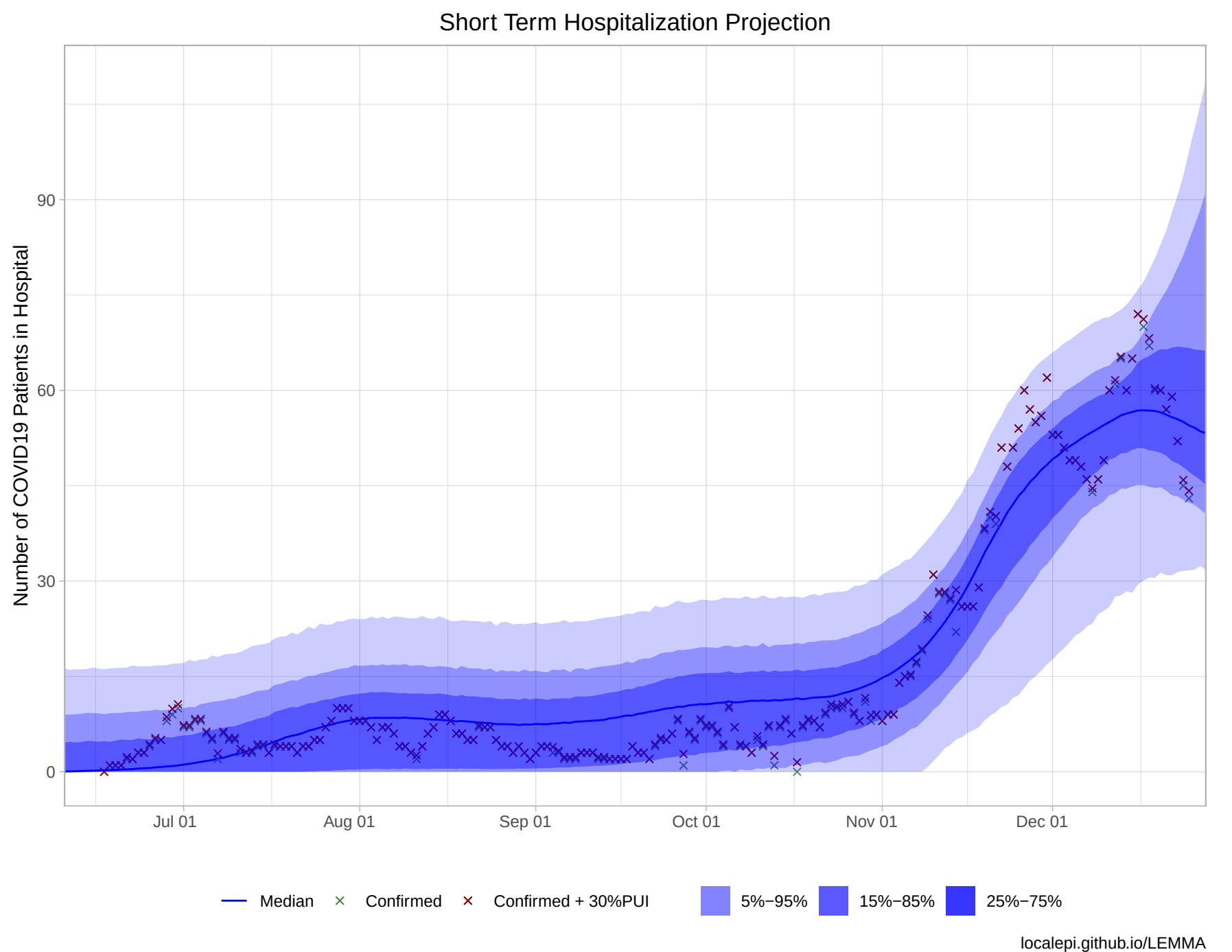
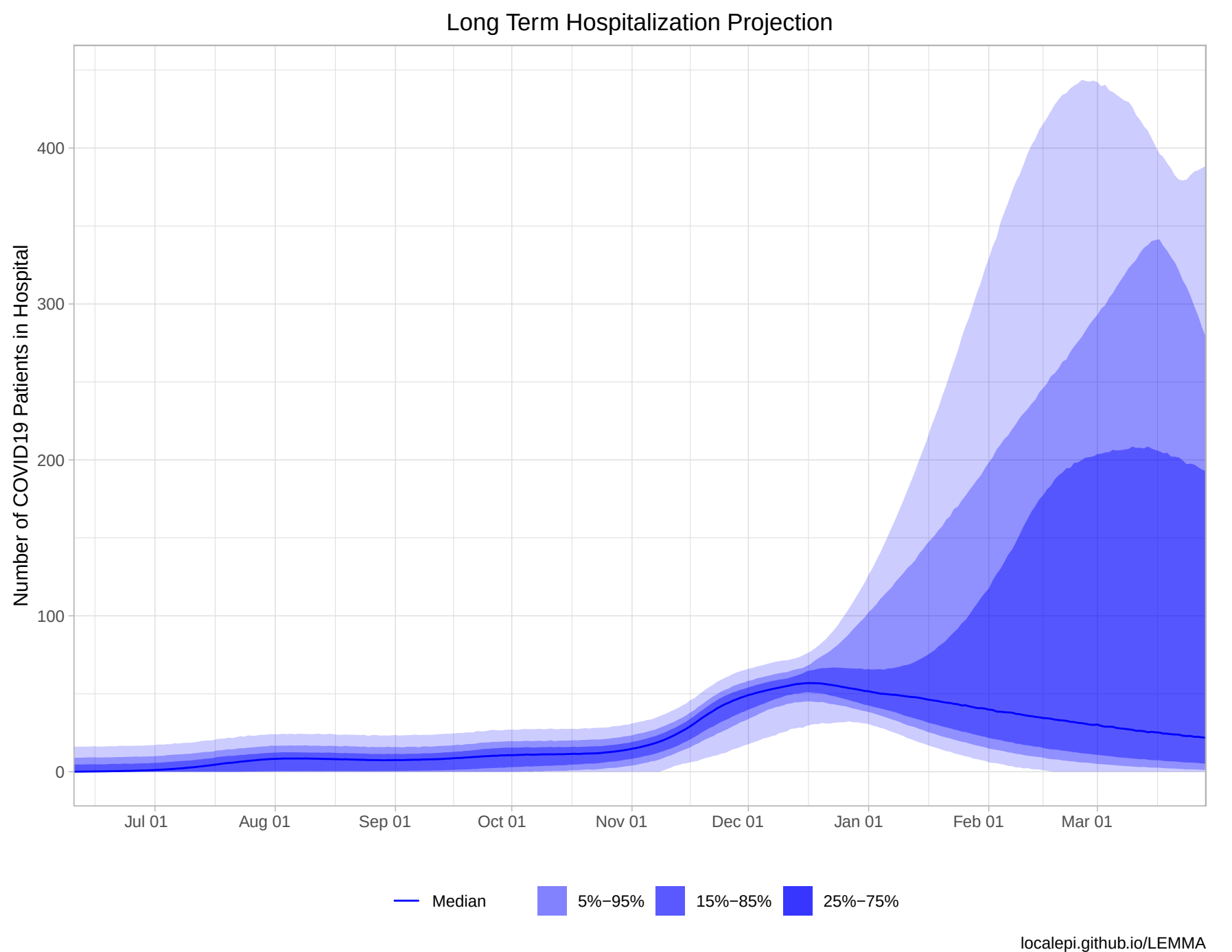
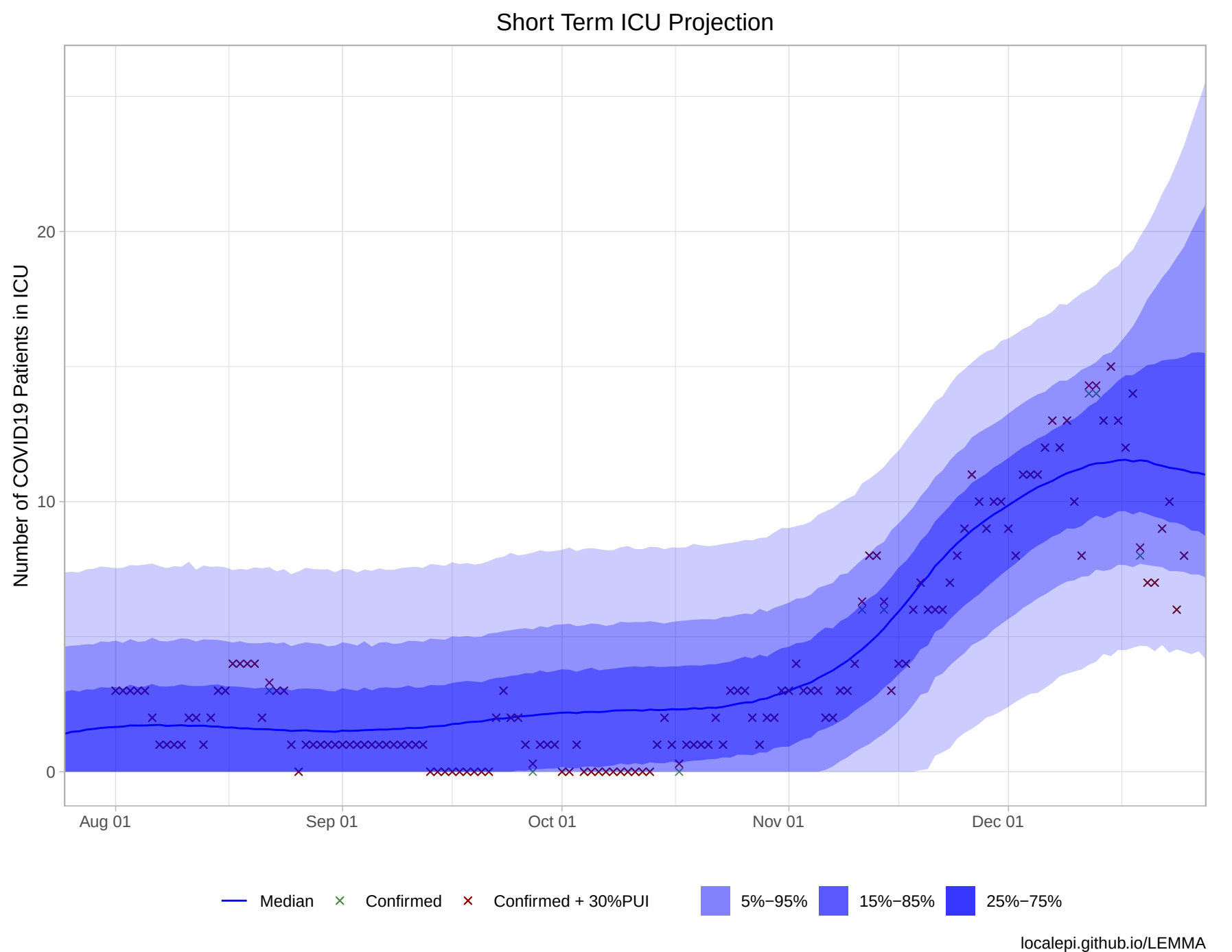
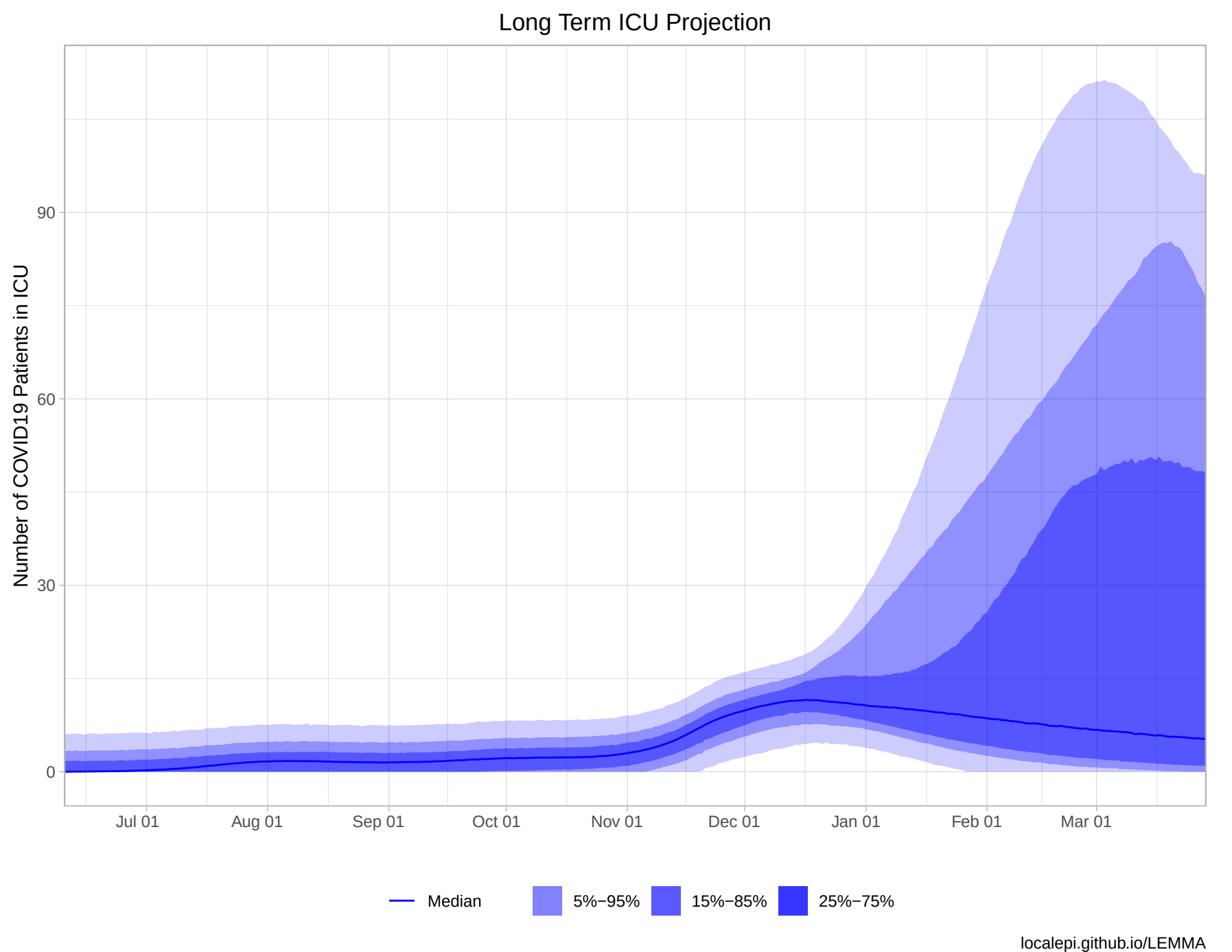
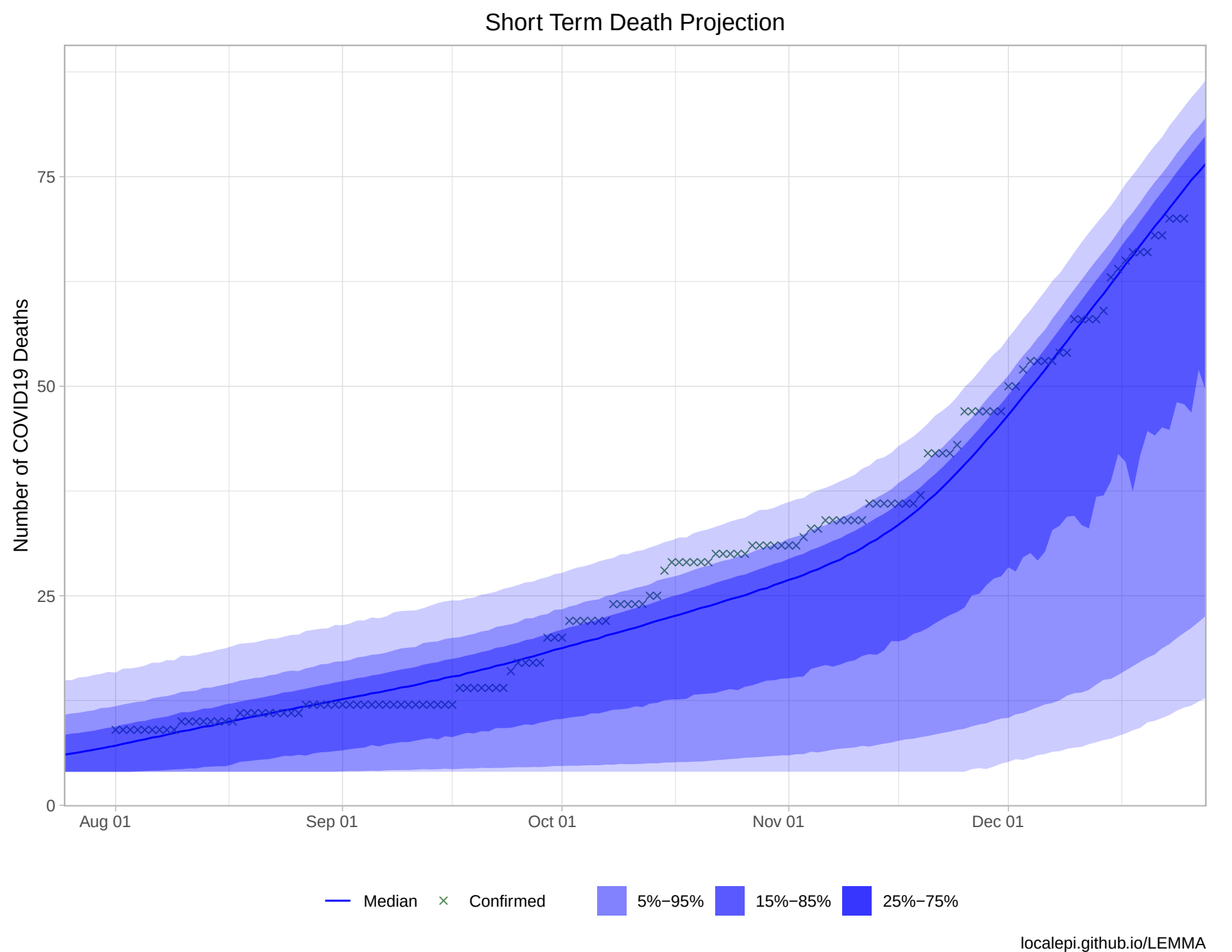
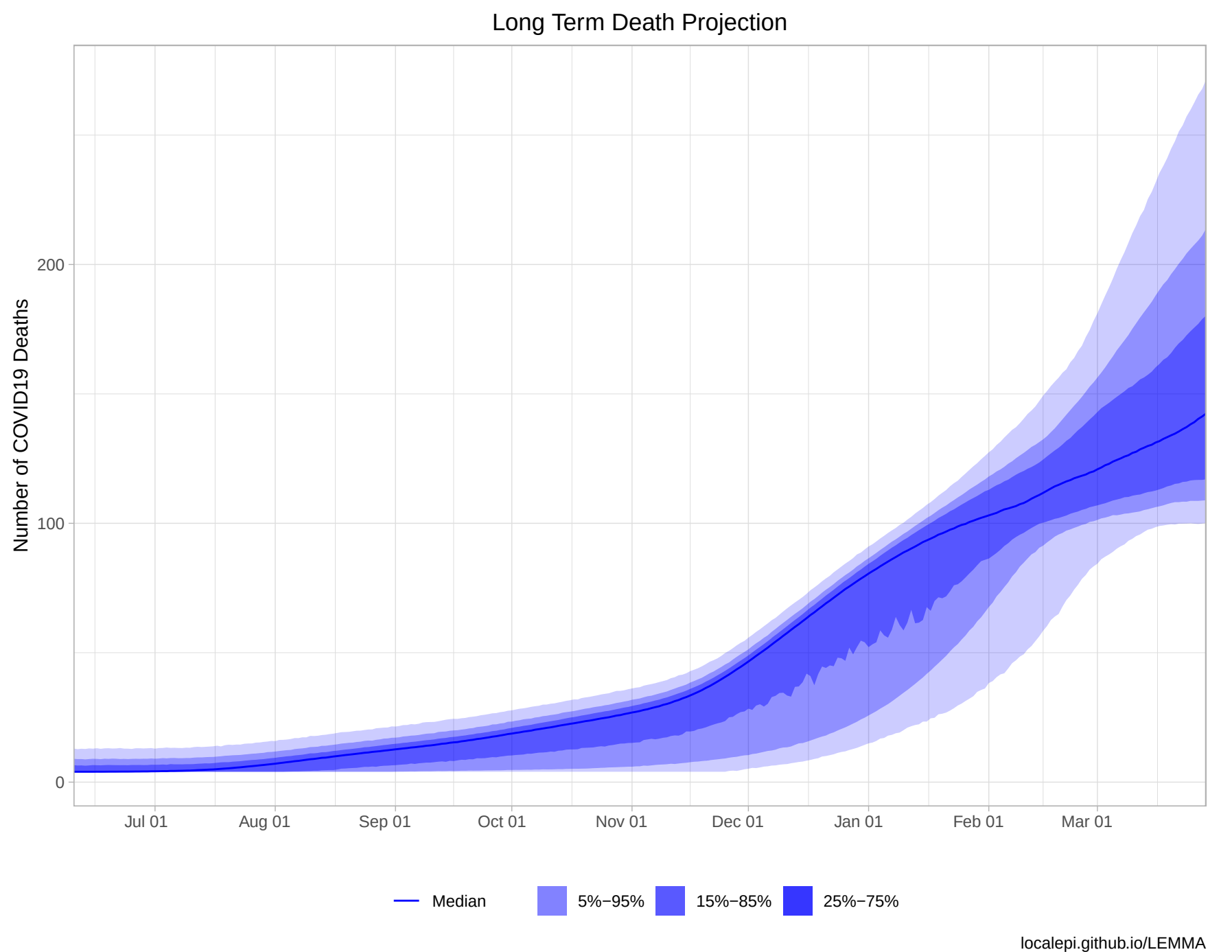

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
30
60
90
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

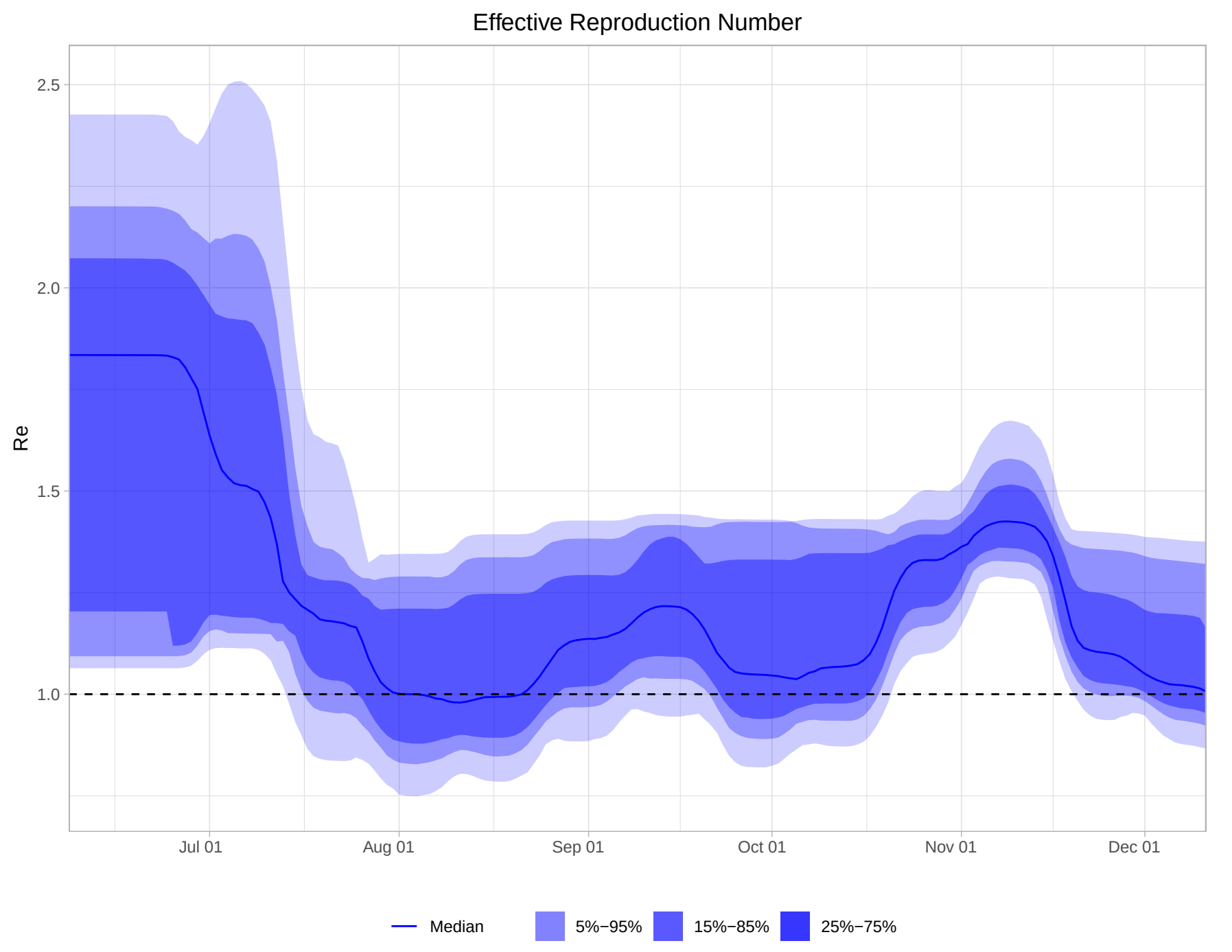

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
400
300
200
100
0
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
20
10
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
90
60
30
0
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

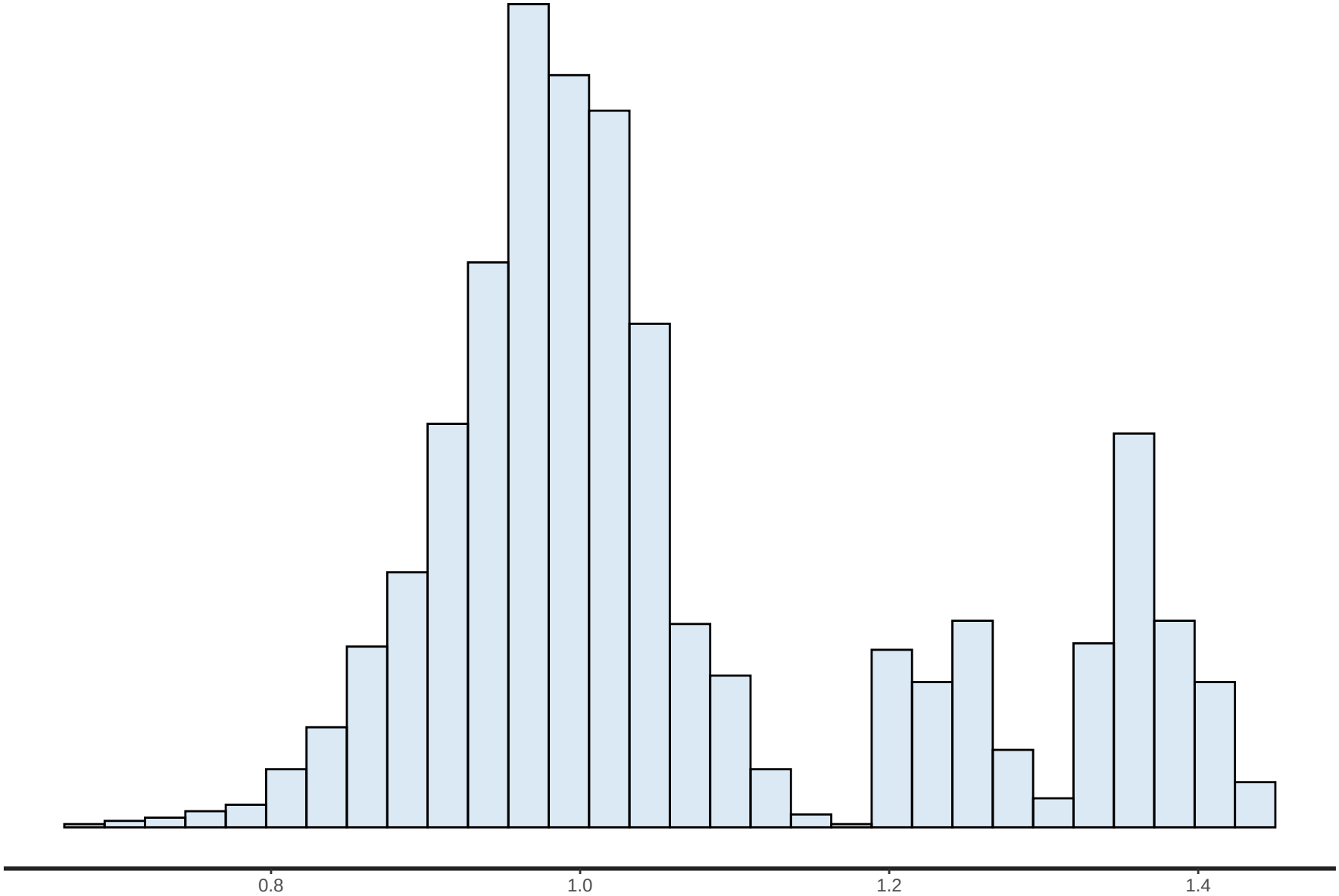

Short Term Death Projection
Number of COVID19 Deaths
0
25
50
75
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

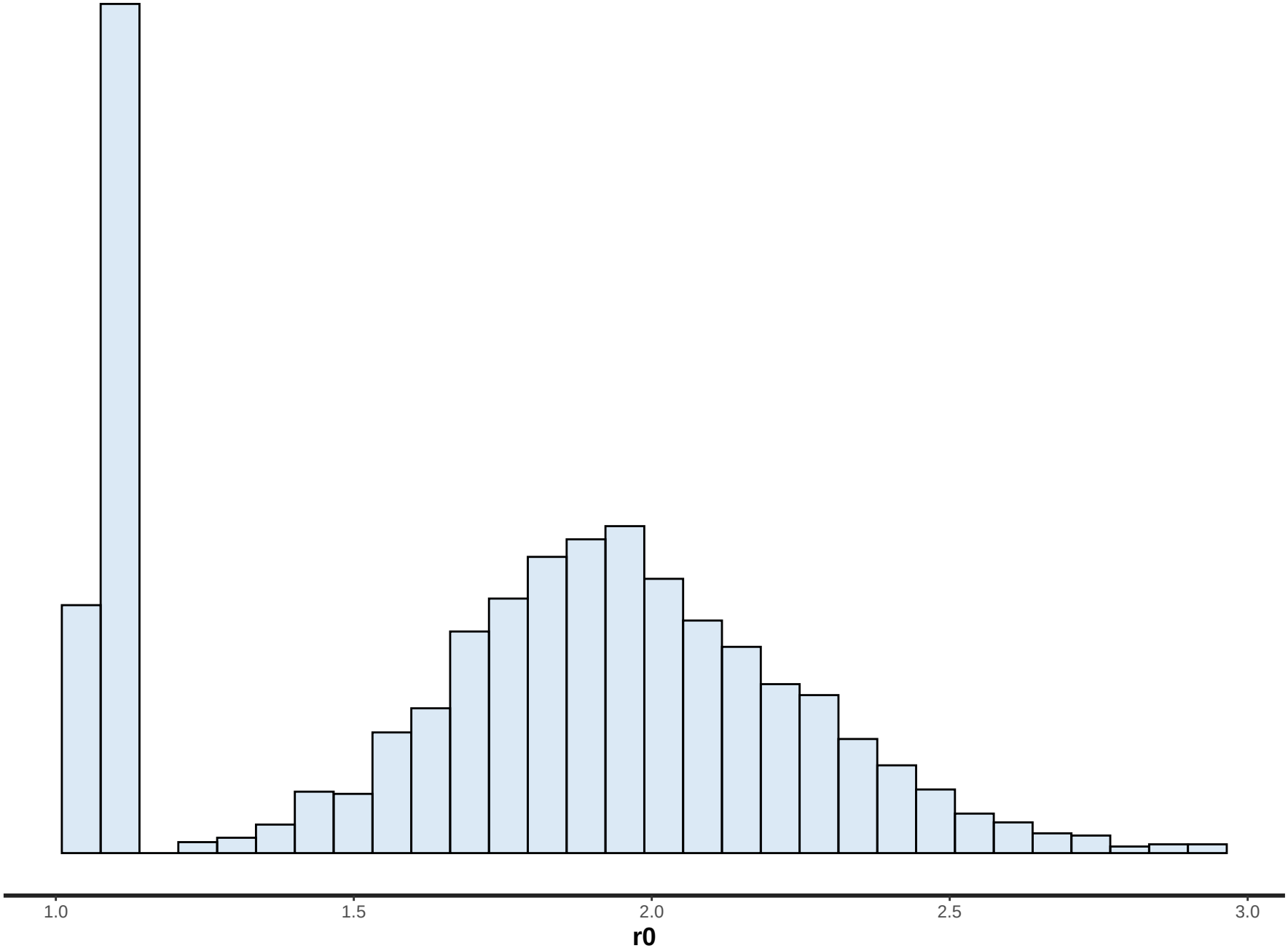

Long Term Death Projection
Number of COVID19 Deaths
200
100
0
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

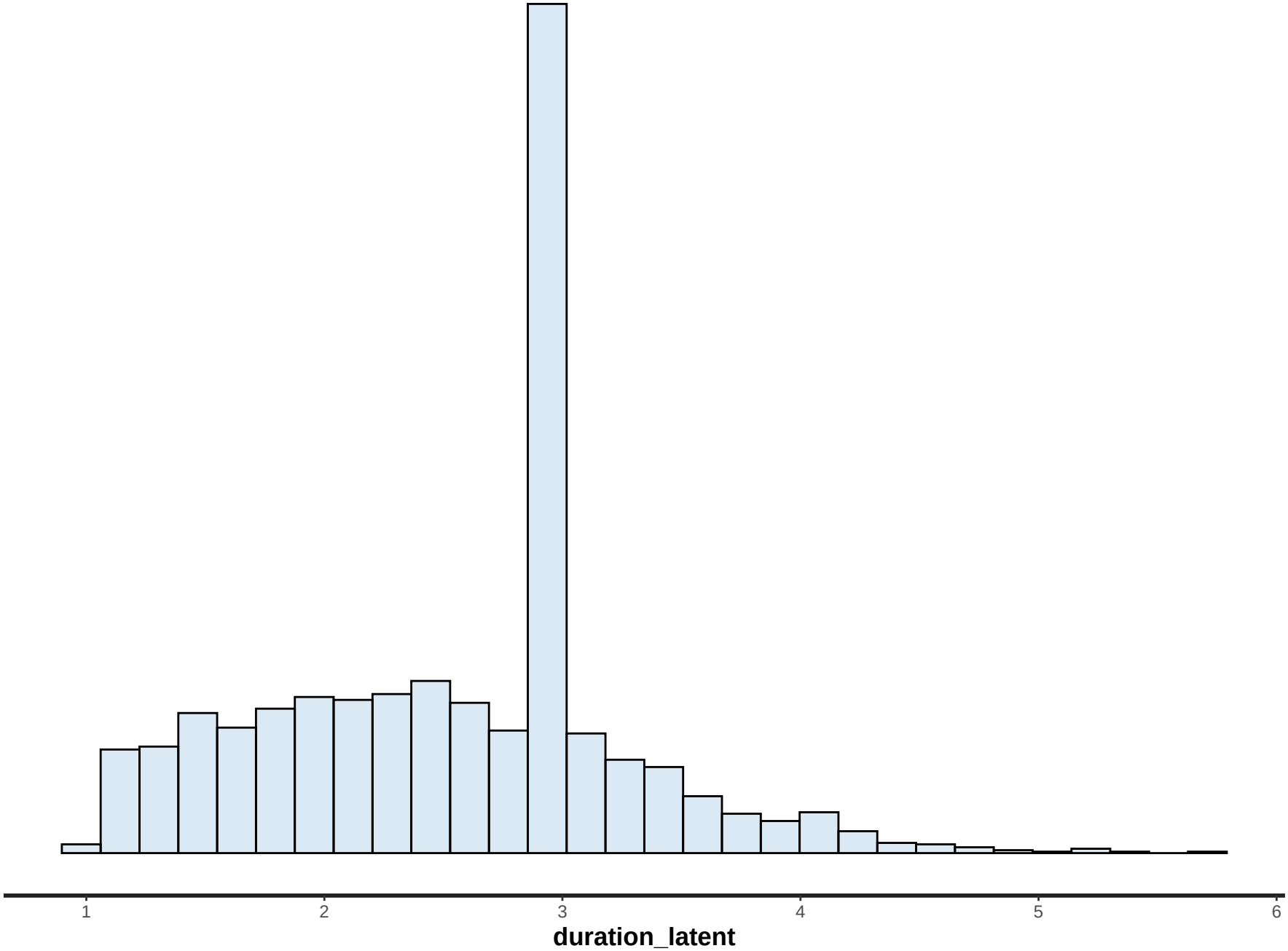

Effective Reproduction Number
Re
2.5
2.0
1.5
1.0
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
5%−95%
15%−85%
25%−75%

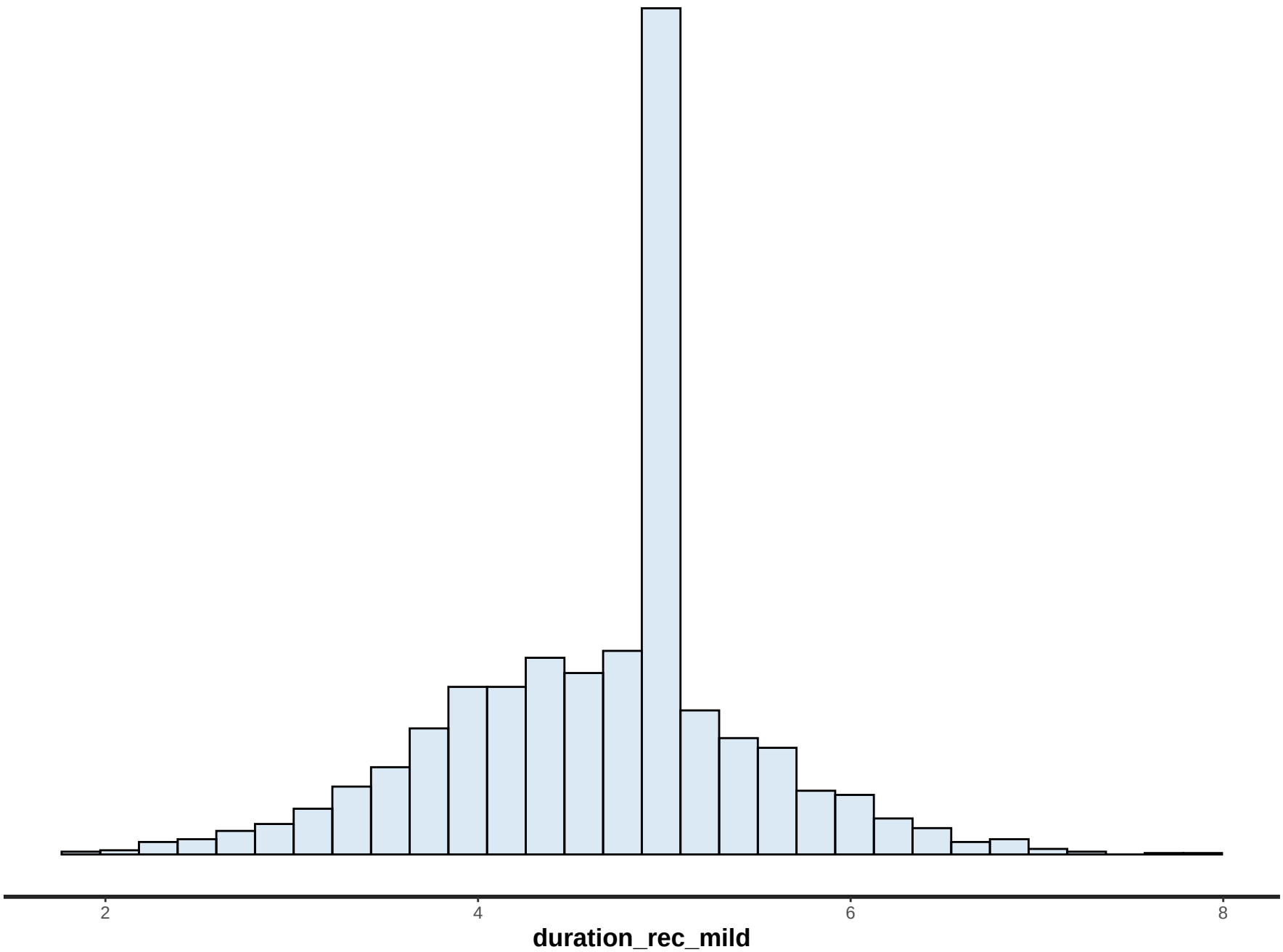
Rt as of 2020−12−11

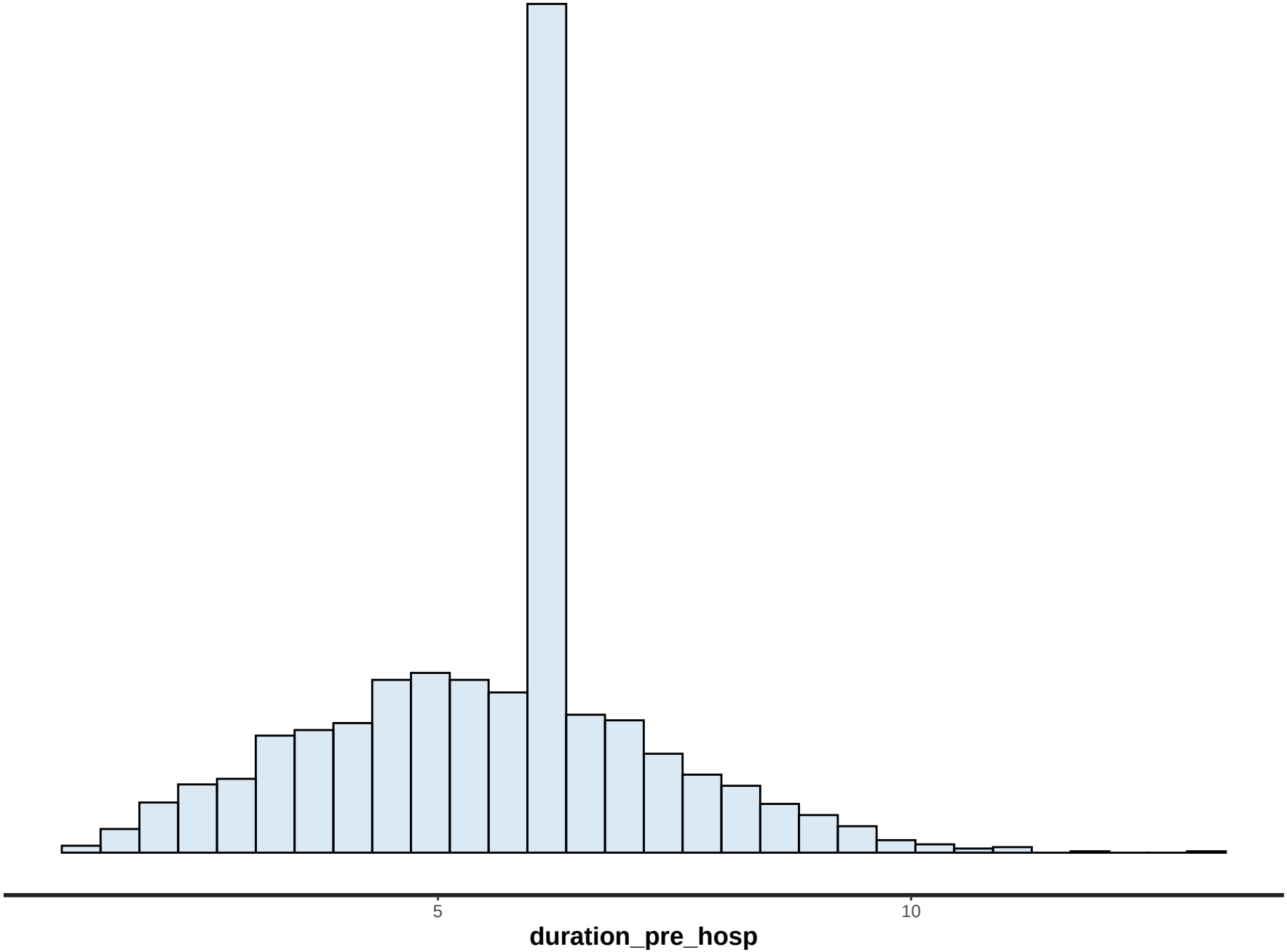
5%	10%	25%	50%	75%	90%	95%
0.87	0.90	0.95	1.01	1.16	1.36	1.38

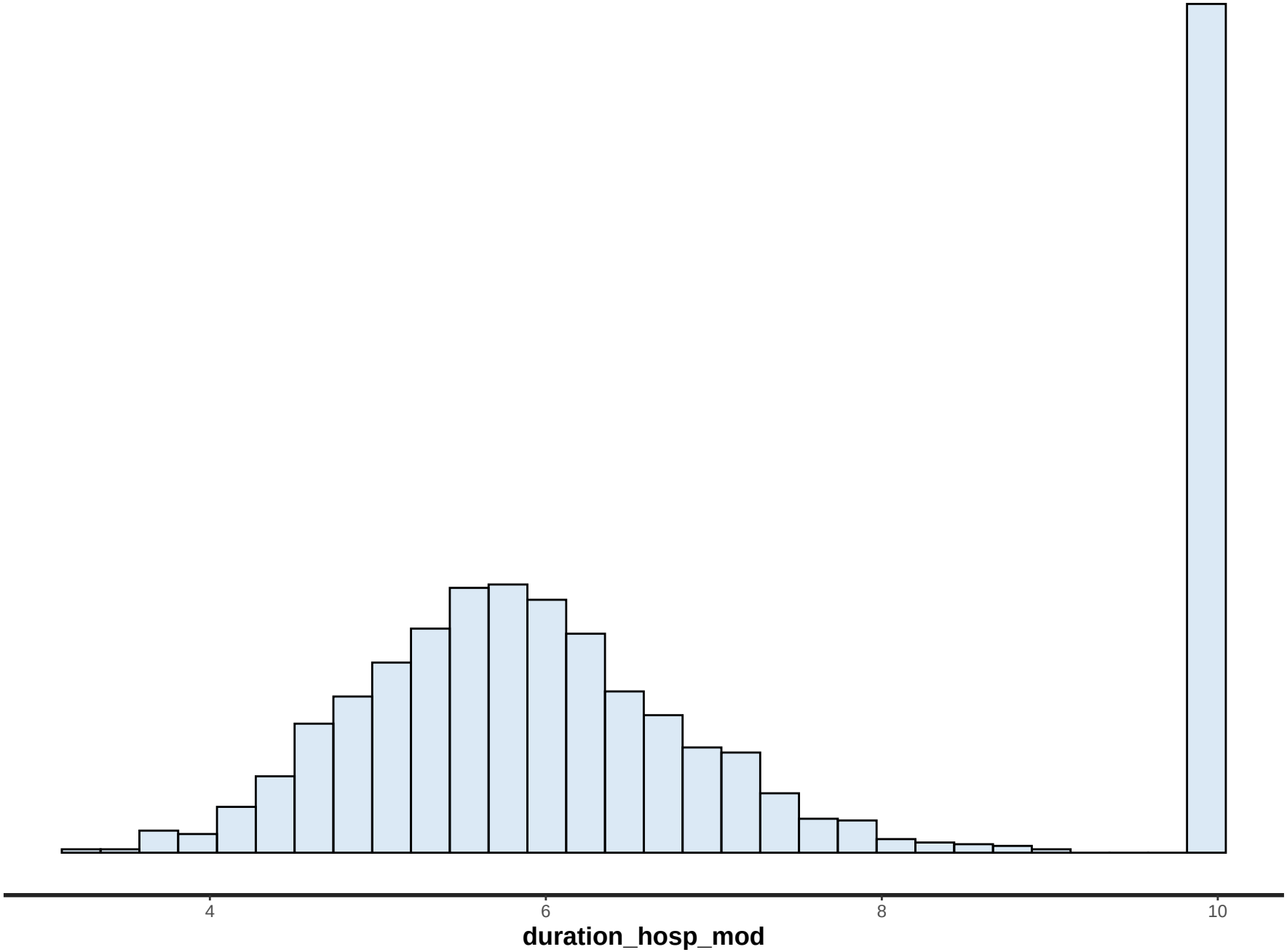


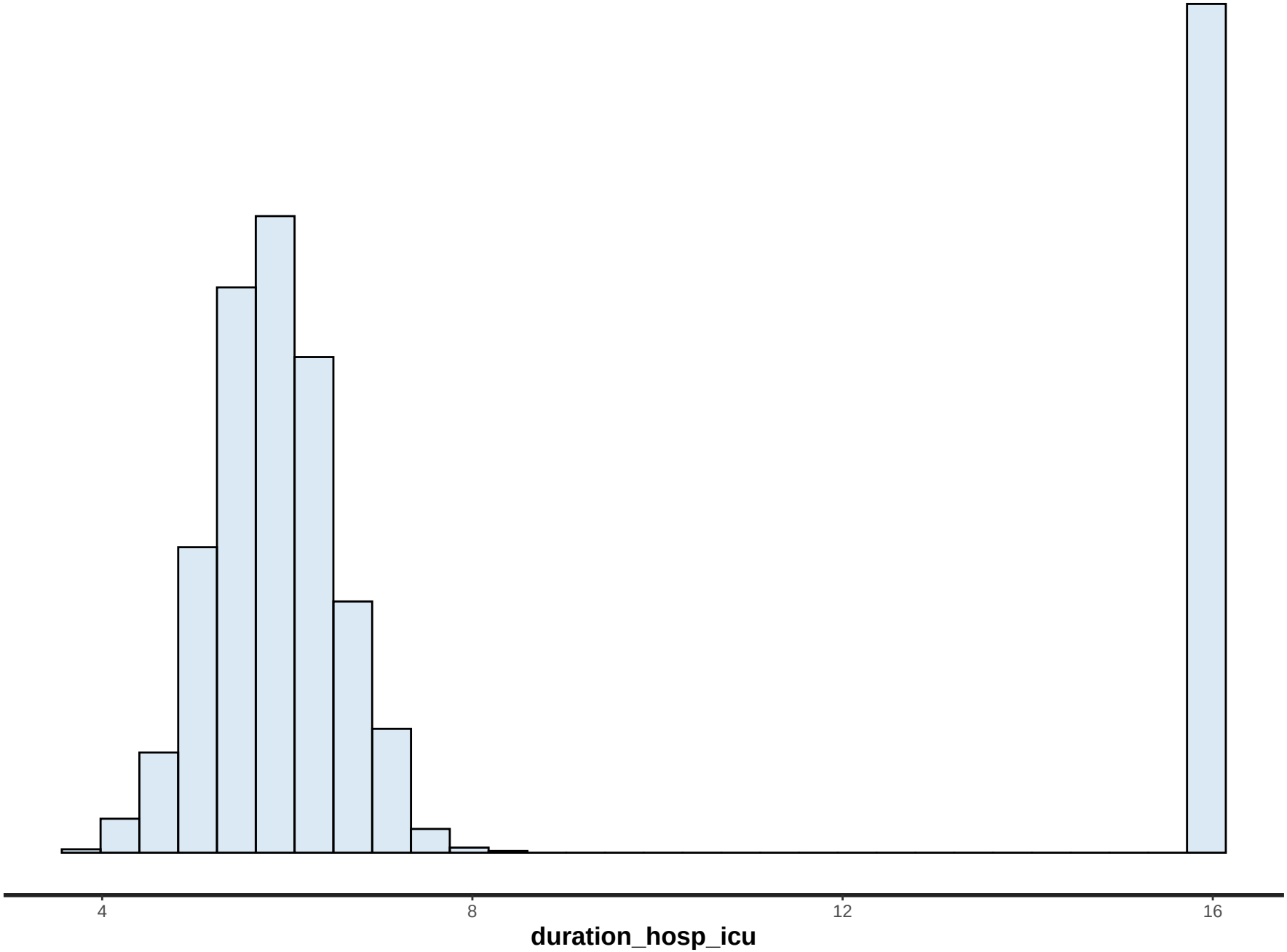

1.0
1.5
2.0
2.5
3.0
r0

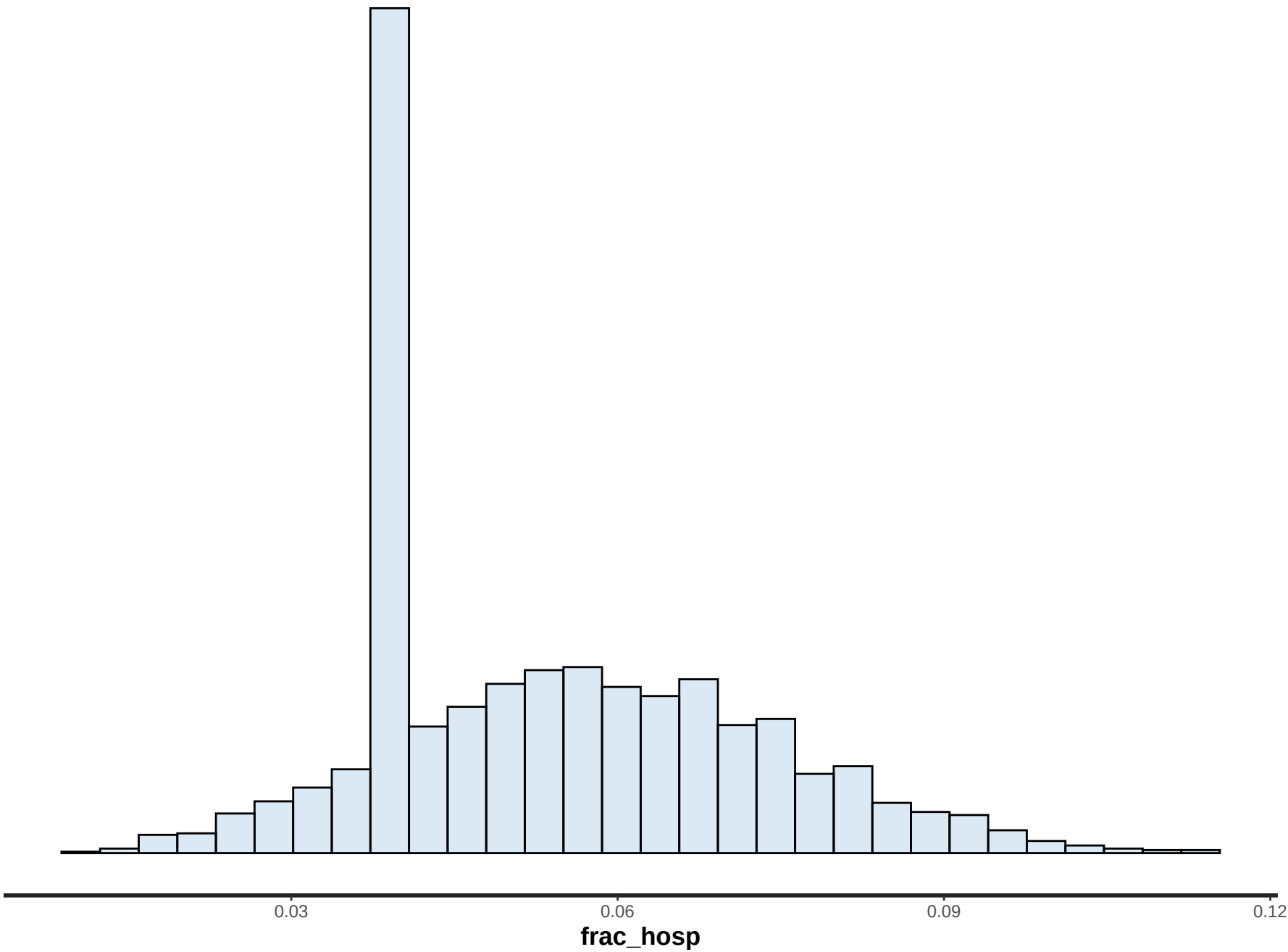

1
2
3
4
5
6
duration_latent

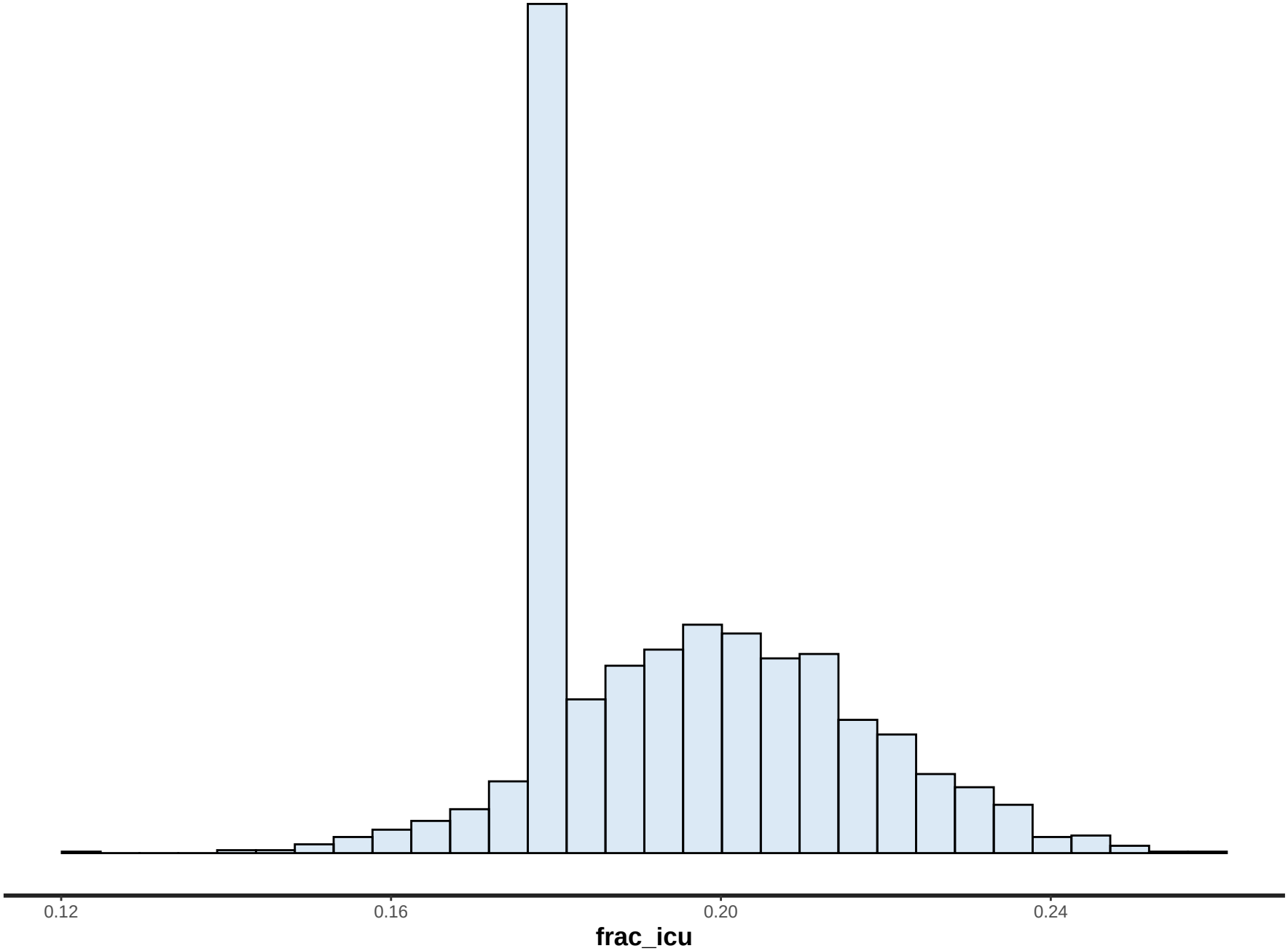

2
4
6
8
duration_rec_mild

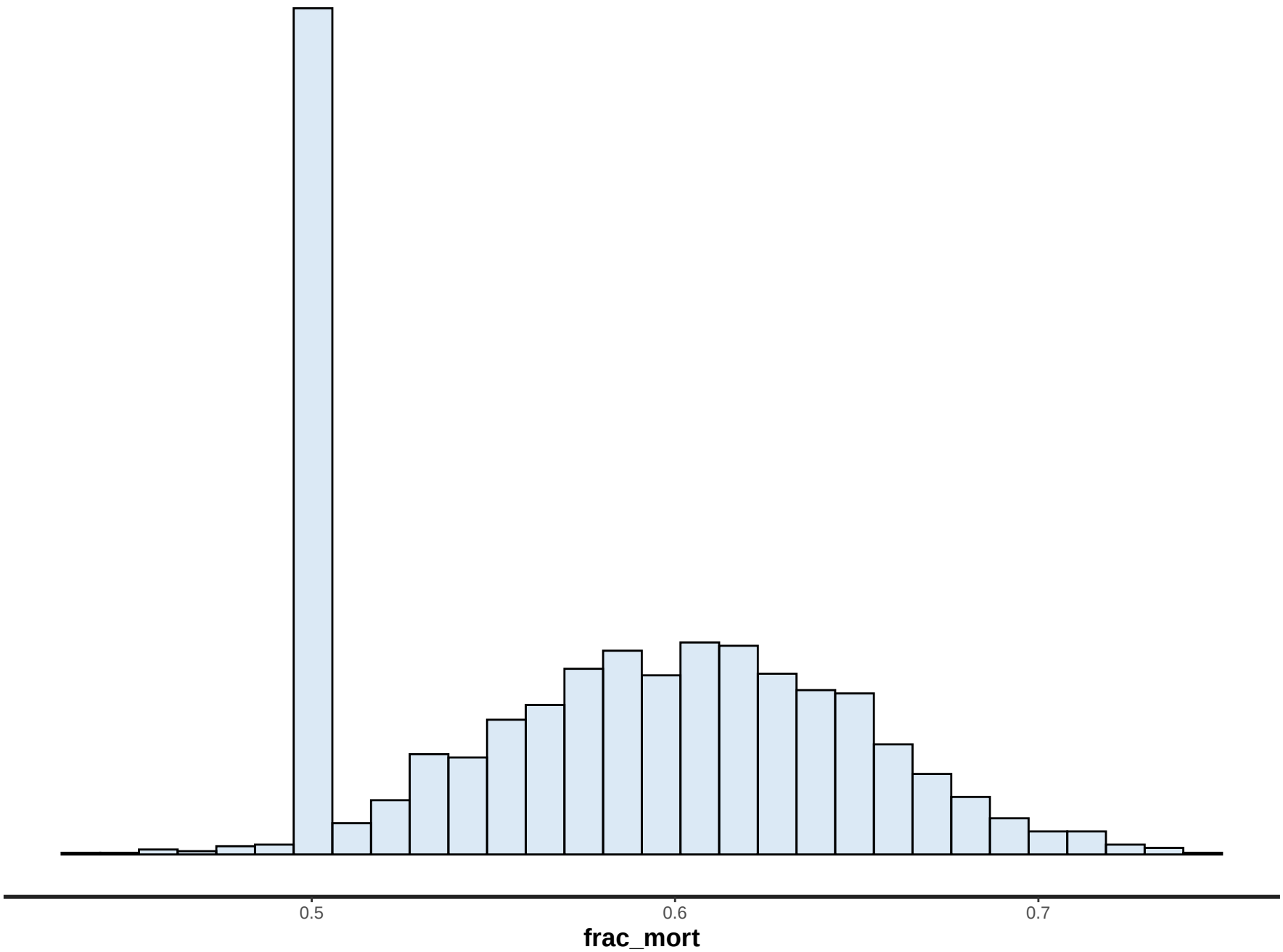

5
10
duration_pre_hosp

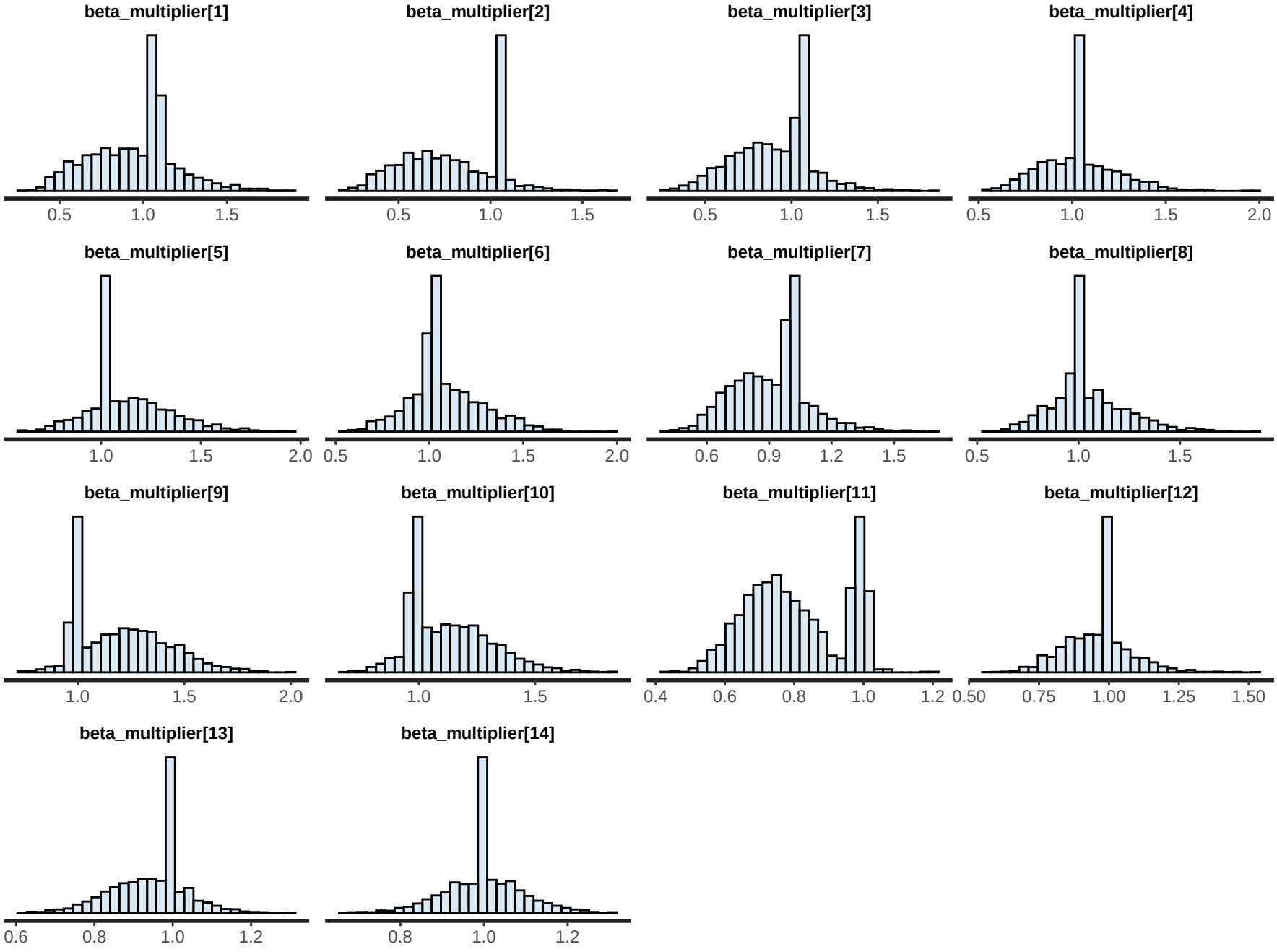

4
6
8
10
duration_hosp_mod


4
8
12
16
duration_hosp_icu


0.03
0.06
0.09
0.12
frac_hosp


0.12
0.16
0.20
0.24
frac_icu


0.5
0.6
0.7
frac_mort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beta_multiplier[2]
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1.0
1.5
beta_multiplier[3]
0.5
1.0
1.5
beta_multiplier[4]
0.5
1.0
1.5
2.0
beta_multiplier[5]
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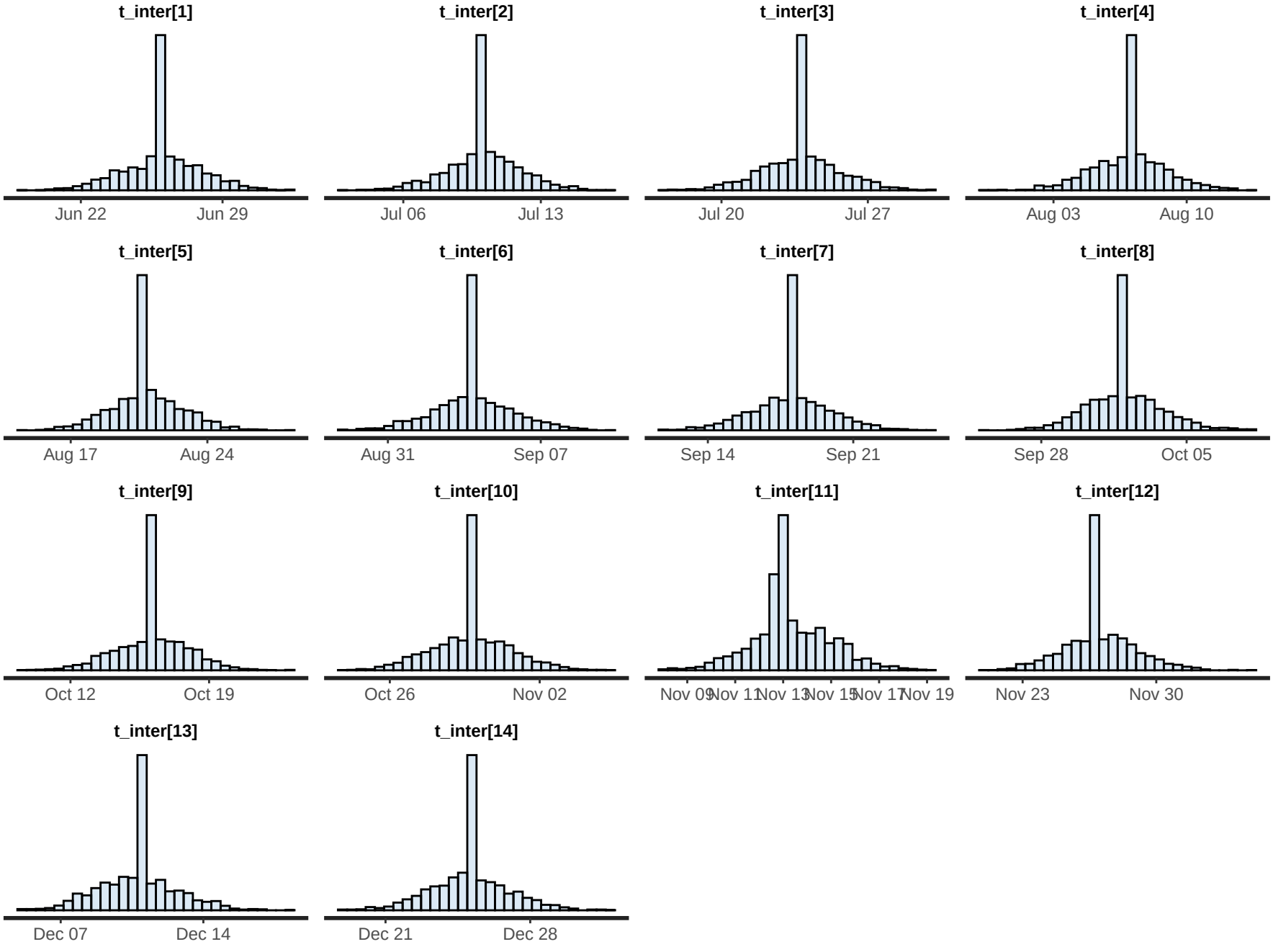
1.5
2.0
beta_multiplier[6]
0.5
1.0
1.5
2.0
beta_multiplier[7]
0.6
0.9
1.2
1.5
beta_multiplier[8]
0.5
1.0
1.5
beta_multiplier[9]
1.0
1.5
2.0
beta_multiplier[10]
1.0
1.5
beta_multiplier[11]
0.4
0.6
0.8
1.0
1.2
beta_multiplier[12]
0.50
0.75
1.00
1.25
1.50
beta_multiplier[13]
0.6
0.8
1.0
1.2
beta_multiplier[14]
0.8
1.0
1.2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Jun 29
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Jul 13
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Jul 20
Jul 27
t_inter[4]
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Aug 17
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Sep 14
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Sep 28
Oct 05
t_inter[9]
Oct 12
Oct 19
t_inter[10]
Oct 26
Nov 02
t_inter[11]
Nov 09
Nov 11
Nov 13
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Nov 17
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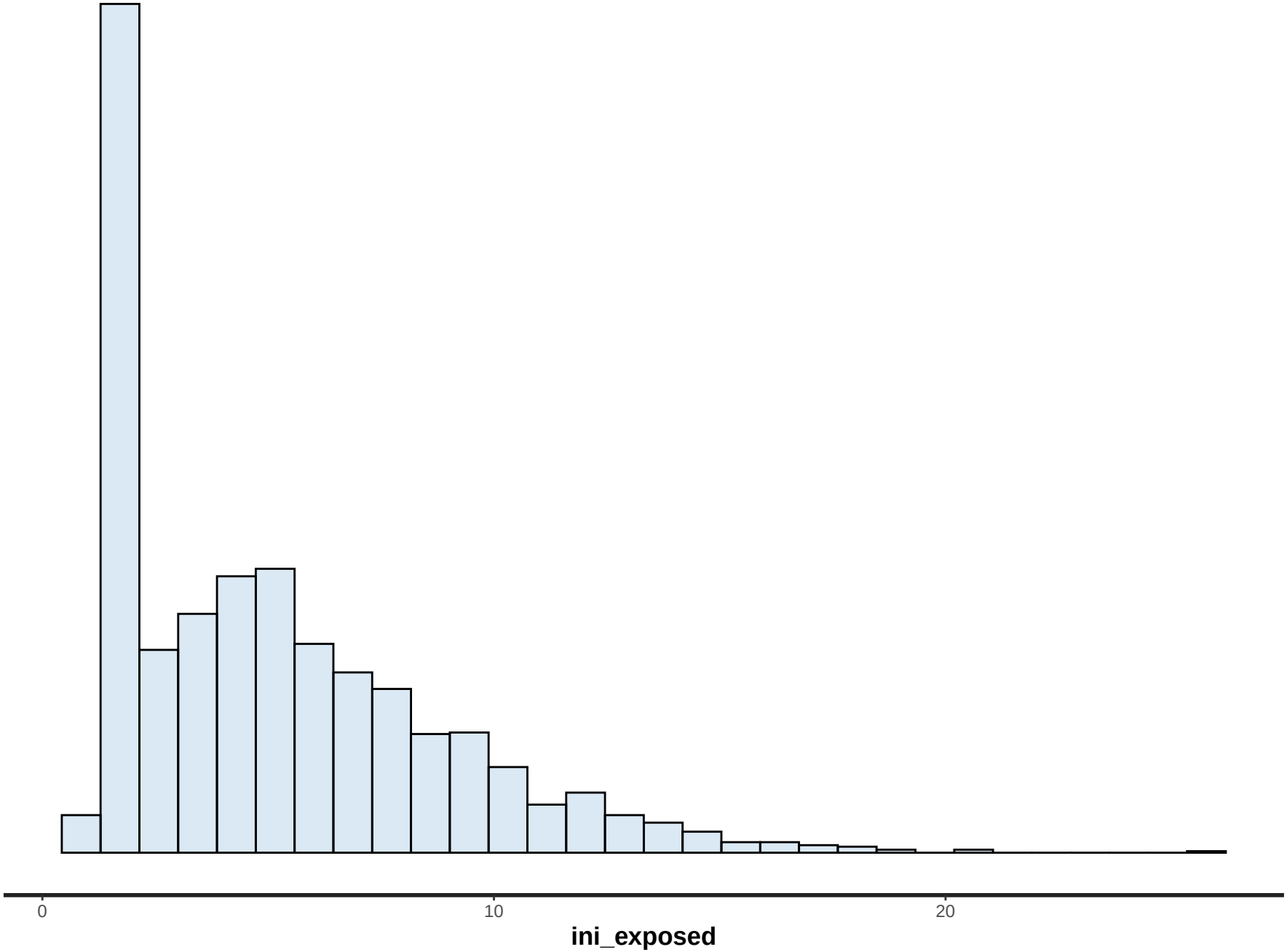
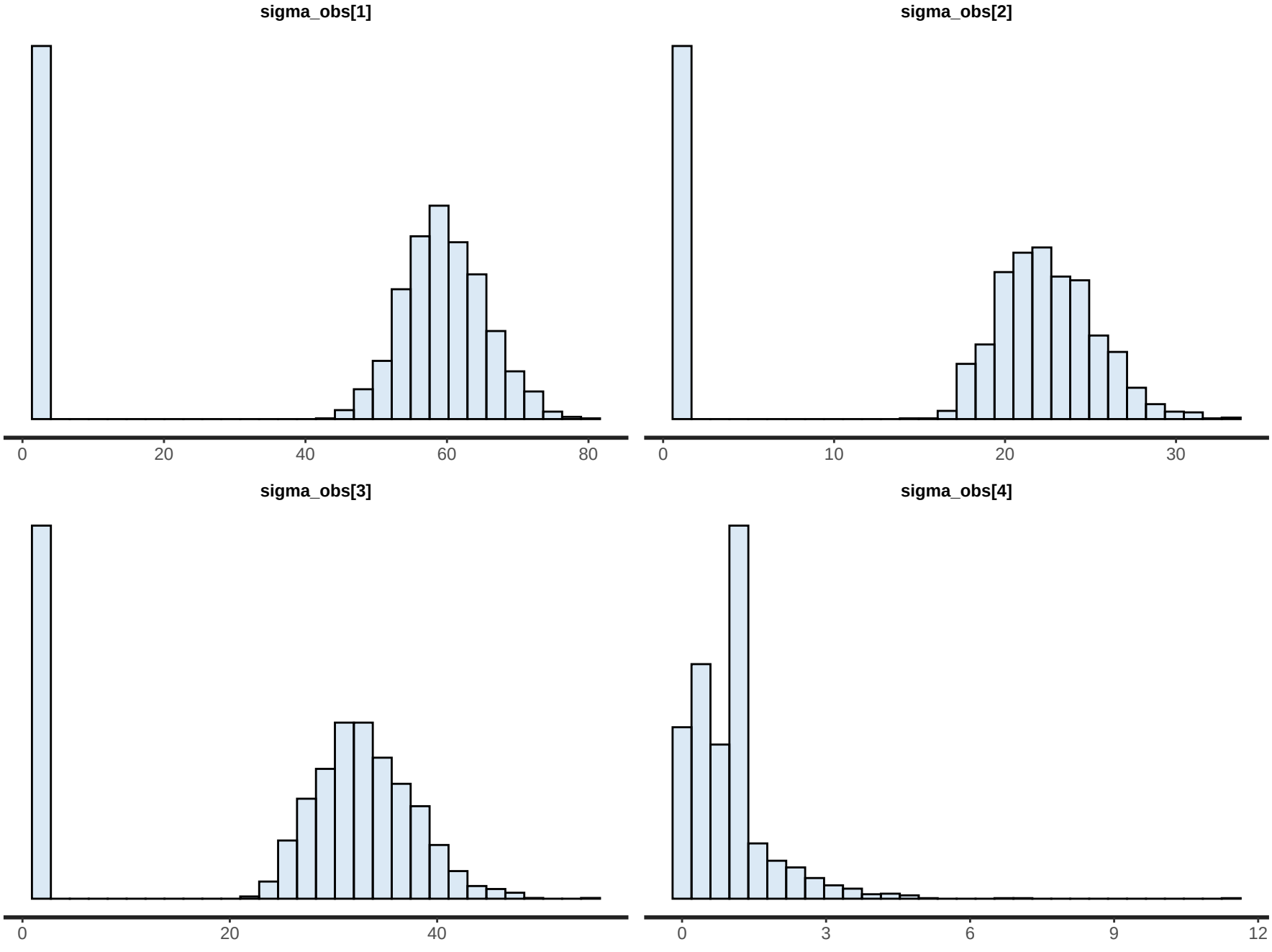
Nov 23
Nov 30
t_inter[13]
Dec 07
Dec 14
t_inter[14]
Dec 21
Dec 28


0
10
20
ini_exposed


sigma_obs[1]
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20
40
60
80
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0
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20
30
sigma_obs[3]
0
20
40
sigma_obs[4]
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3
6
9
12