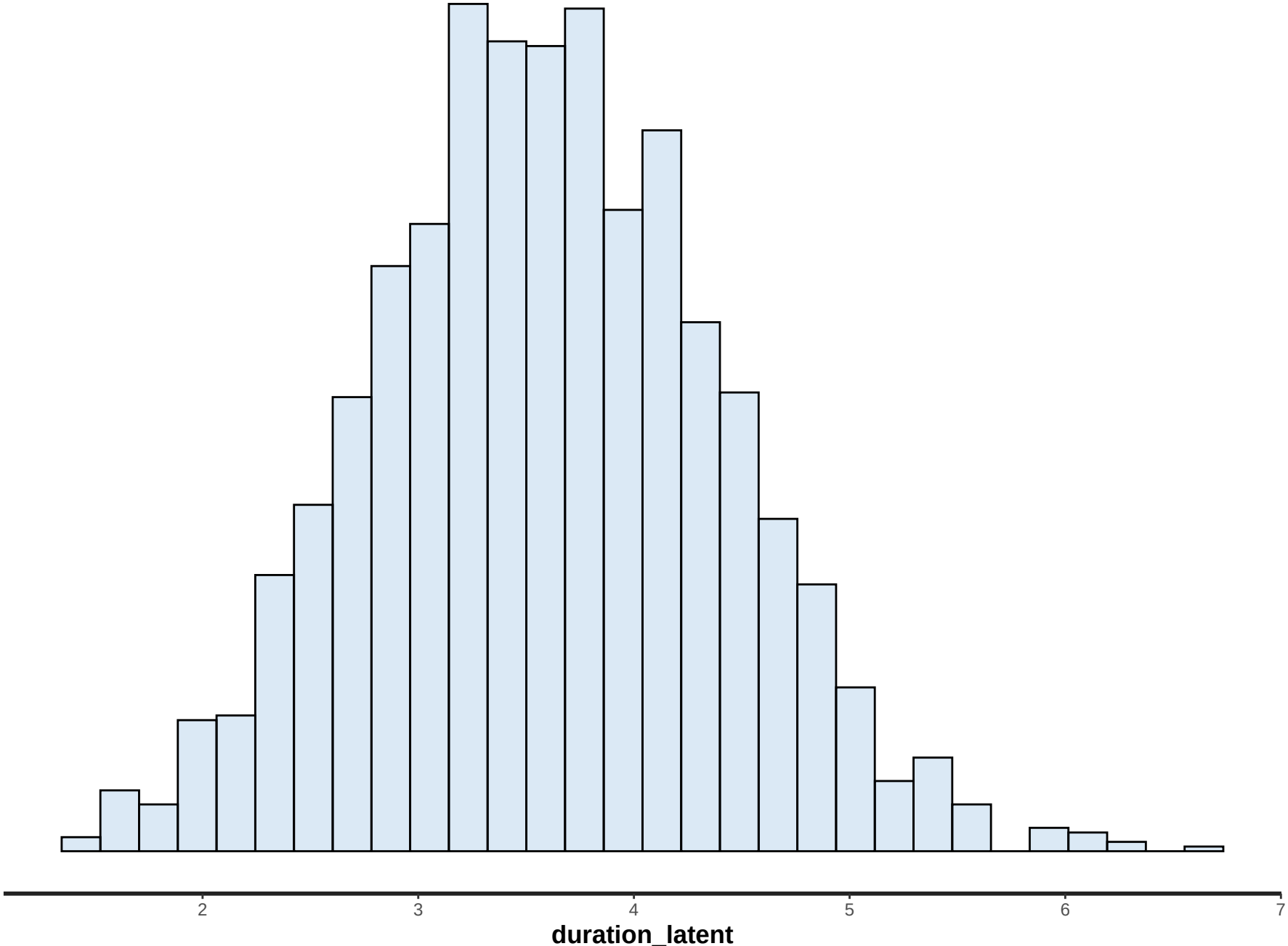

Effective Reproduction Number
Re
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

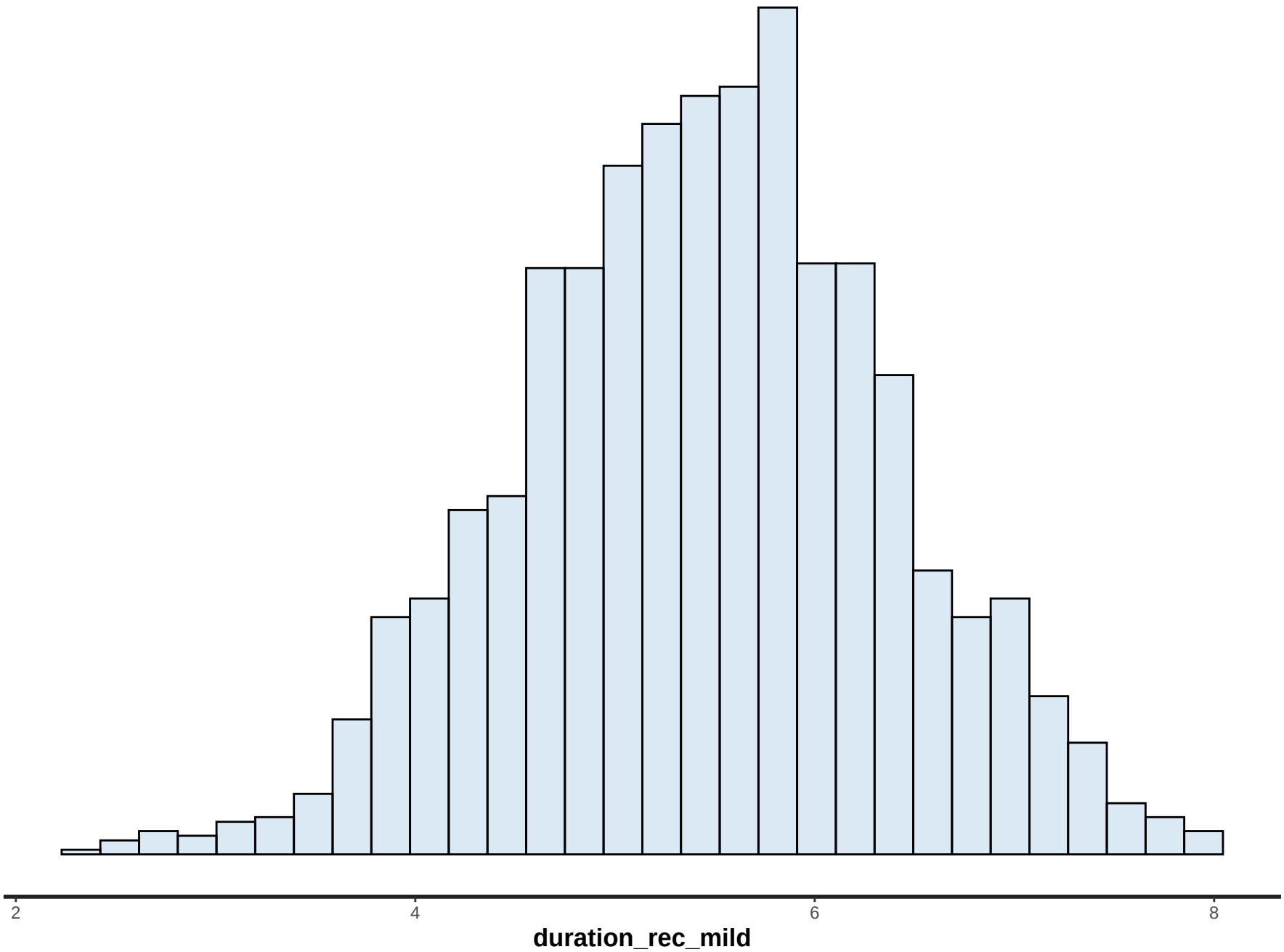
Rt as of 2020−12−27

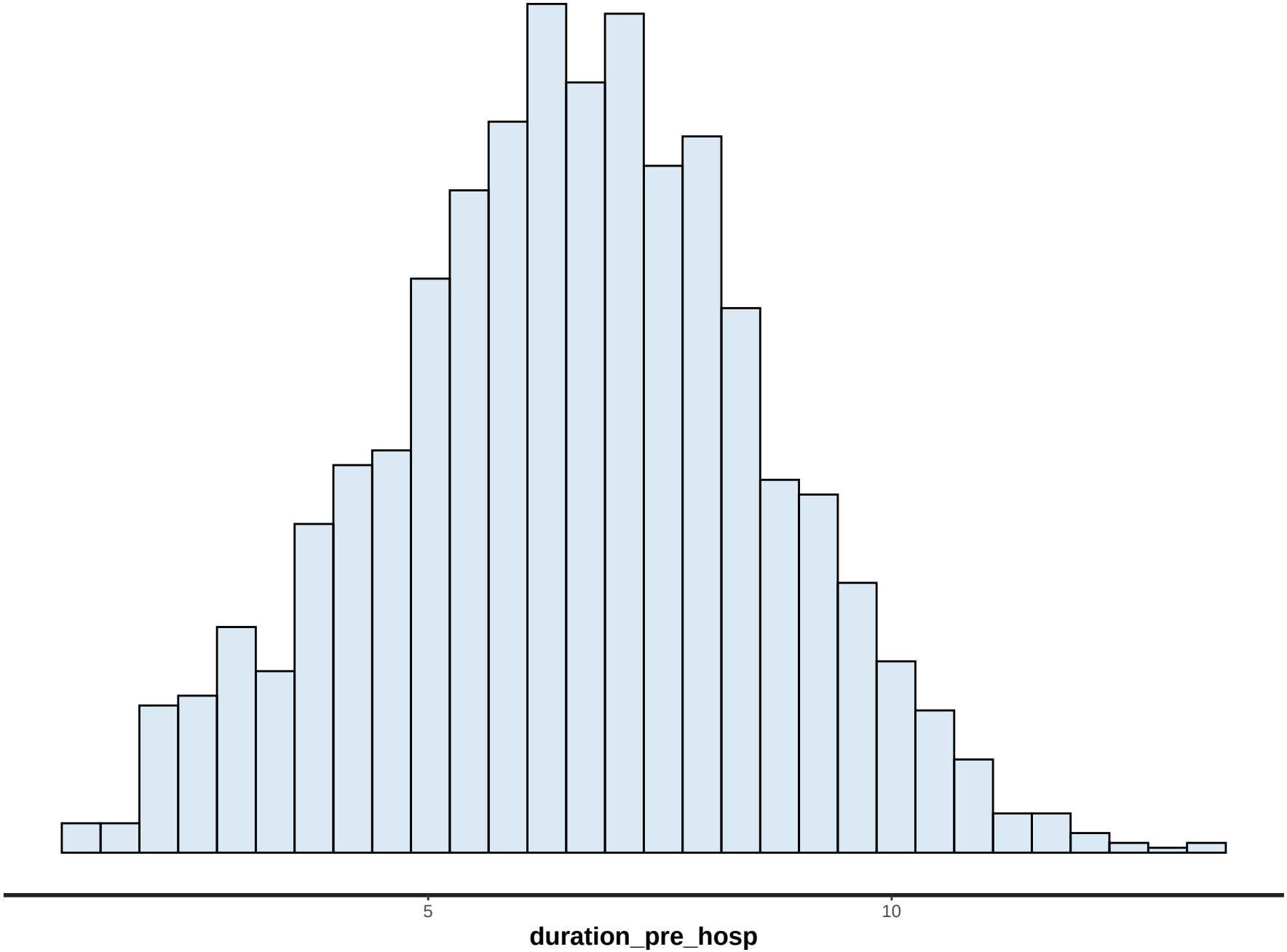
5%	10%	25%	50%	75%	90%	95%
0.95	0.97	0.99	1.02	1.05	1.07	1.09

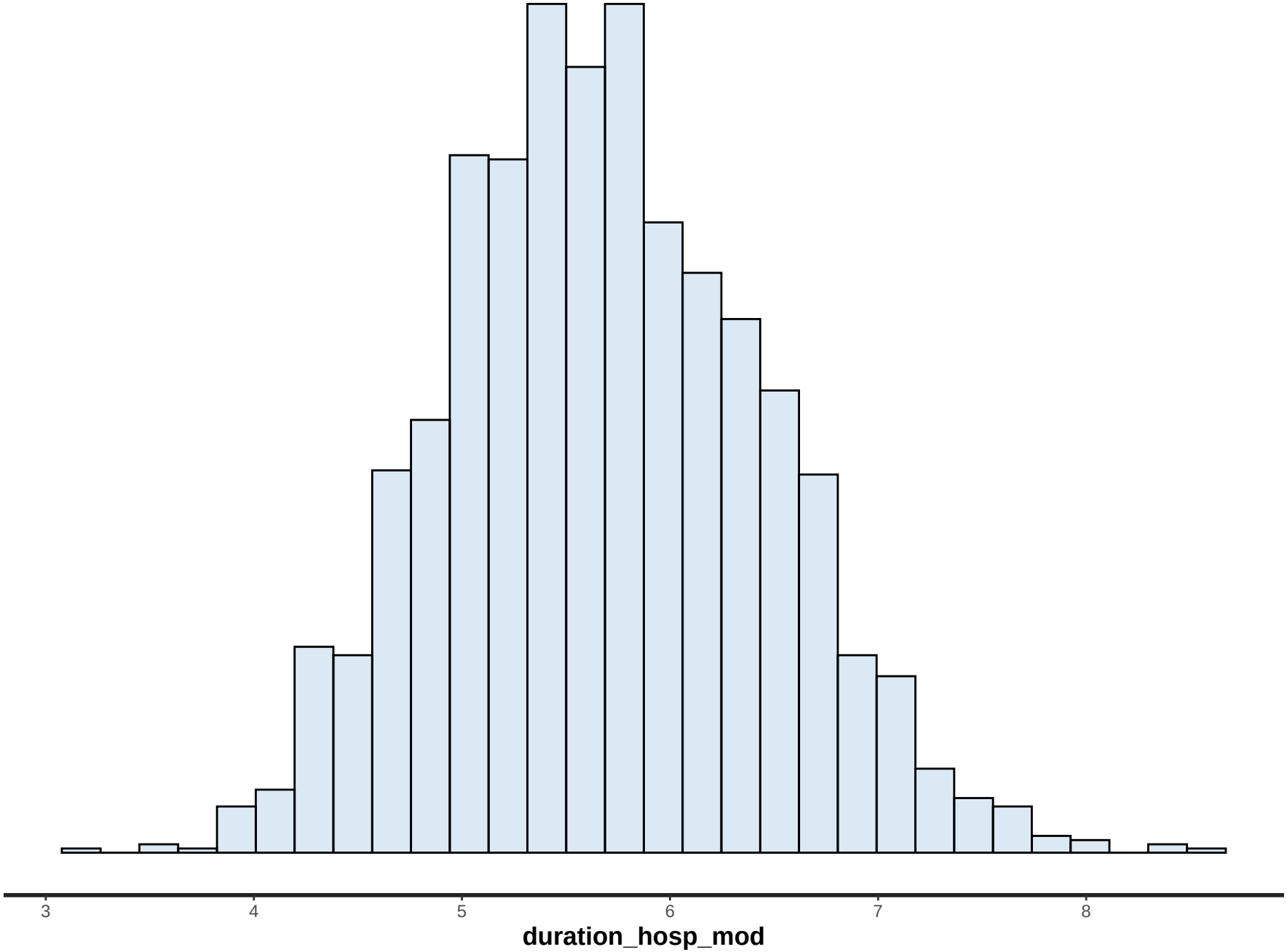


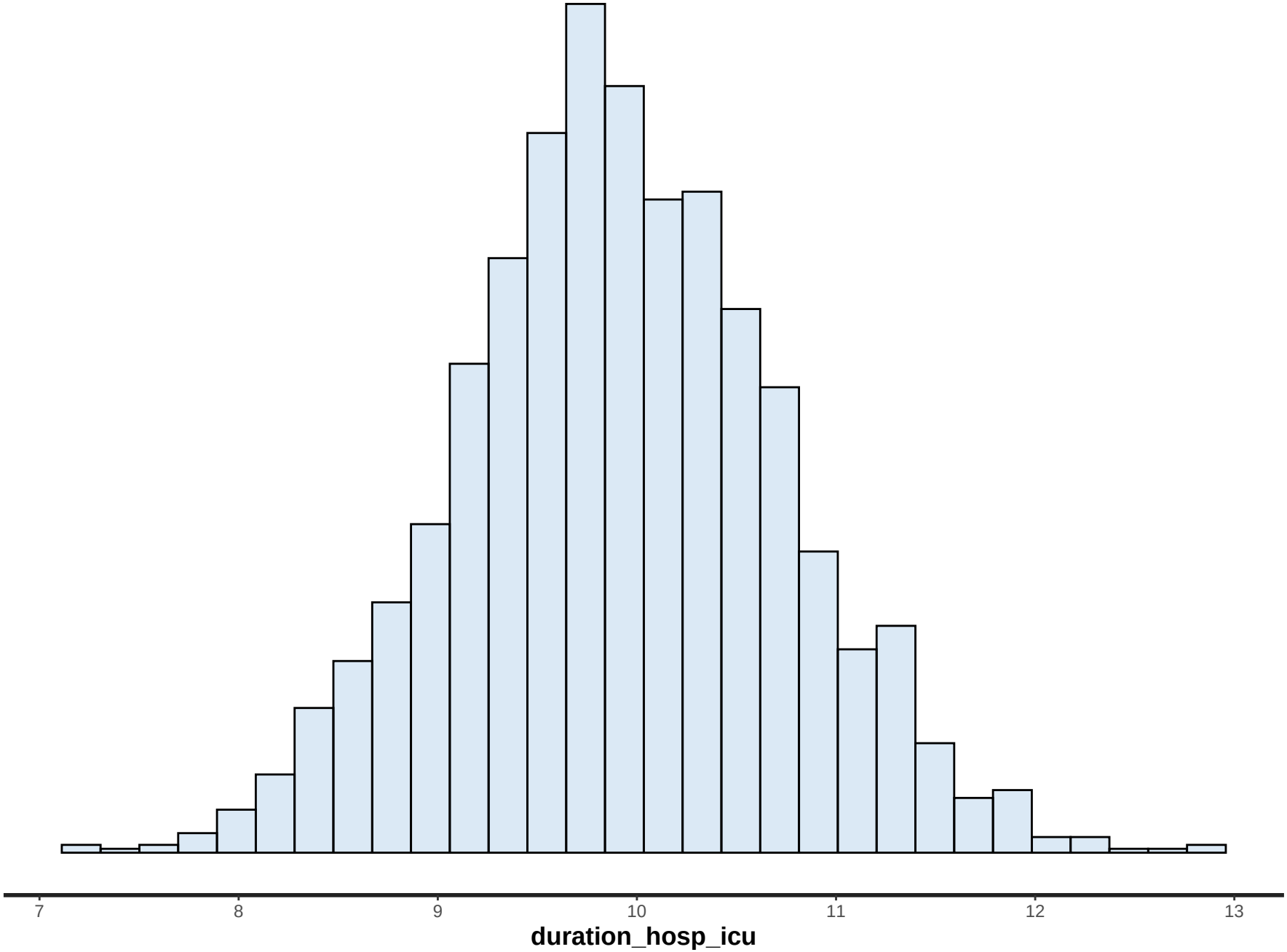

2
3
4
5
r0

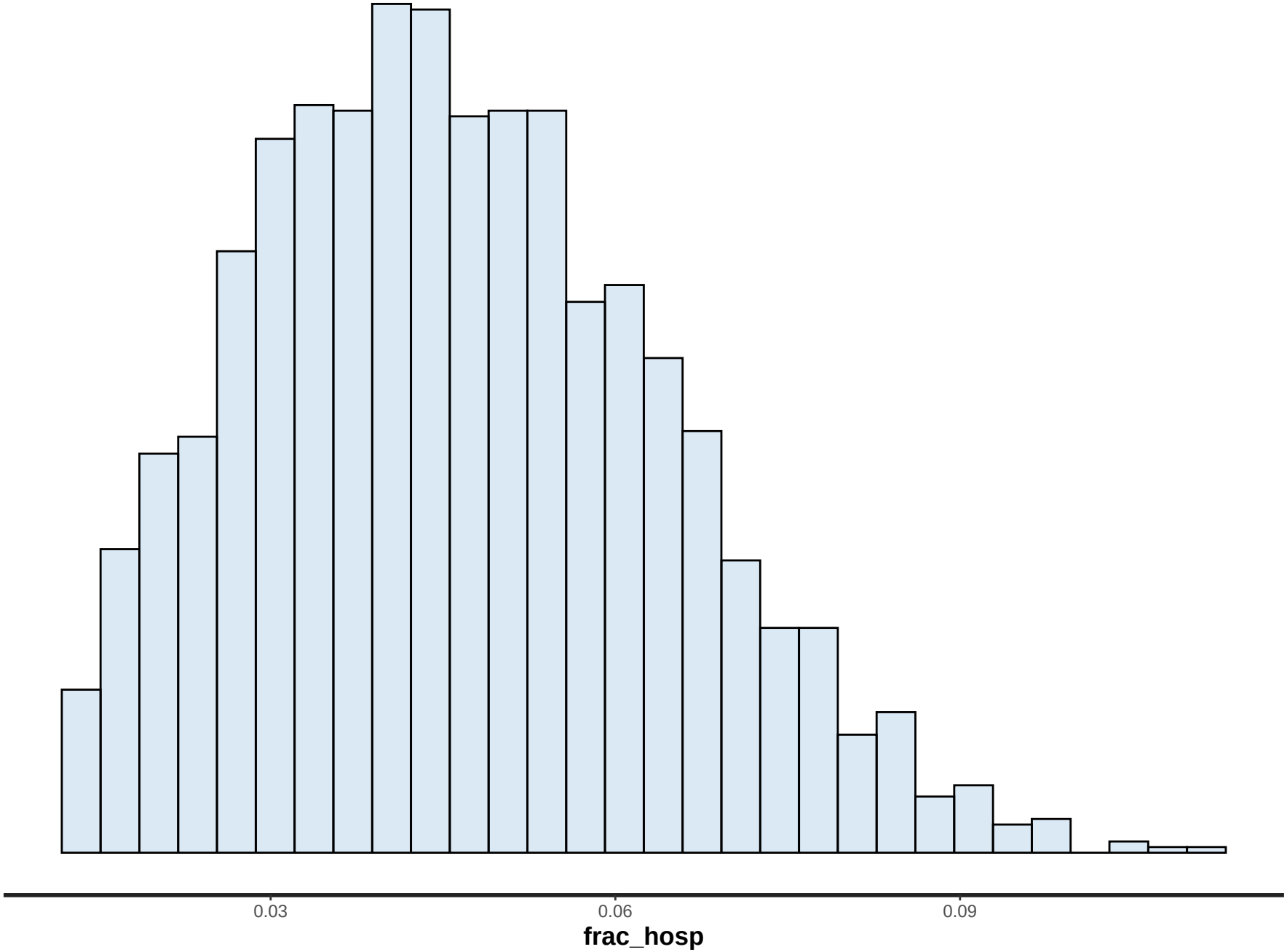

2
3
4
5
6
7
duration_latent

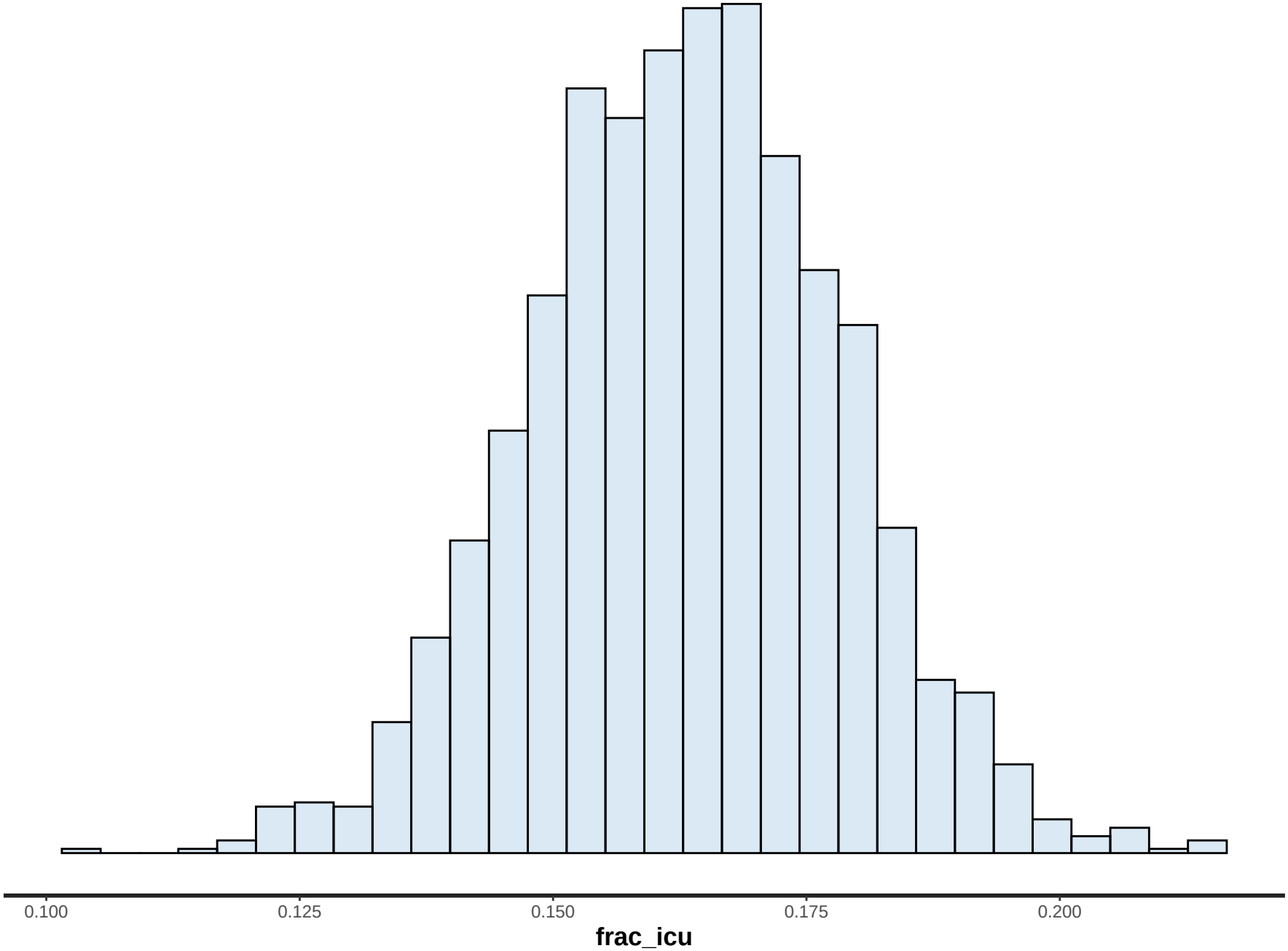

2
4
6
8
duration_rec_mild

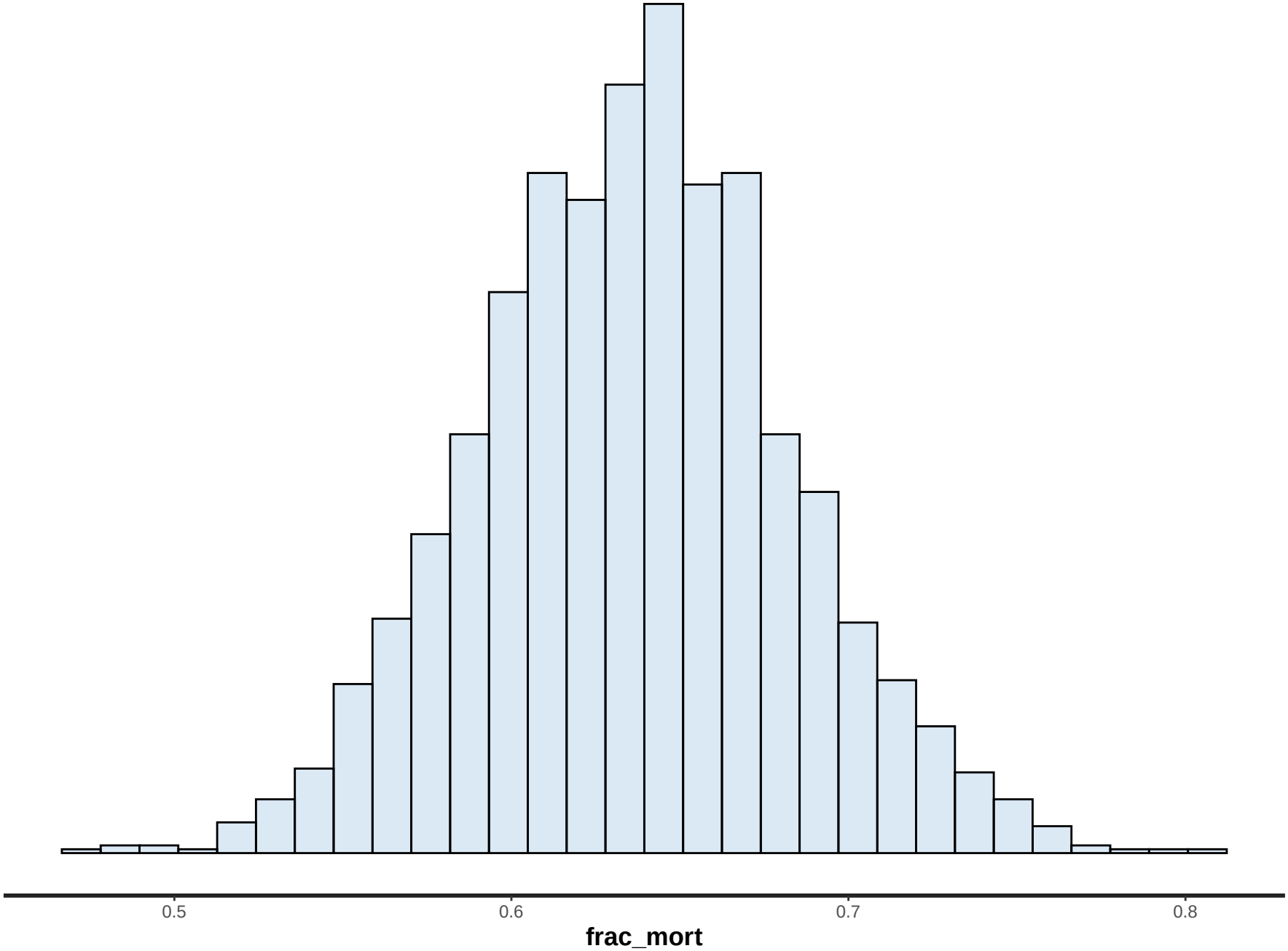

5
10
duration_pre_hosp

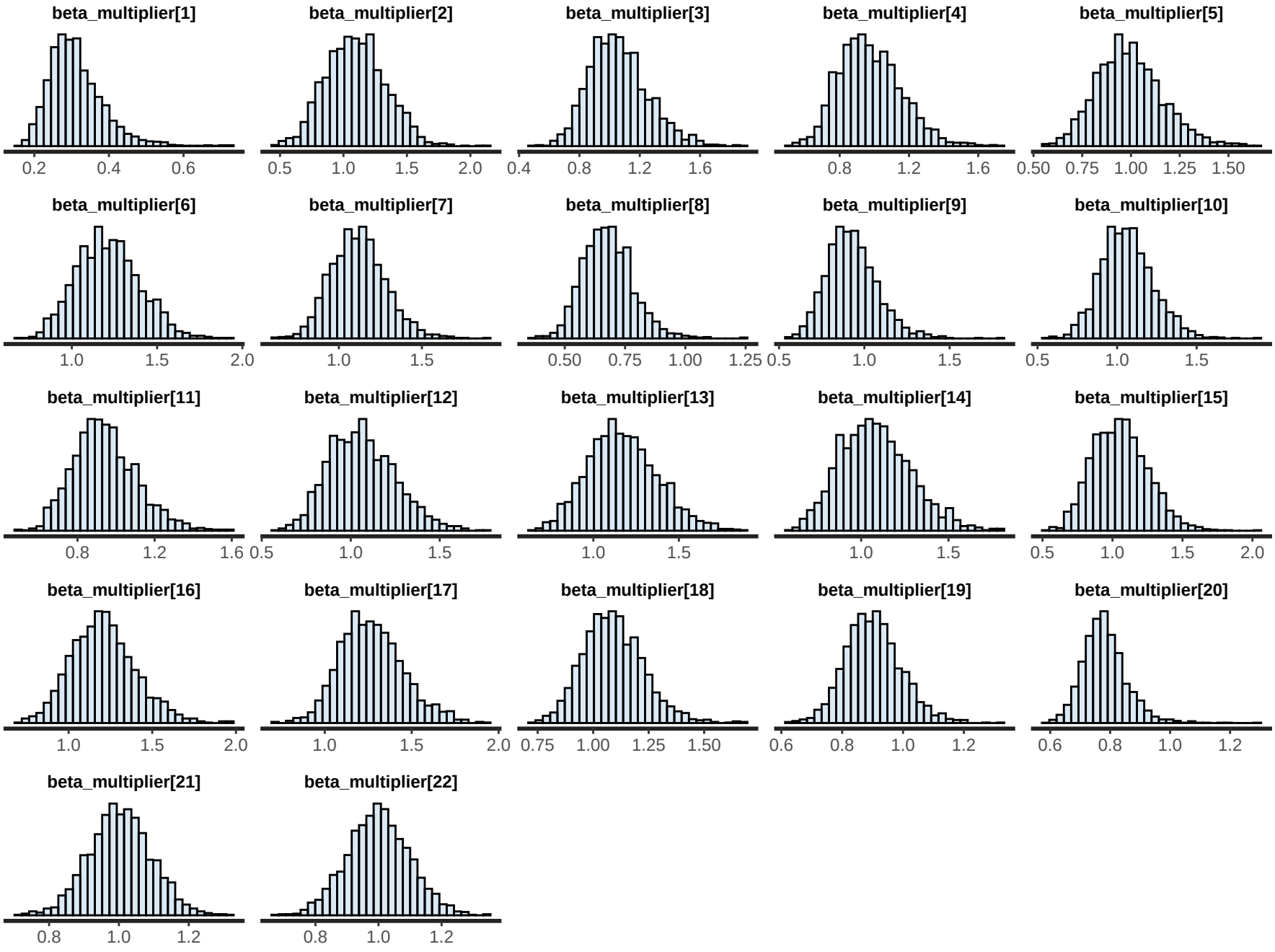

3
4
5
6
7
8
duration_hosp_mod

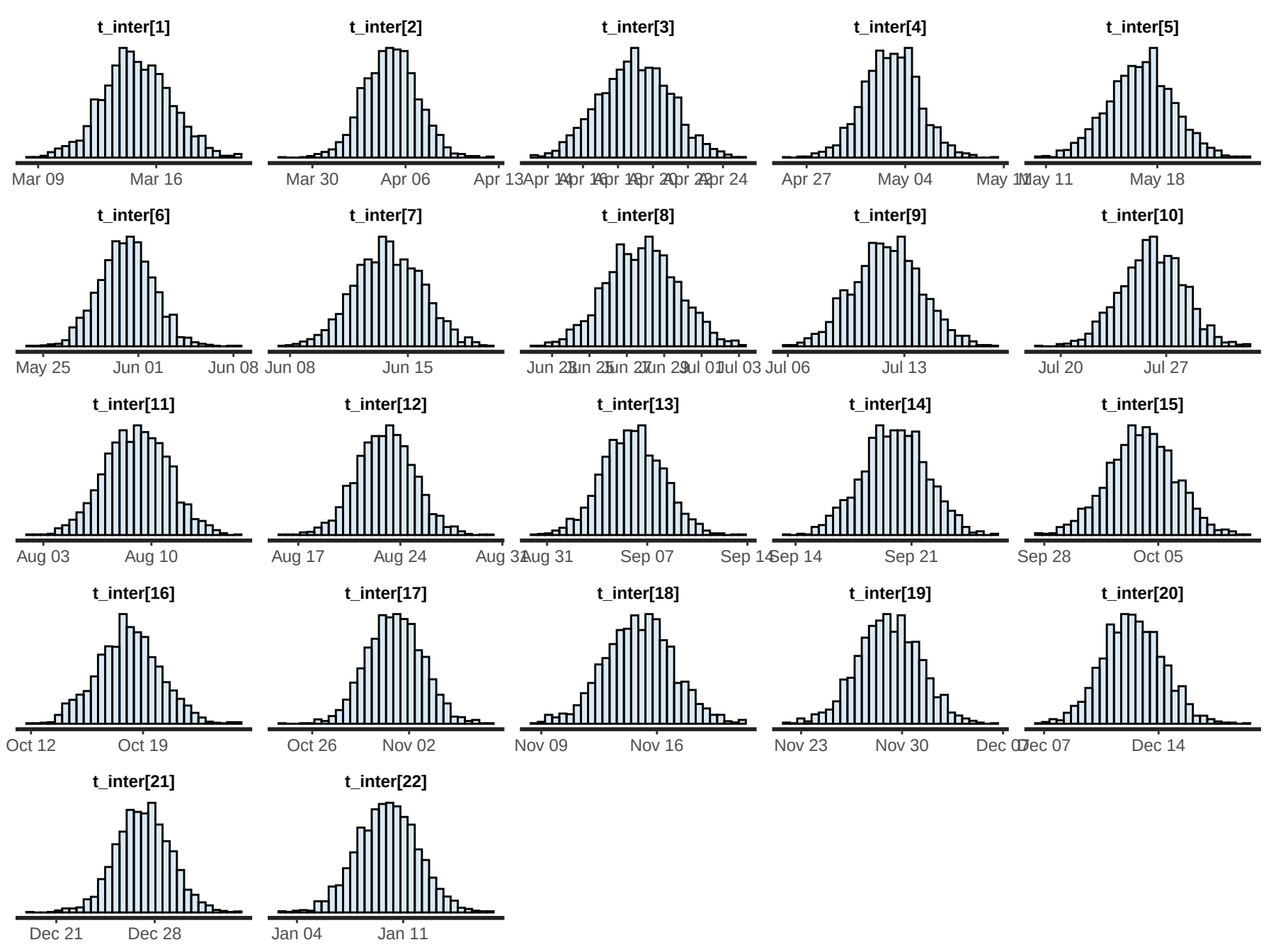

7
8
9
10
11
12
13
duration_hosp_icu


0.03
0.06
0.09
frac_hosp


0.100
0.125
0.150
0.175
0.200
frac_icu


0.5
0.6
0.7
0.8
frac_mort


beta_multiplier[1]
0.2 0.4 0.6
beta_multiplier[2]
0.5 1.0 1.5 2.0
beta_multiplier[3]
0.4 0.8 1.2 1.6
beta_multiplier[4]
0.8 1.2 1.6
beta_multiplier[5]
0.50 0.75 1.00 1.25 1.50
beta_multiplier[6]
1.0 1.5 2.0
beta_multiplier[7]
1.0 1.5
beta_multiplier[8]
0.50 0.75 1.00 1.25
beta_multiplier[9]
0.5 1.0 1.5
beta_multiplier[10]
0.5 1.0 1.5
beta_multiplier[11]
0.8 1.2 1.6
beta_multiplier[12]
0.5 1.0 1.5
beta_multiplier[13]
1.0 1.5
beta_multiplier[14]
1.0 1.5
beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
1.0 1.5 2.0
beta_multiplier[17]
1.0 1.5 2.0
beta_multiplier[18]
0.75 1.00 1.25 1.50
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
beta_multiplier[22]
0.8 1.0 1.2


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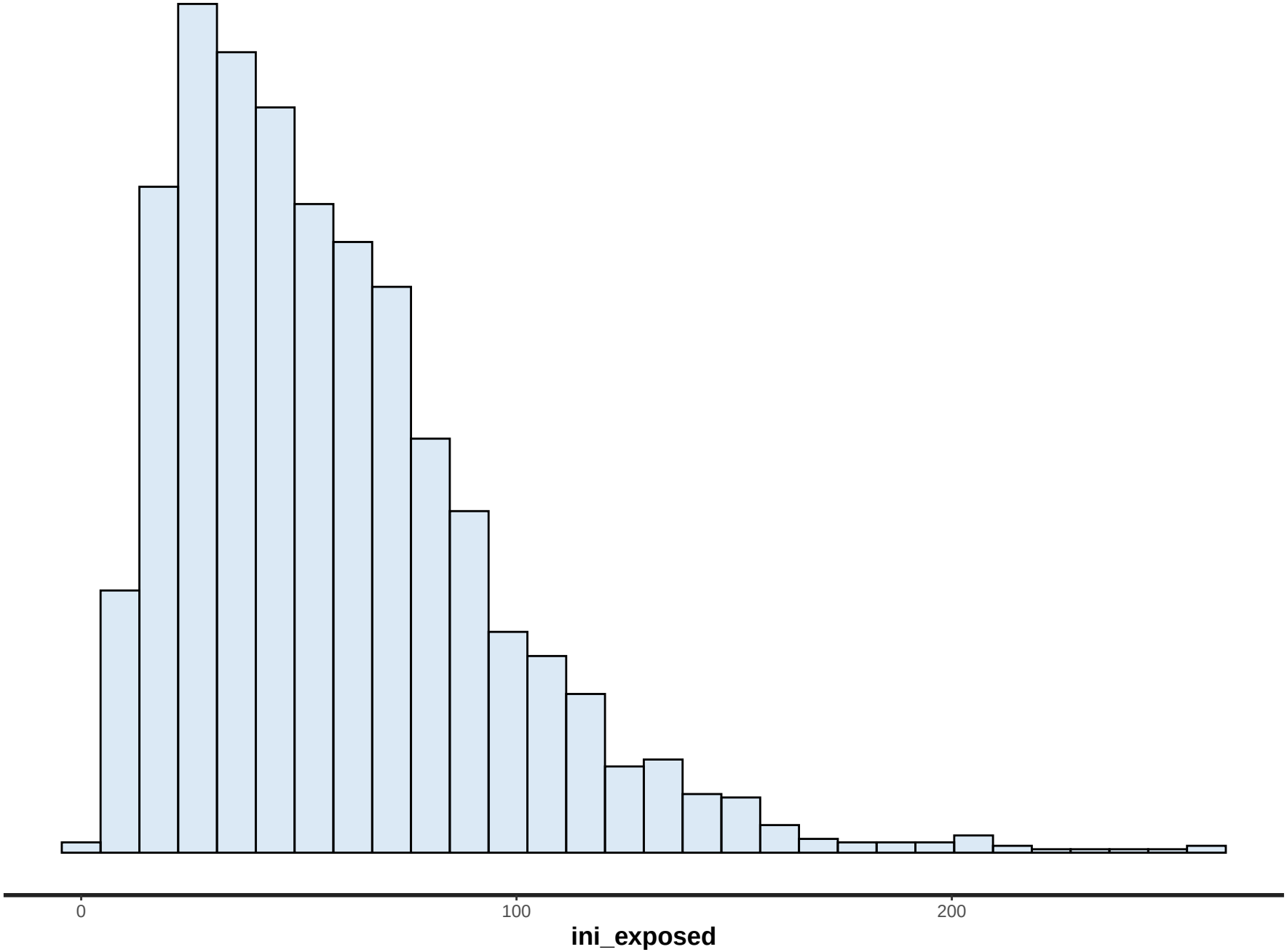
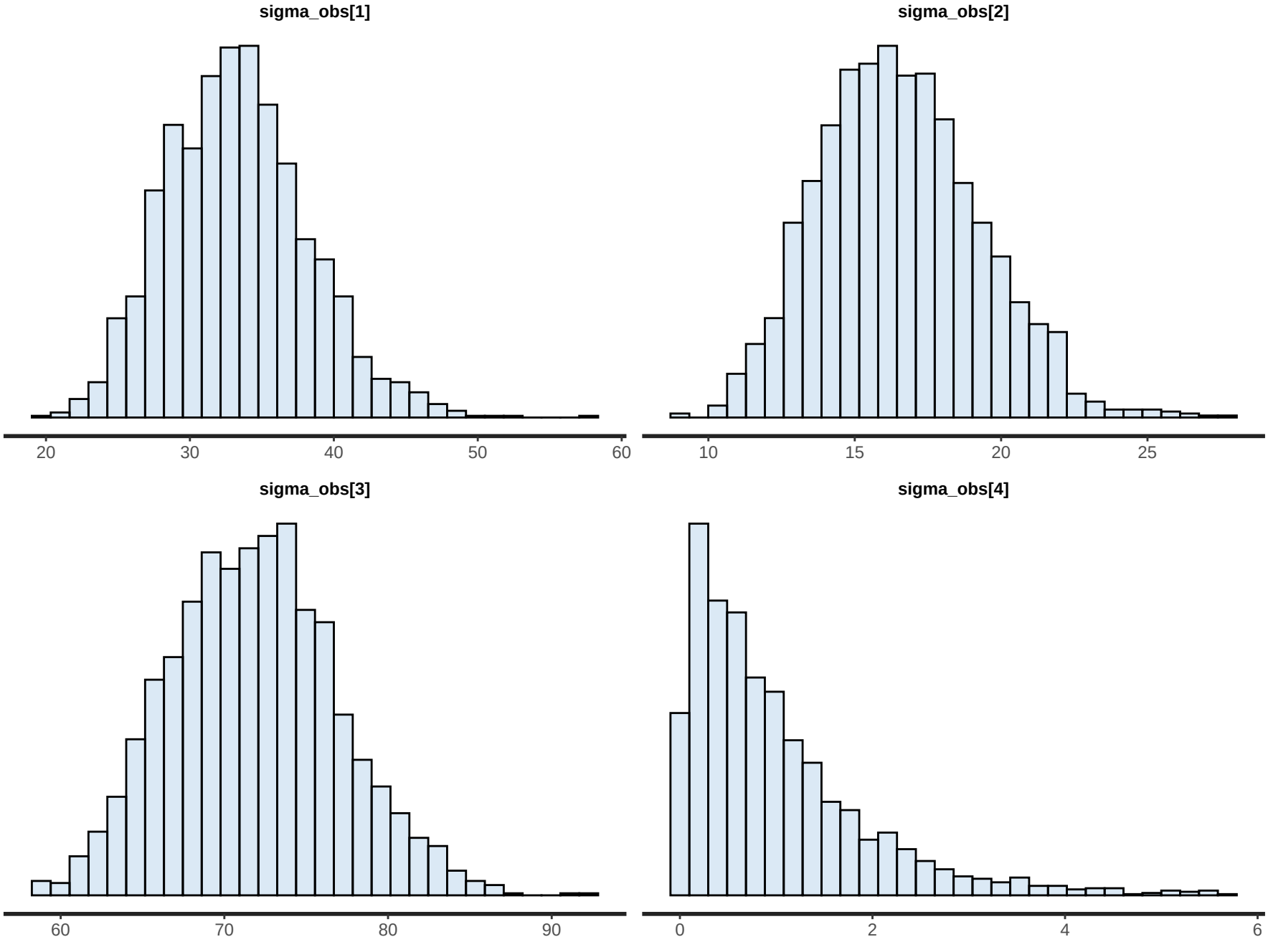
Dec 21
Dec 28
t_inter[22]
Jan 04
Jan 11


0
100
200
ini_exposed


sigma_obs[1]
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30
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10
15
20
25
sigma_obs[3]
60
70
80
90
sigma_obs[4]
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2
4
6