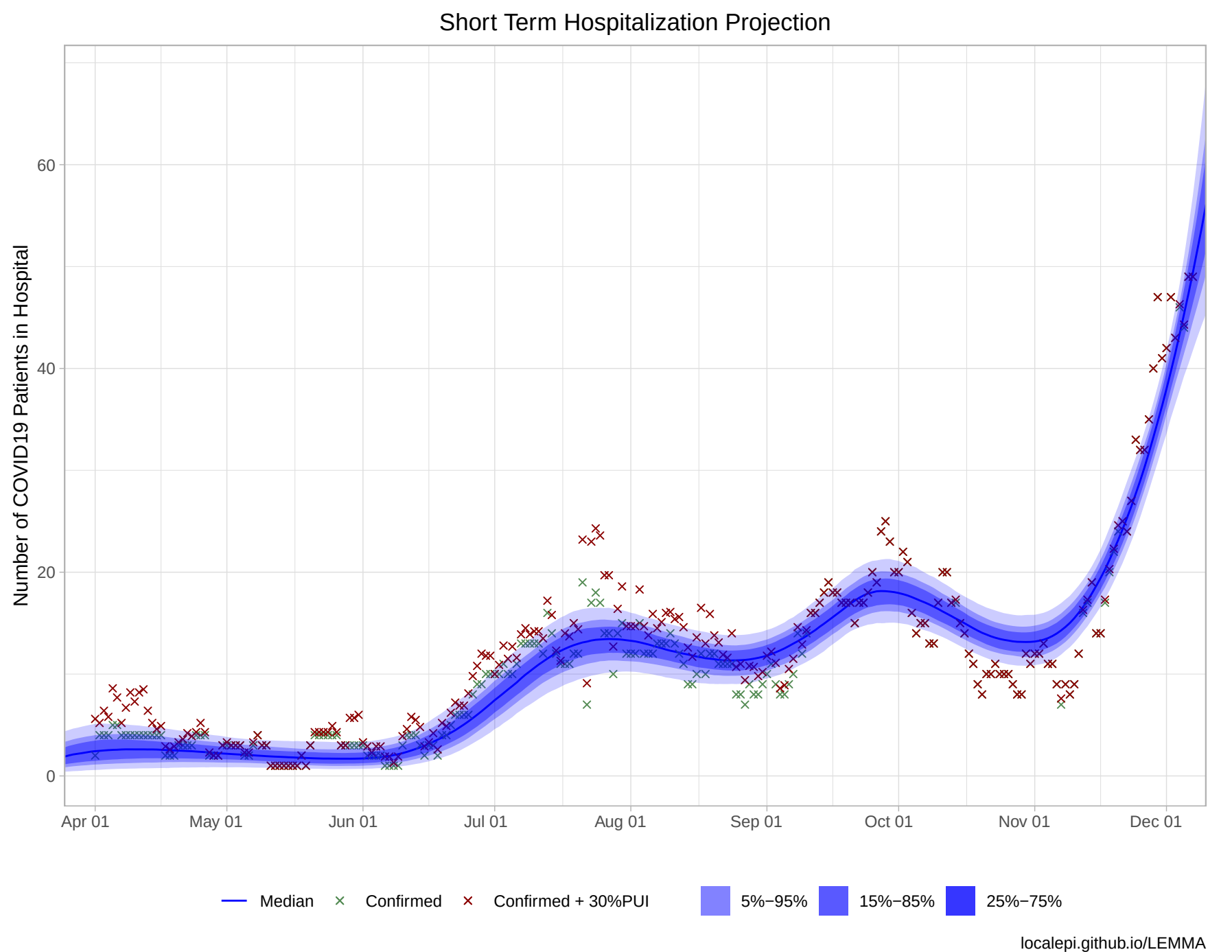
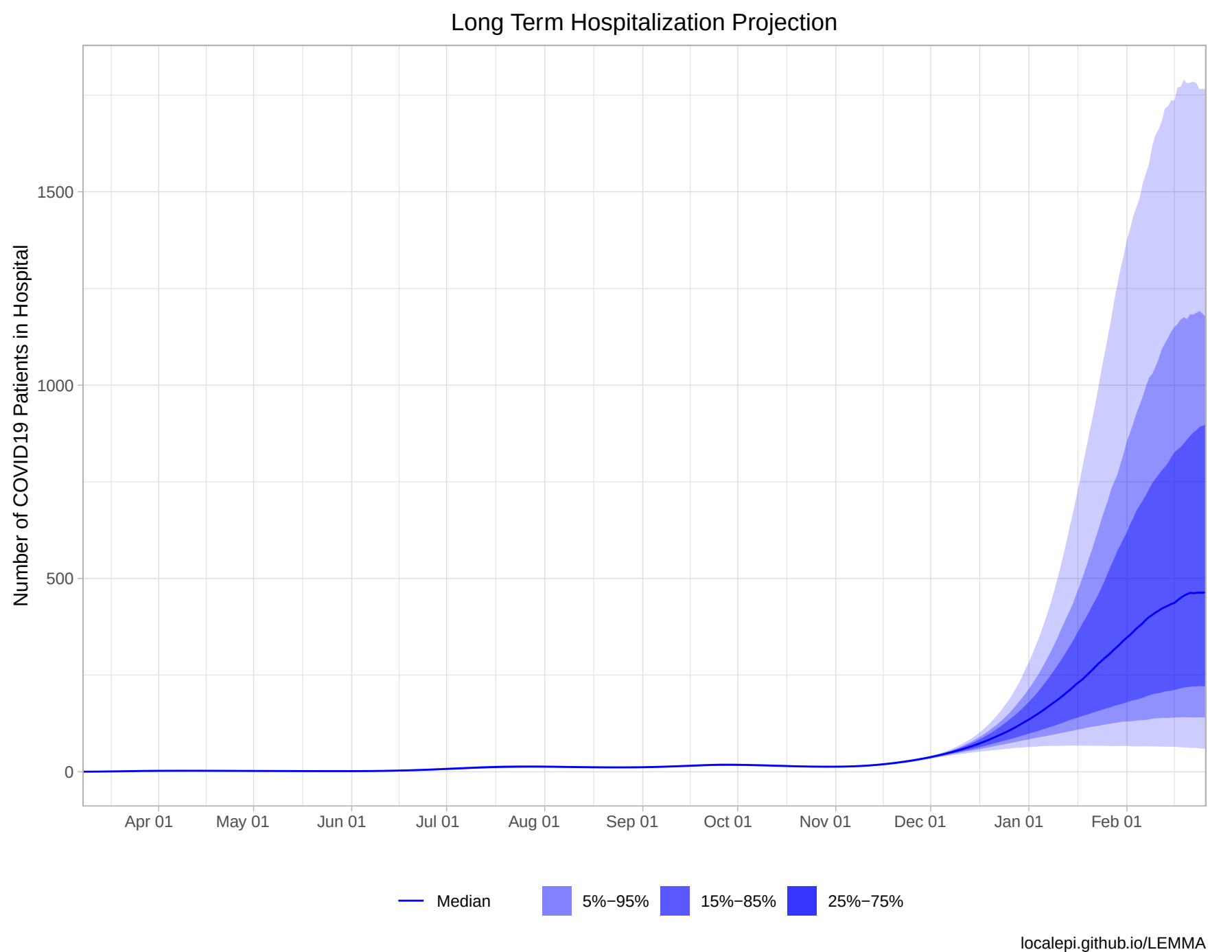
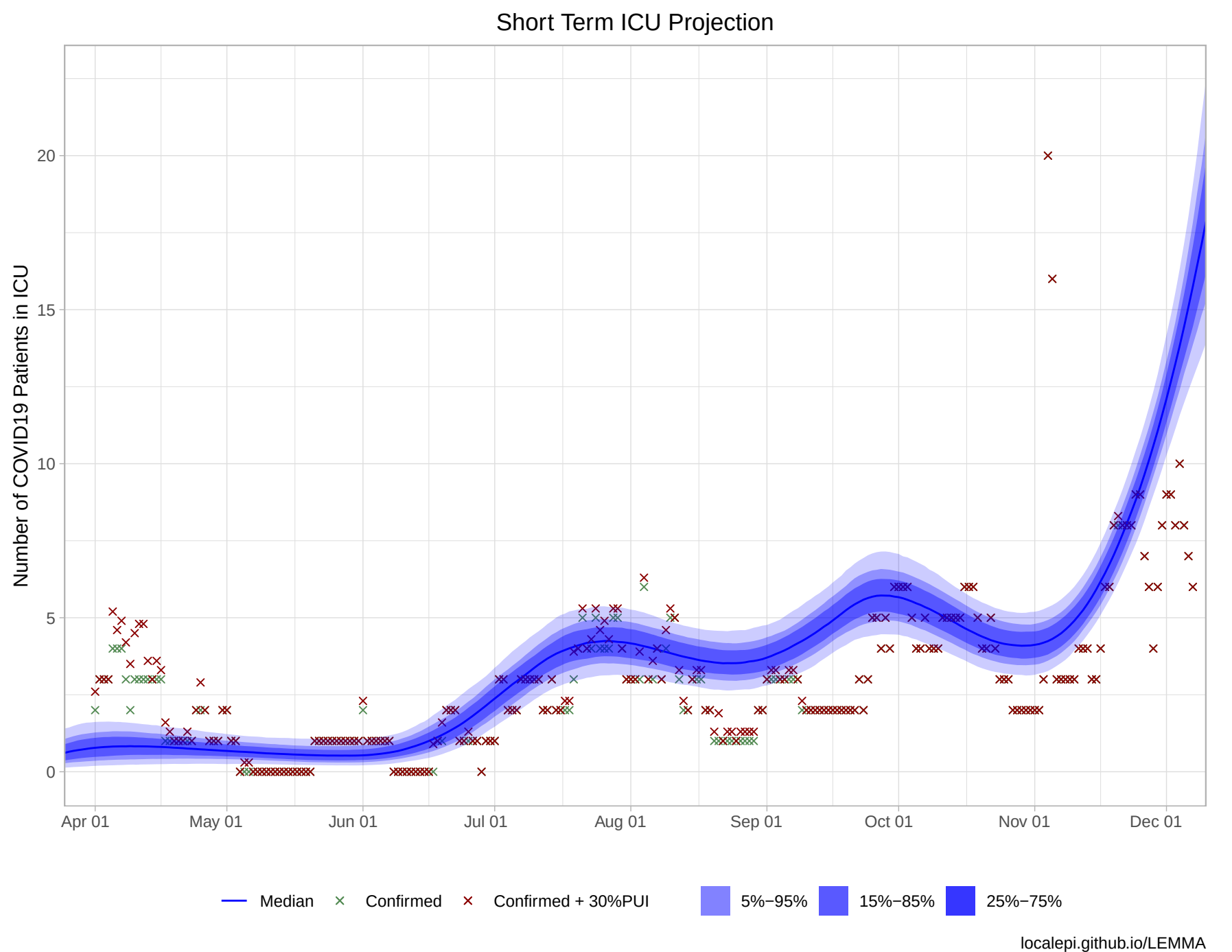
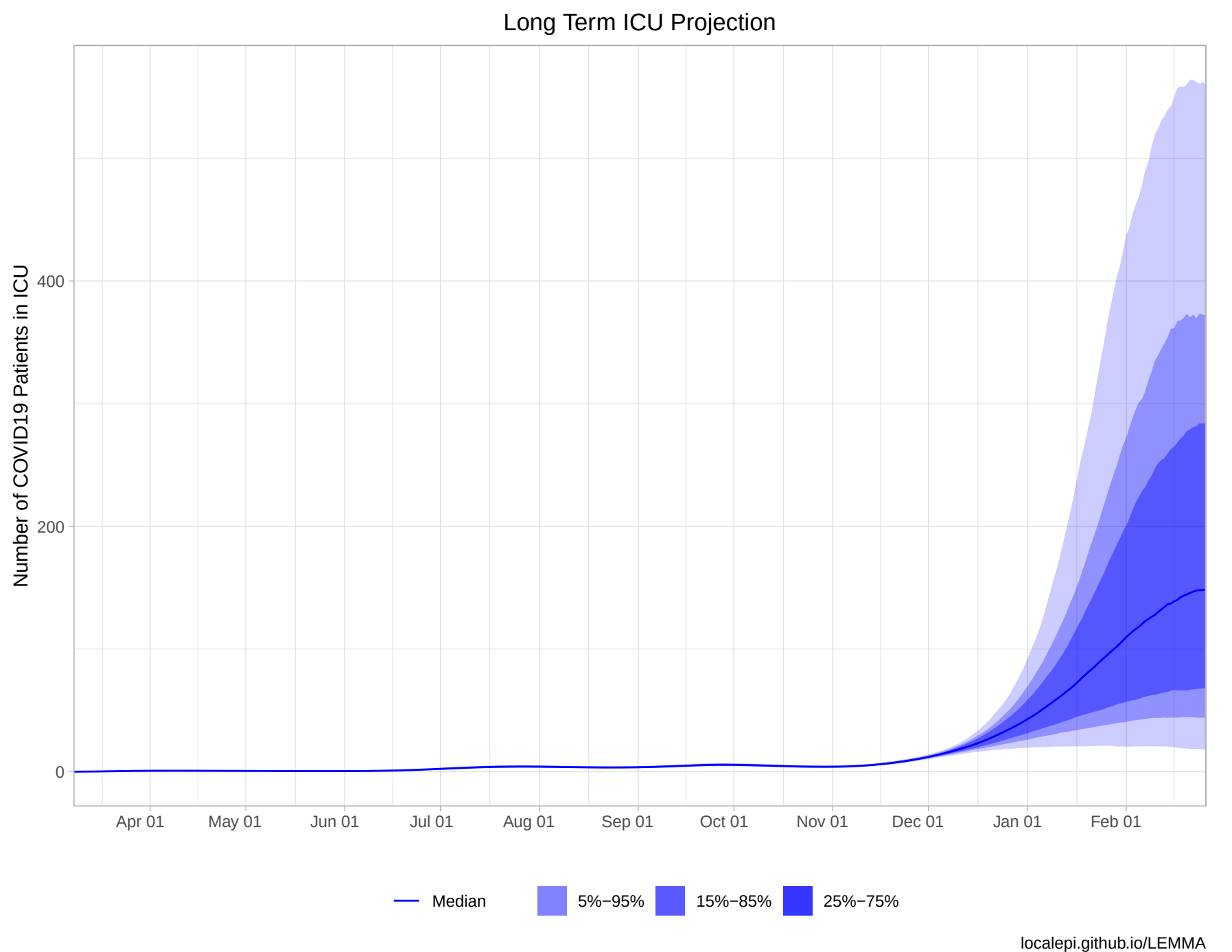
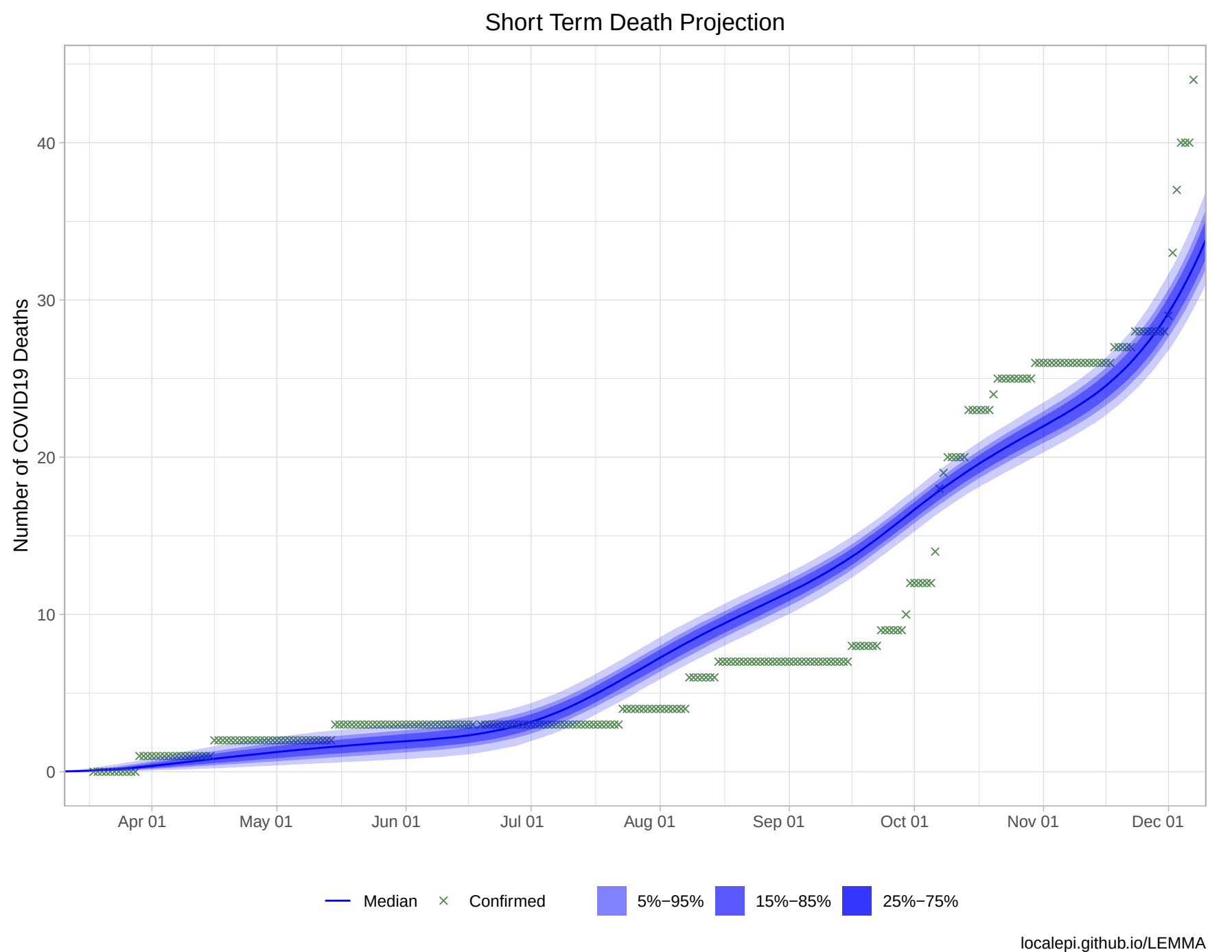
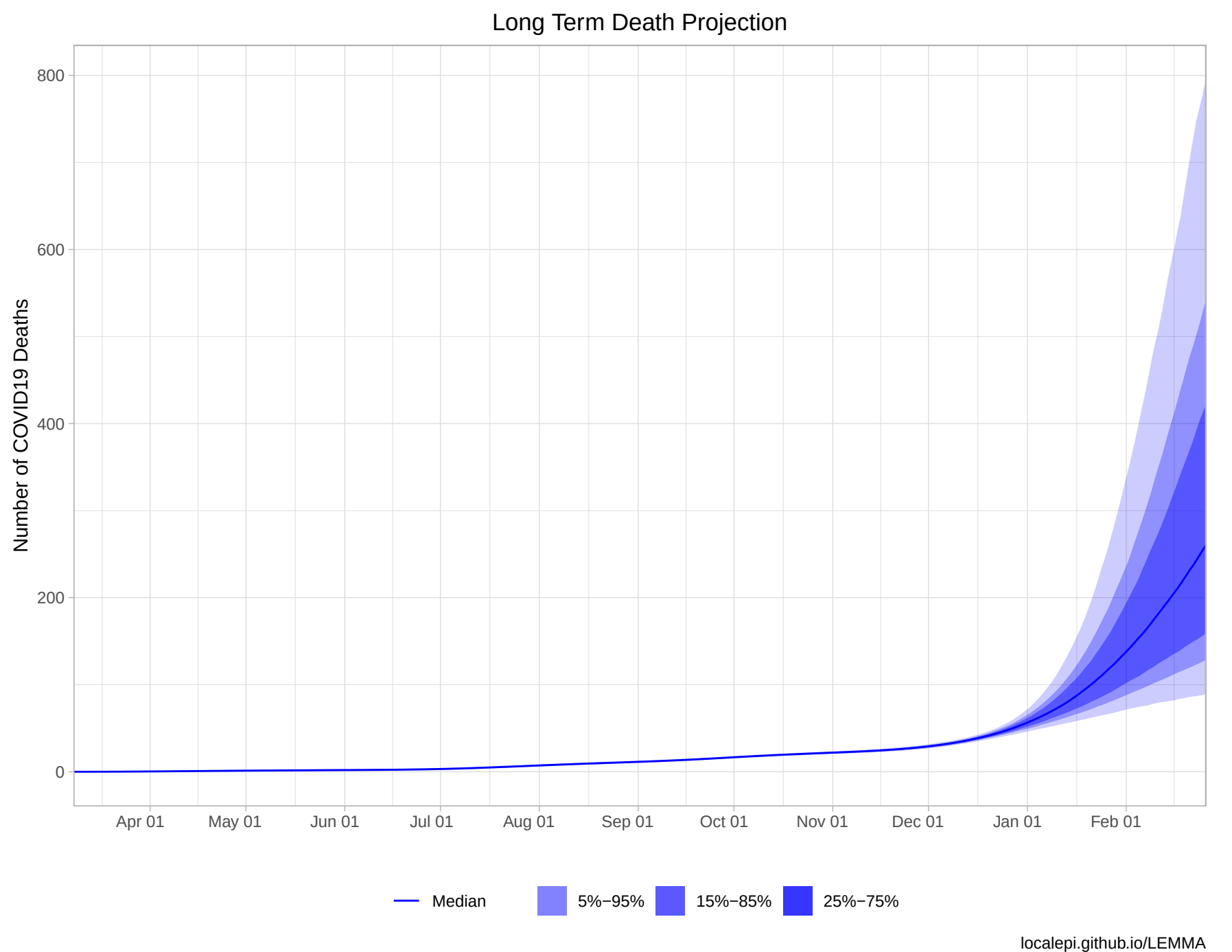

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
20
40
60
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

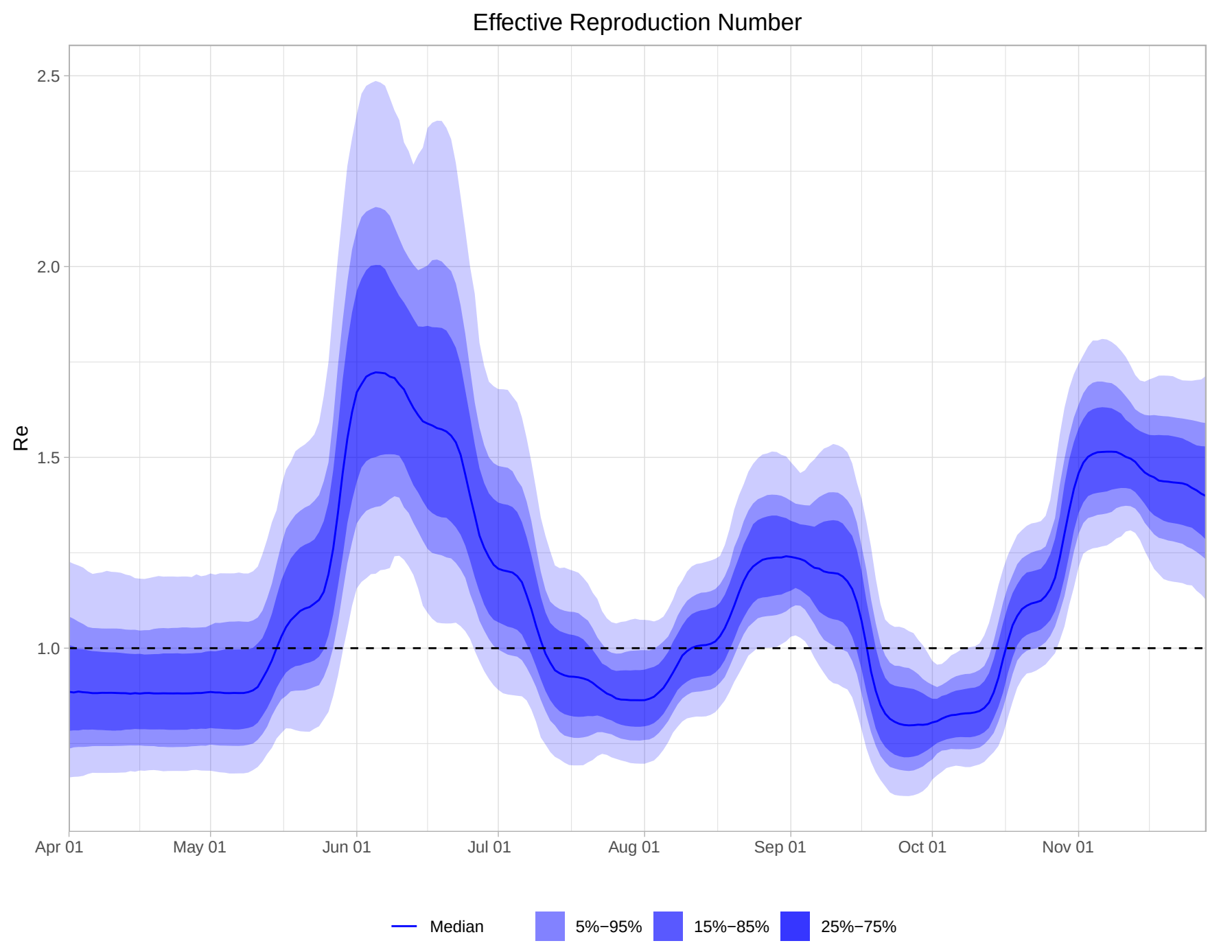

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
1500
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
0
5
10
15
20
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 ICU Projection
Number of COVID19 Patients in ICU
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
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

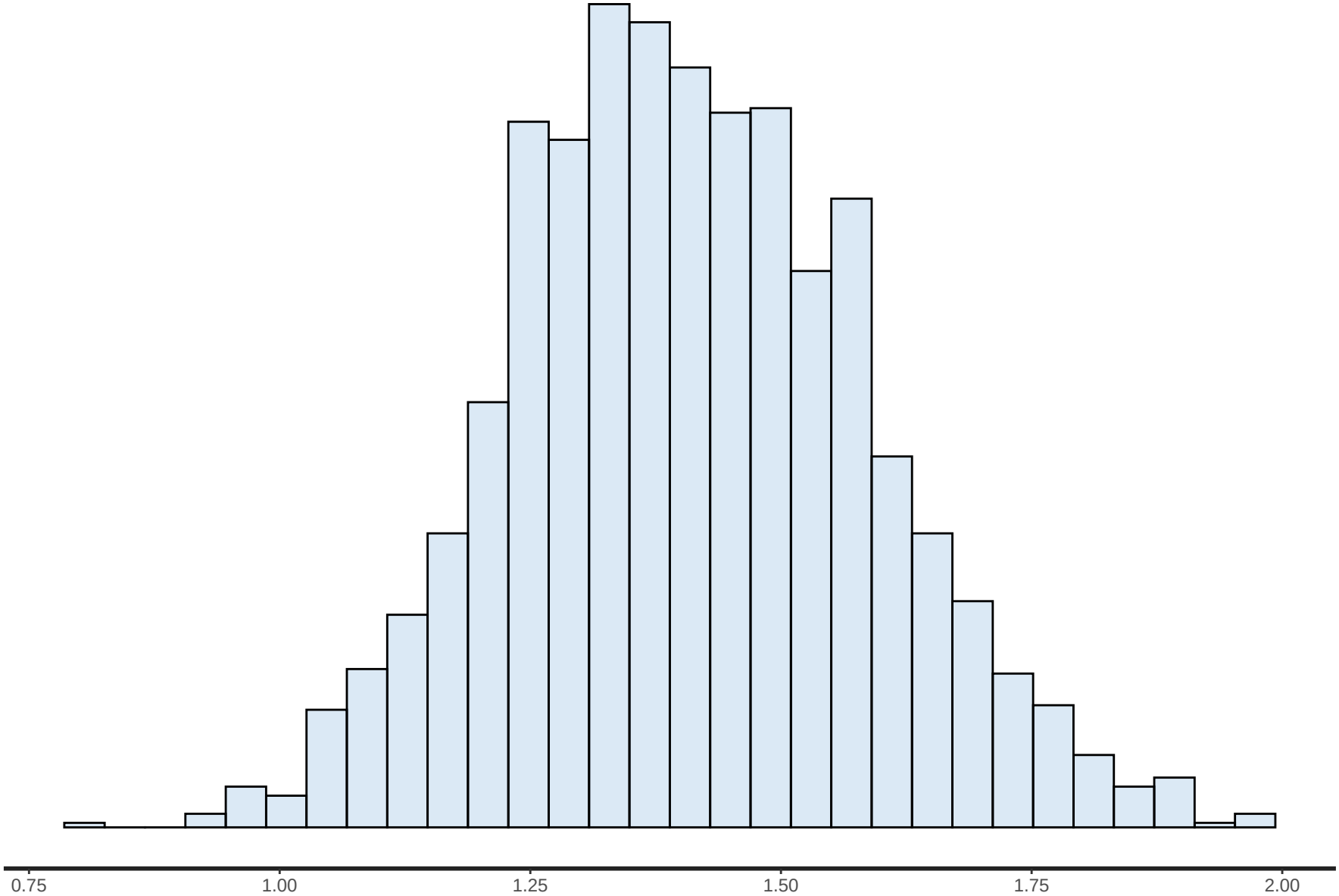

Short Term Death Projection
Number of COVID19 Deaths
0
10
20
30
40
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

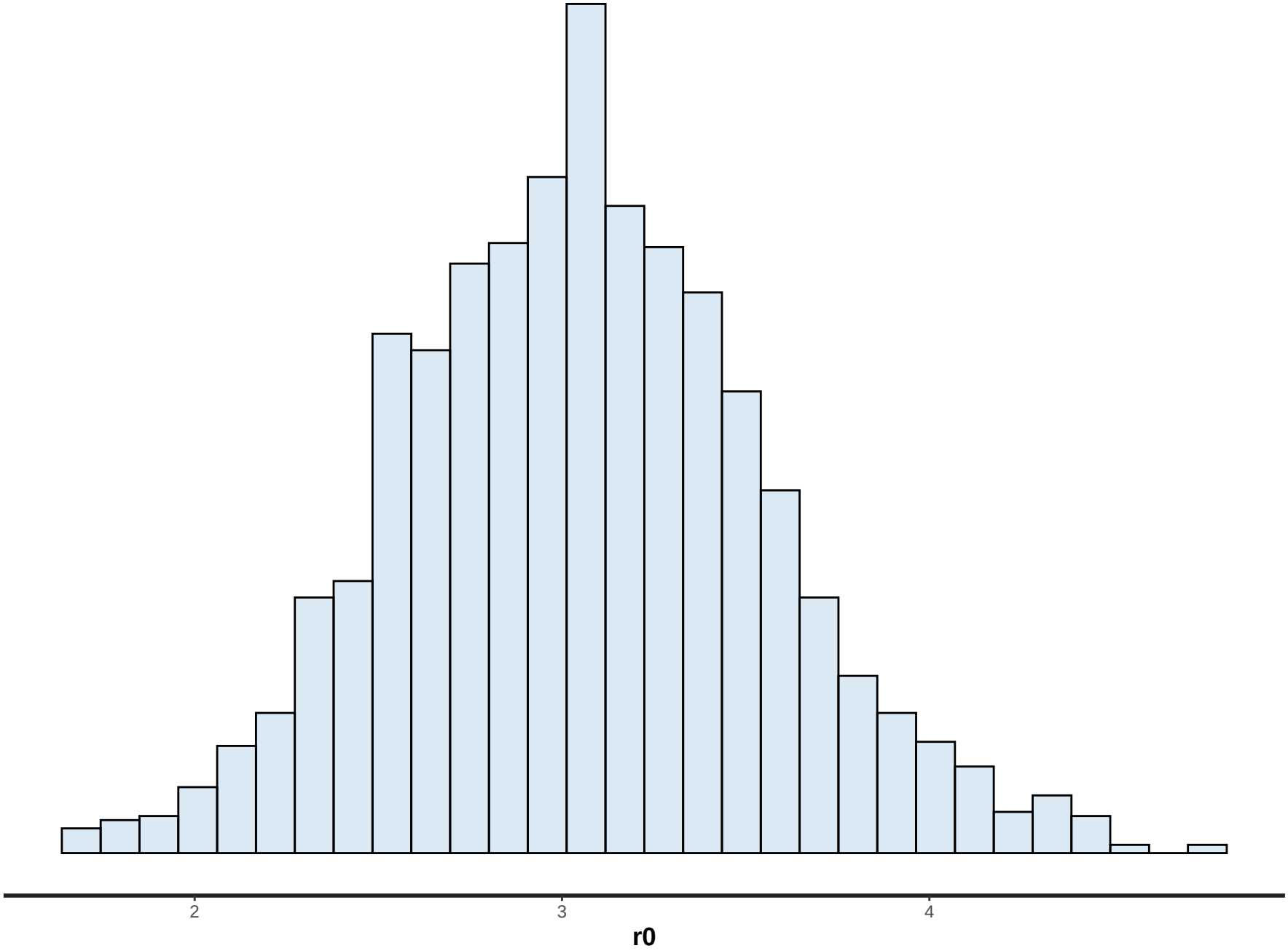

Long Term Death Projection
Number of COVID19 Deaths
800
600
400
200
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

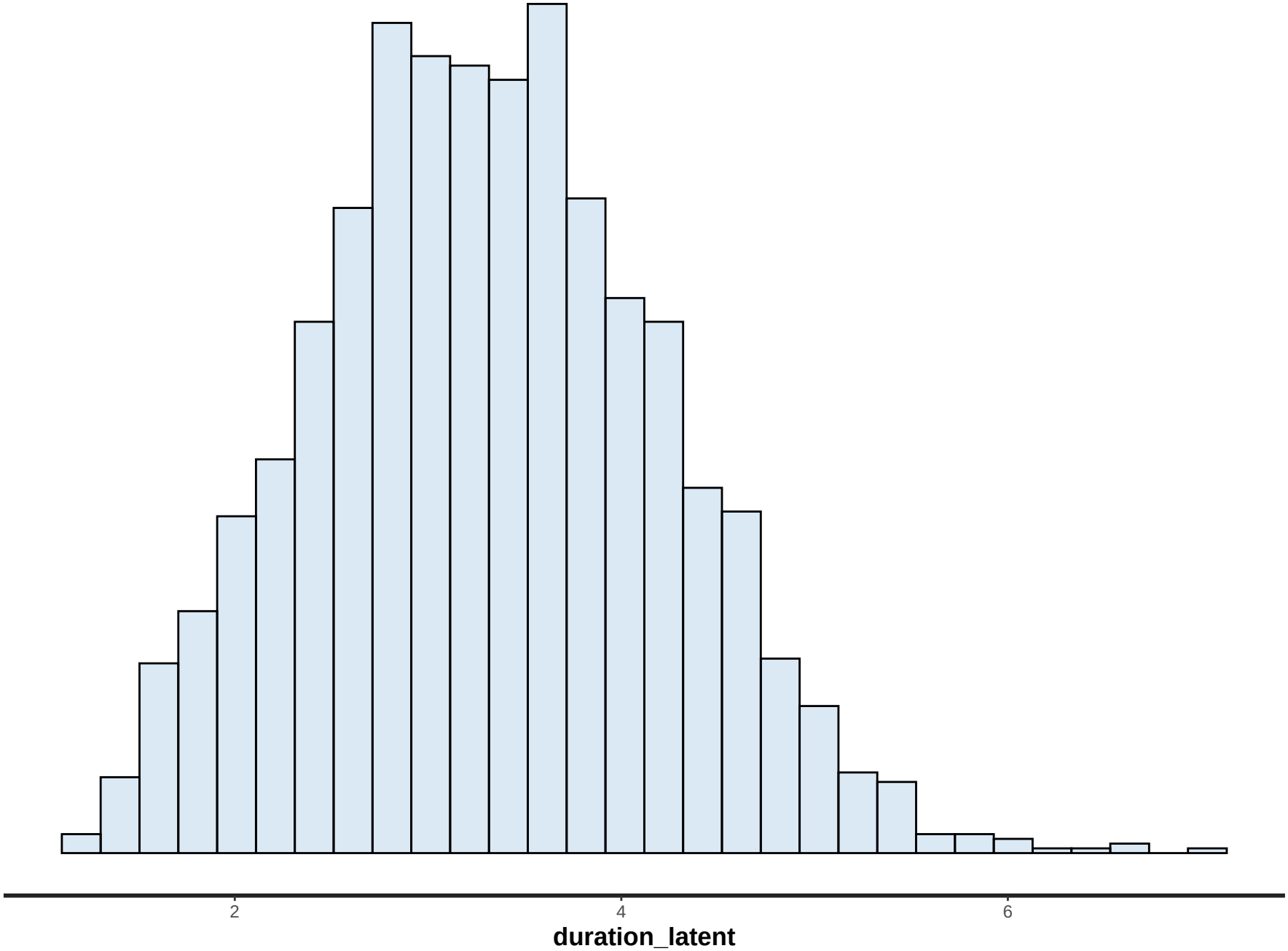

Effective Reproduction Number
Re
2.5
2.0
1.5
1.0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

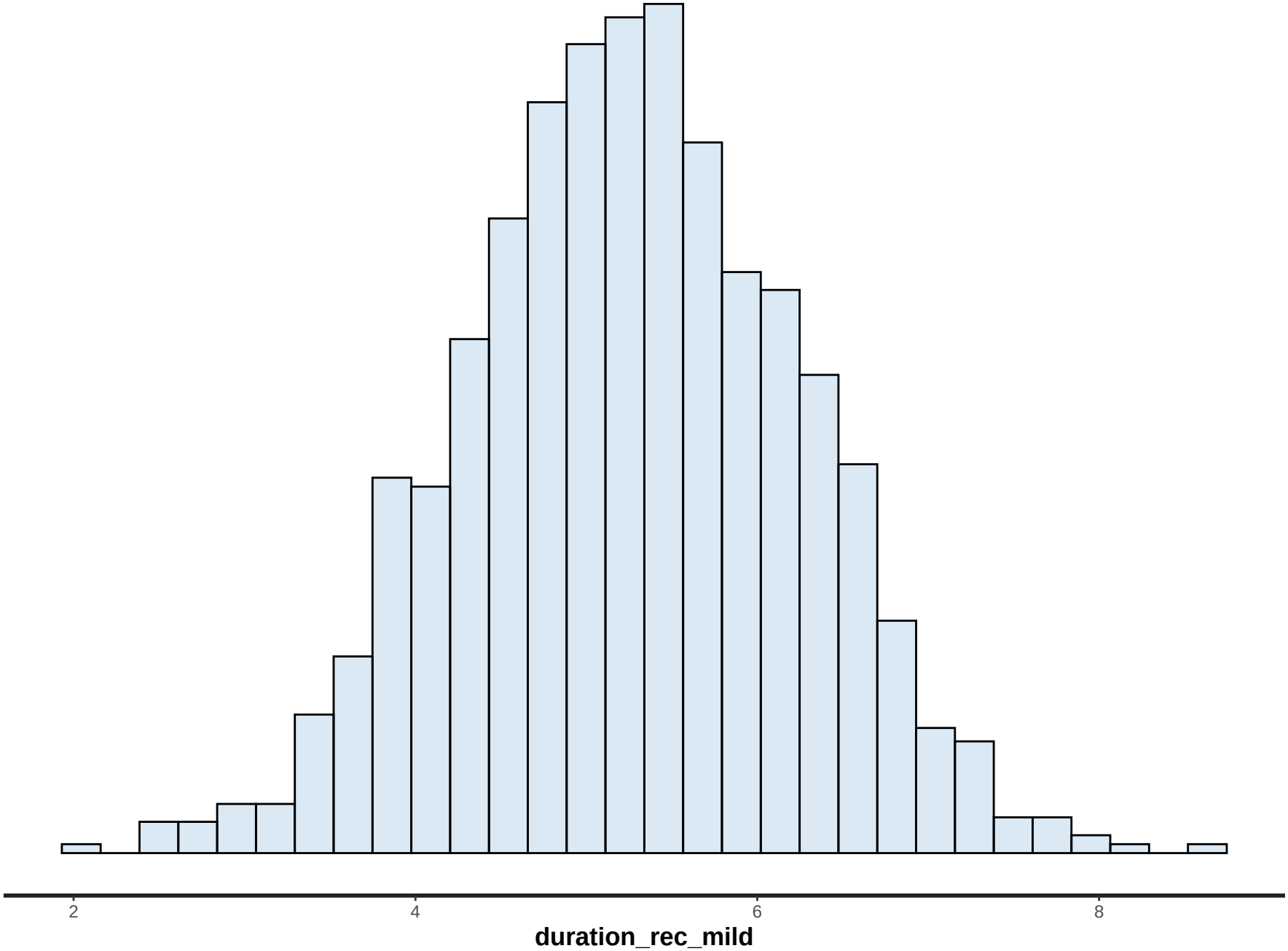
# Rt as of 2020−11−28

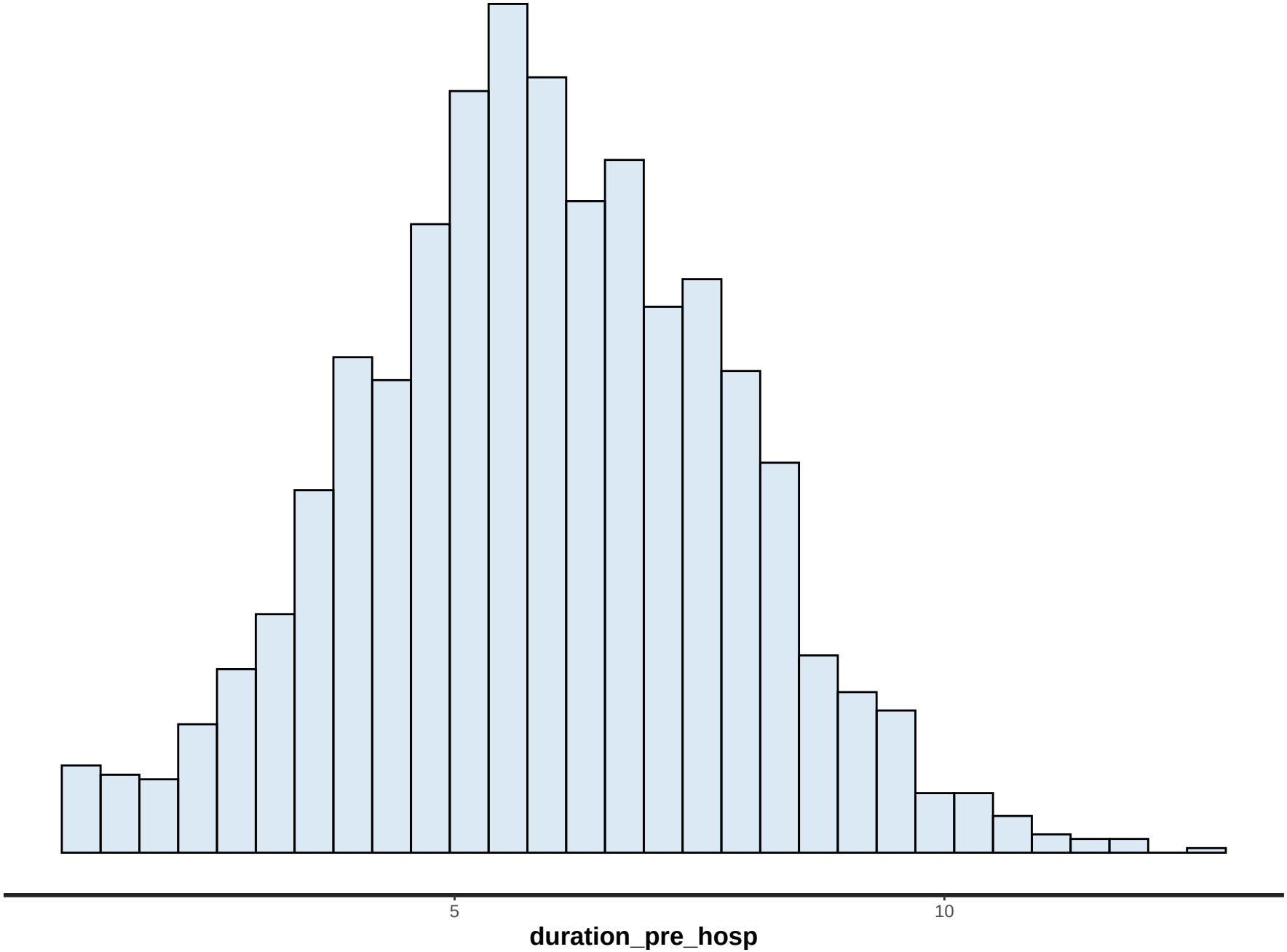
| 5% | 10% | 25% | 50% | 75% | 90% | 95% |
|---|---|---|---|---|---|---|
| 1.13 | 1.19 | 1.28 | 1.40 | 1.53 | 1.64 | 1.71 |

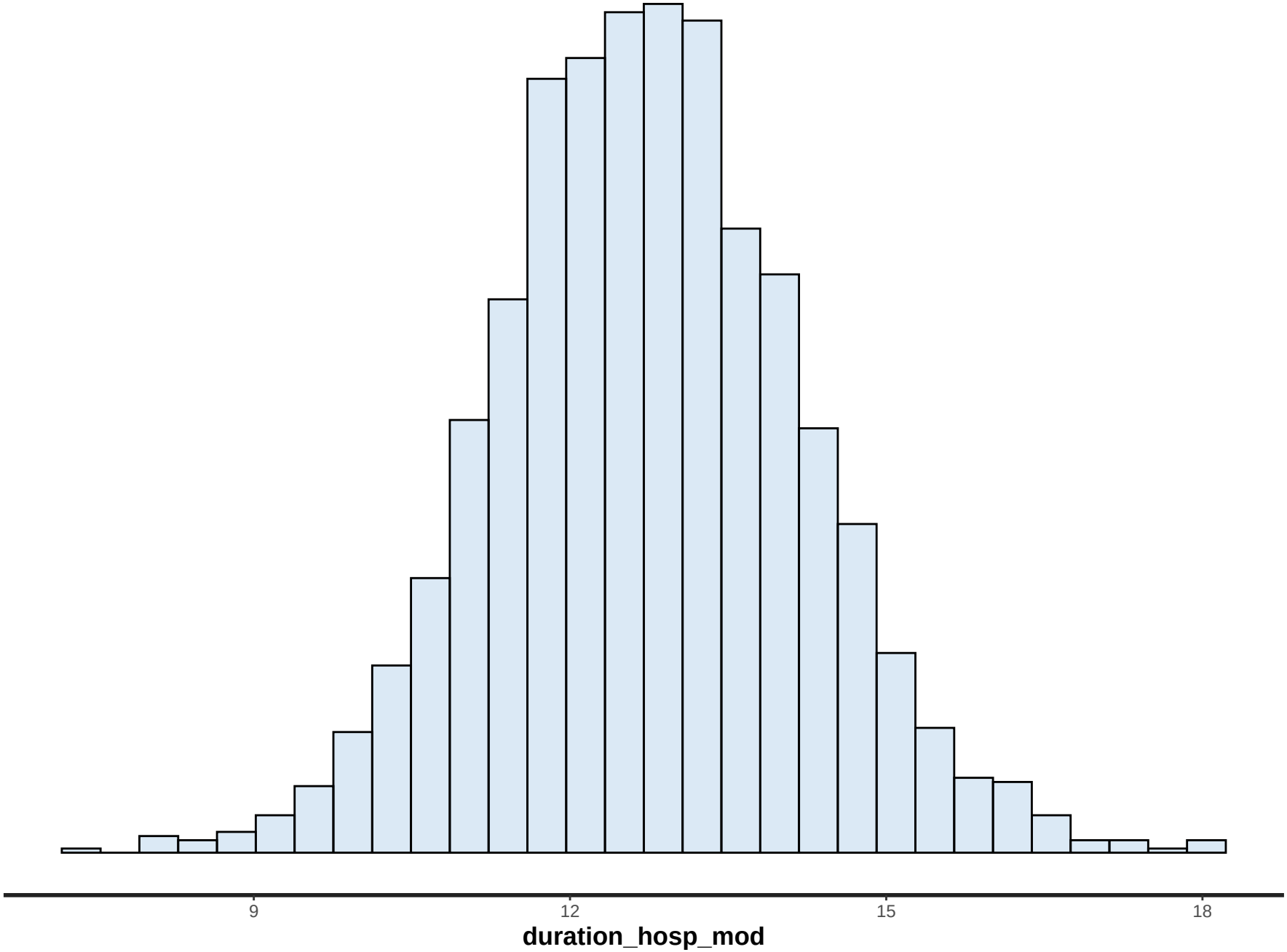


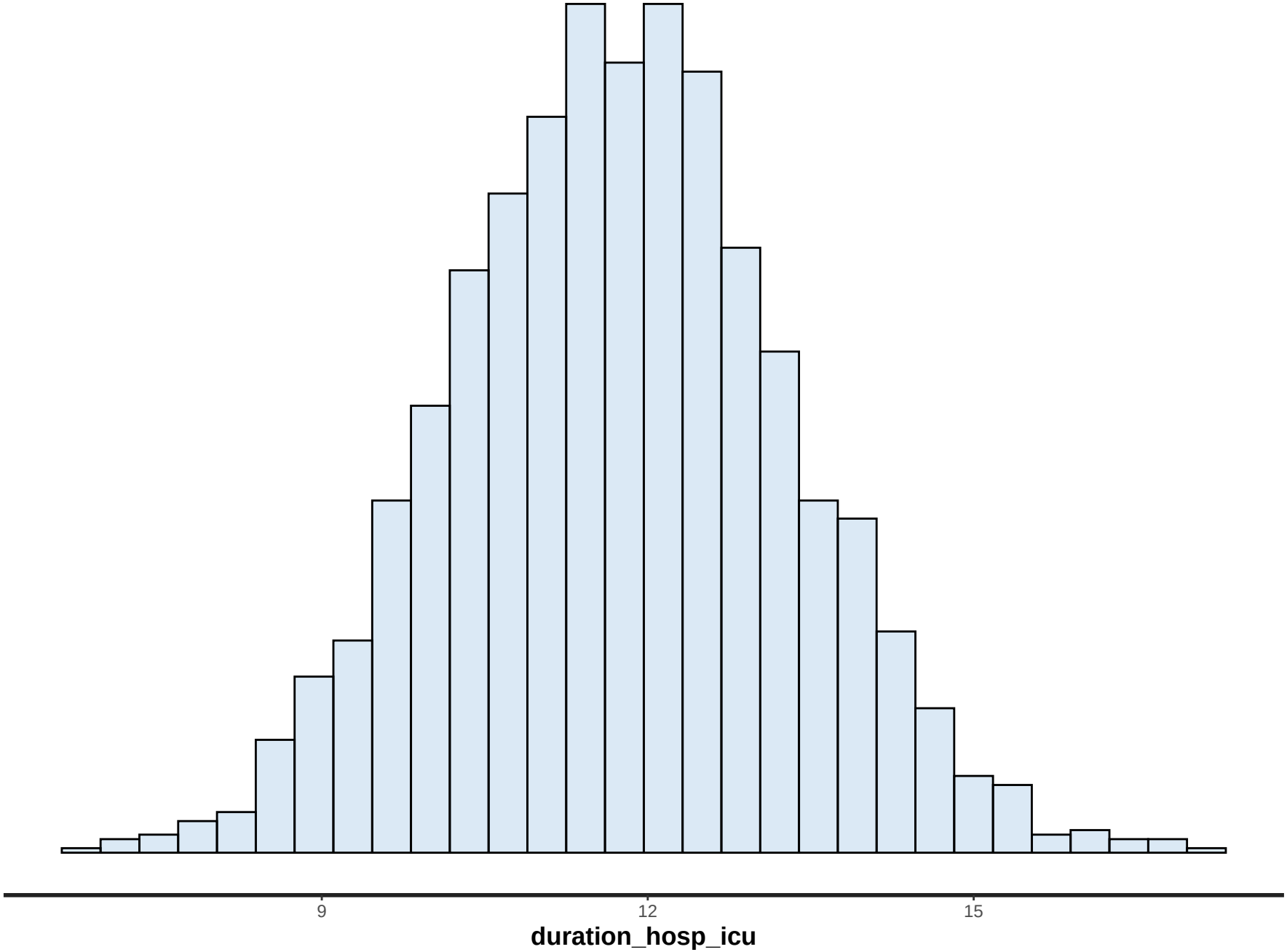

2
3
4
r0

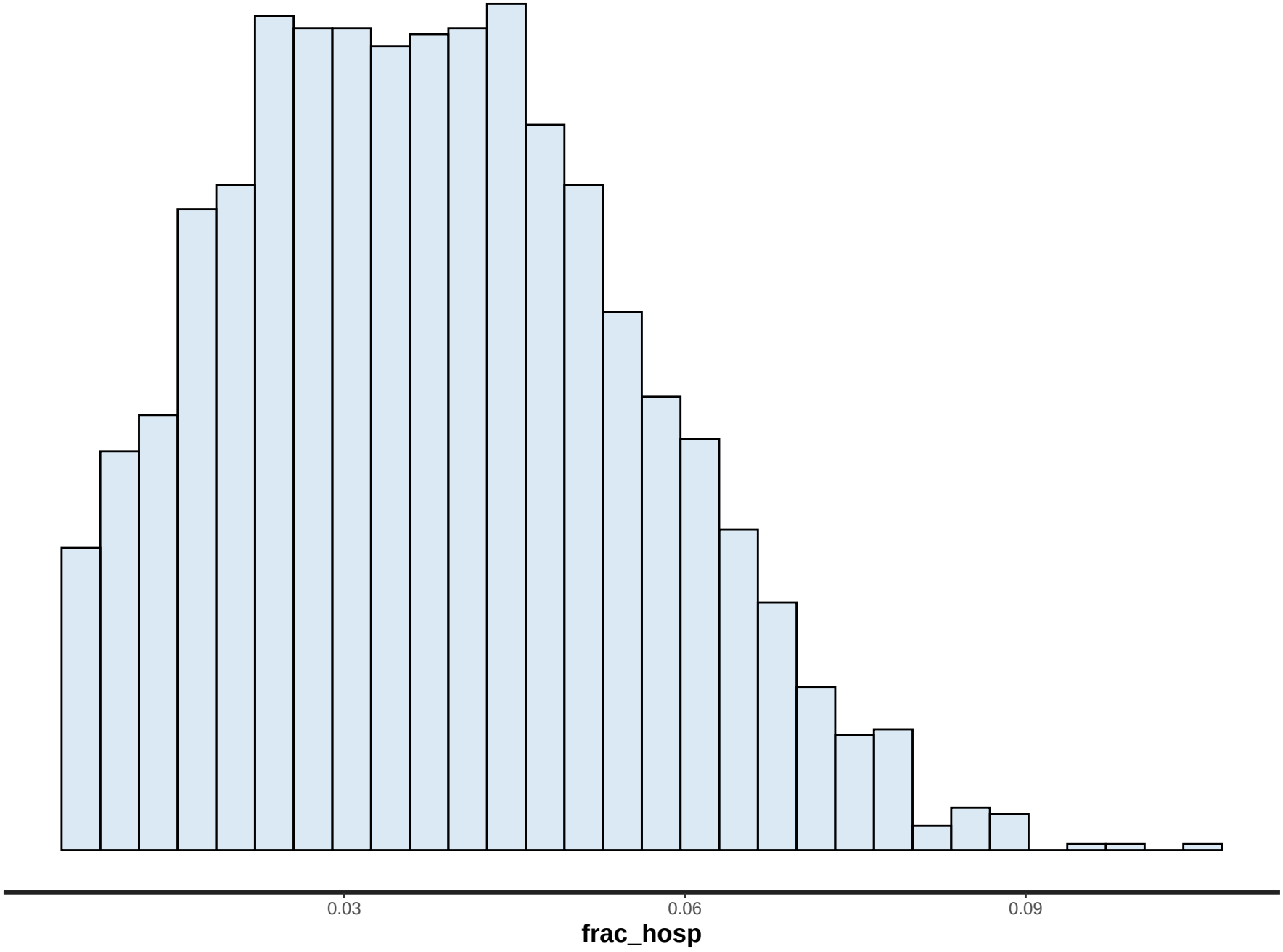

2
4
6
duration_latent

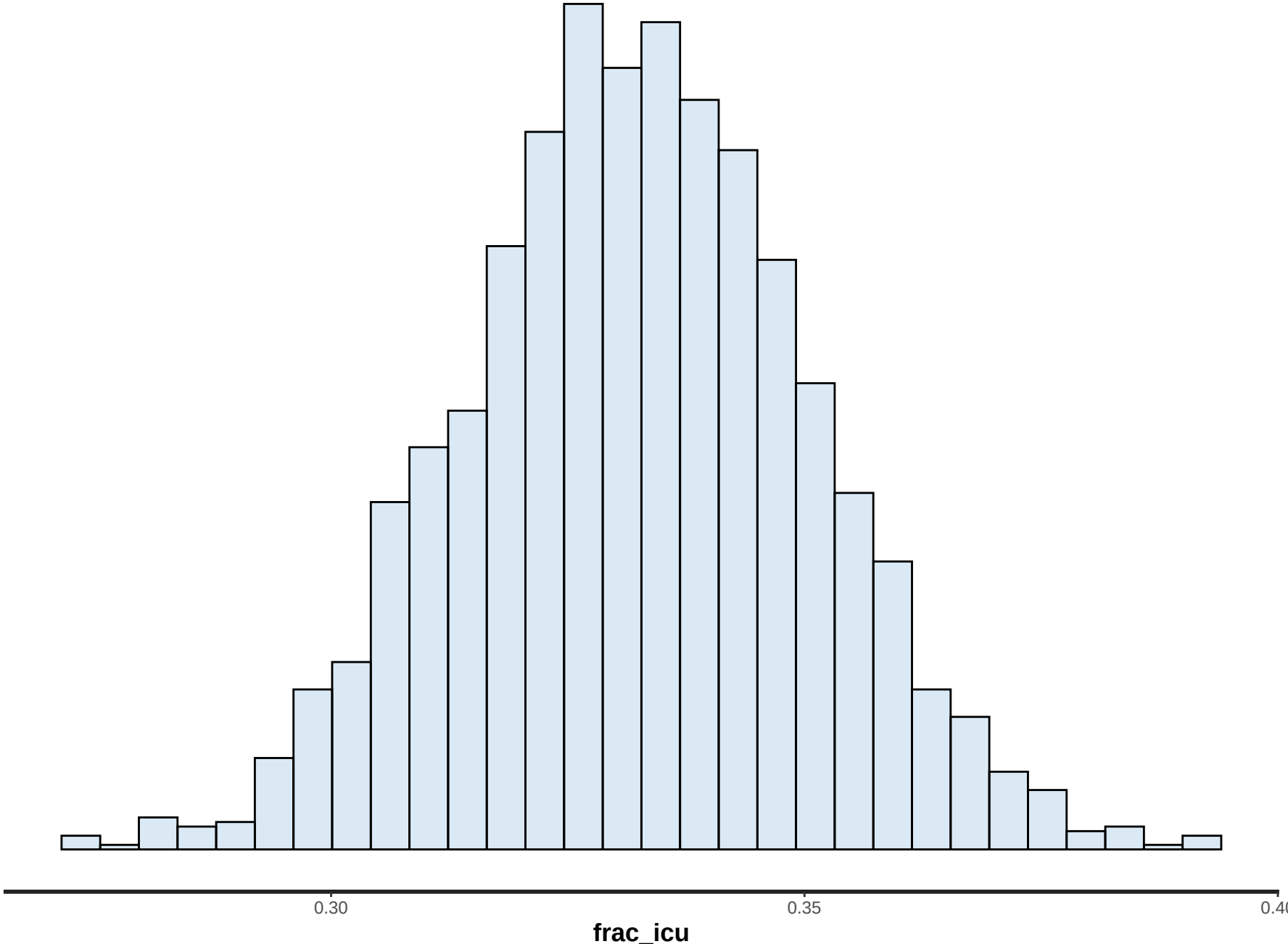

2
4
6
8
duration_rec_mild

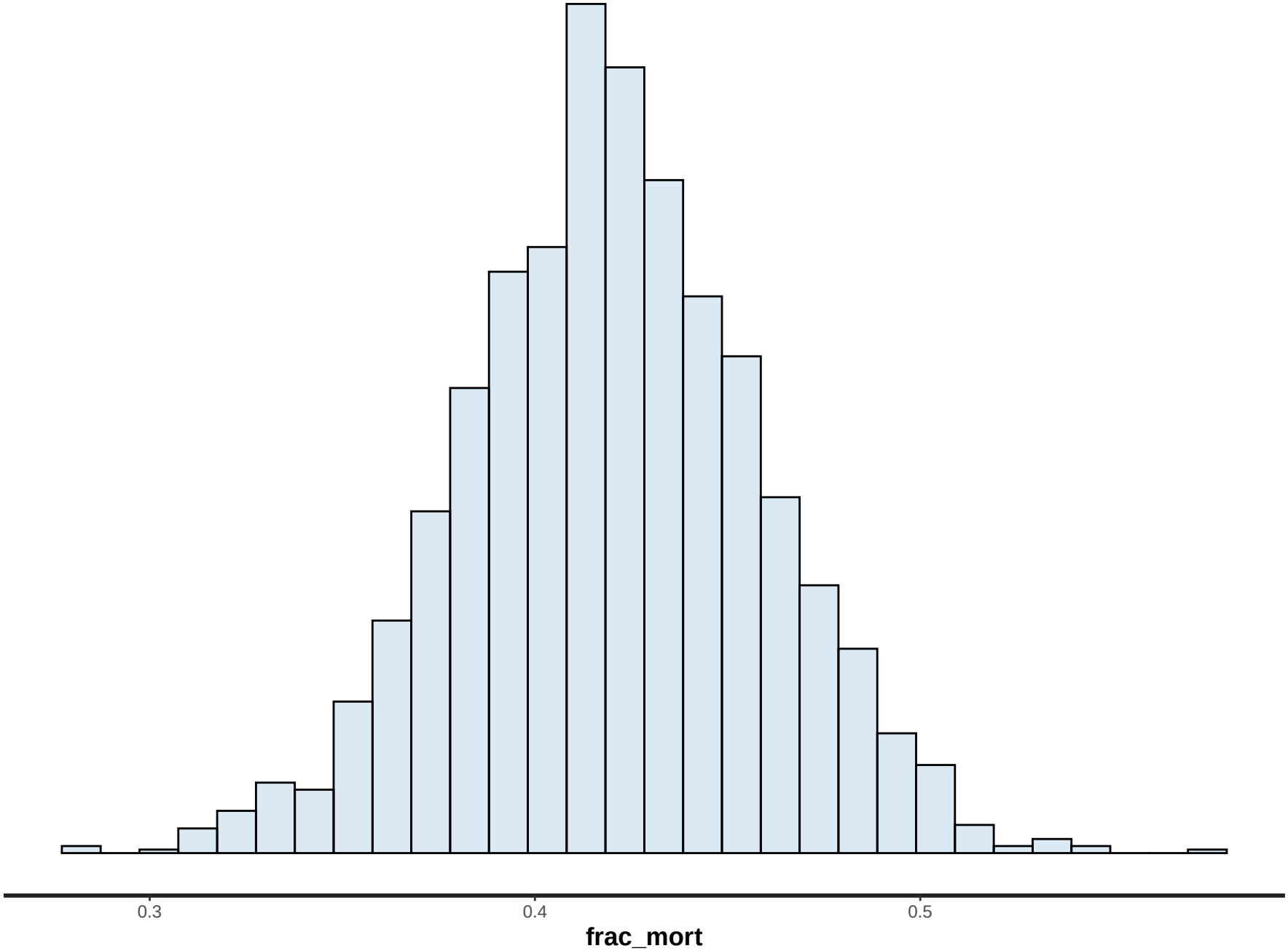

5
10
duration_pre_hosp

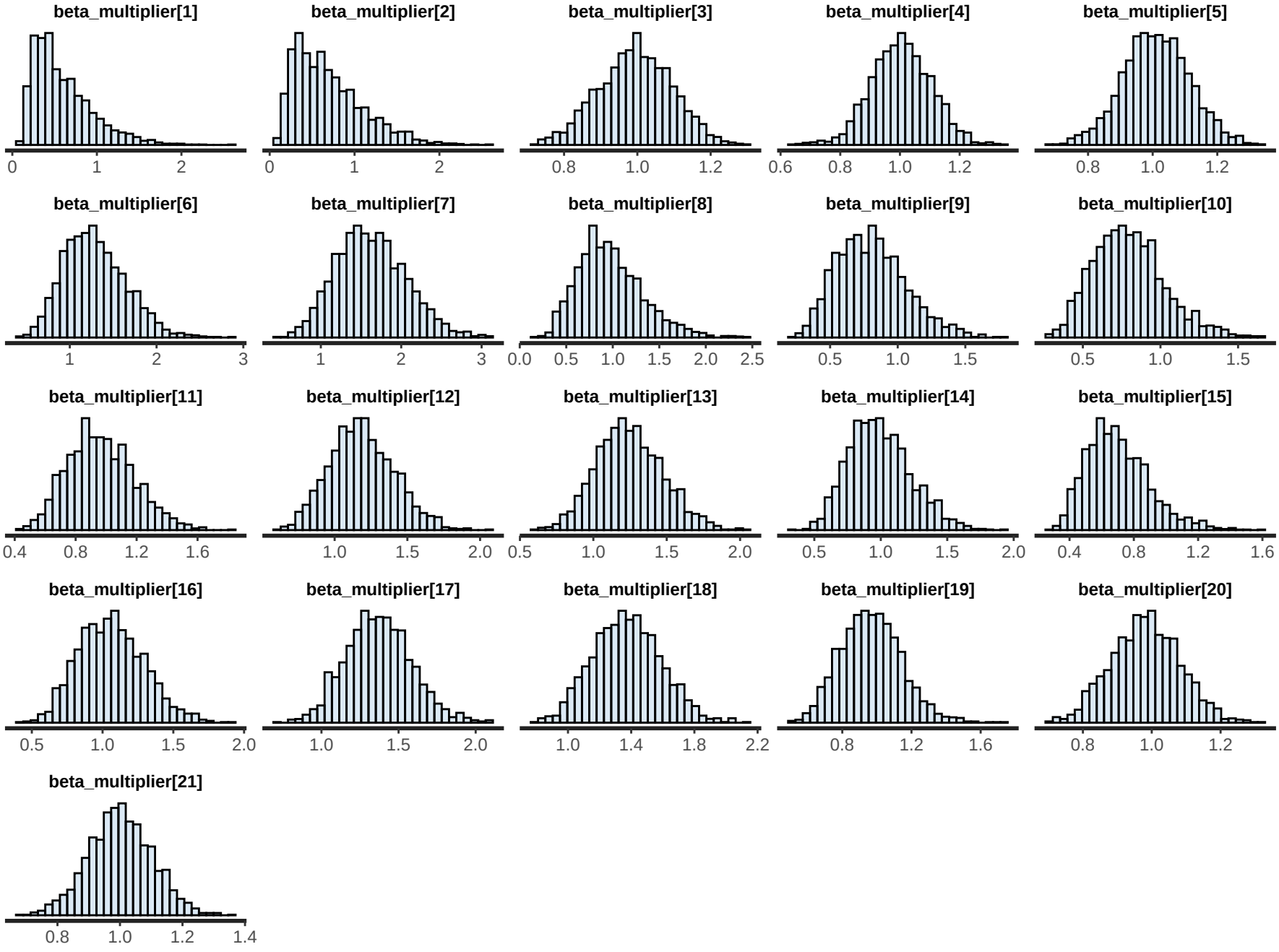

9
12
15
18
duration_hosp_mod

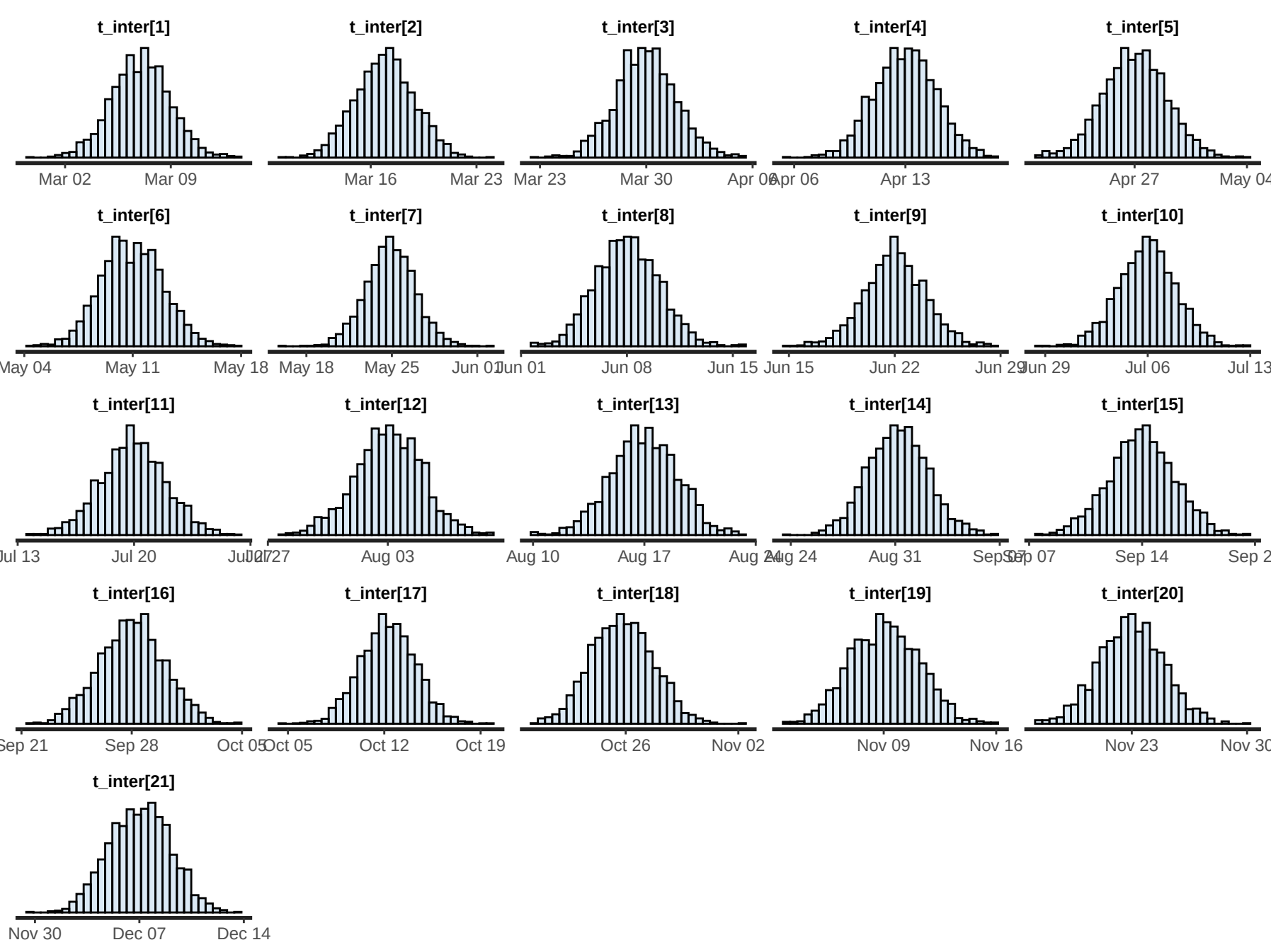

9
12
15
duration_hosp_icu

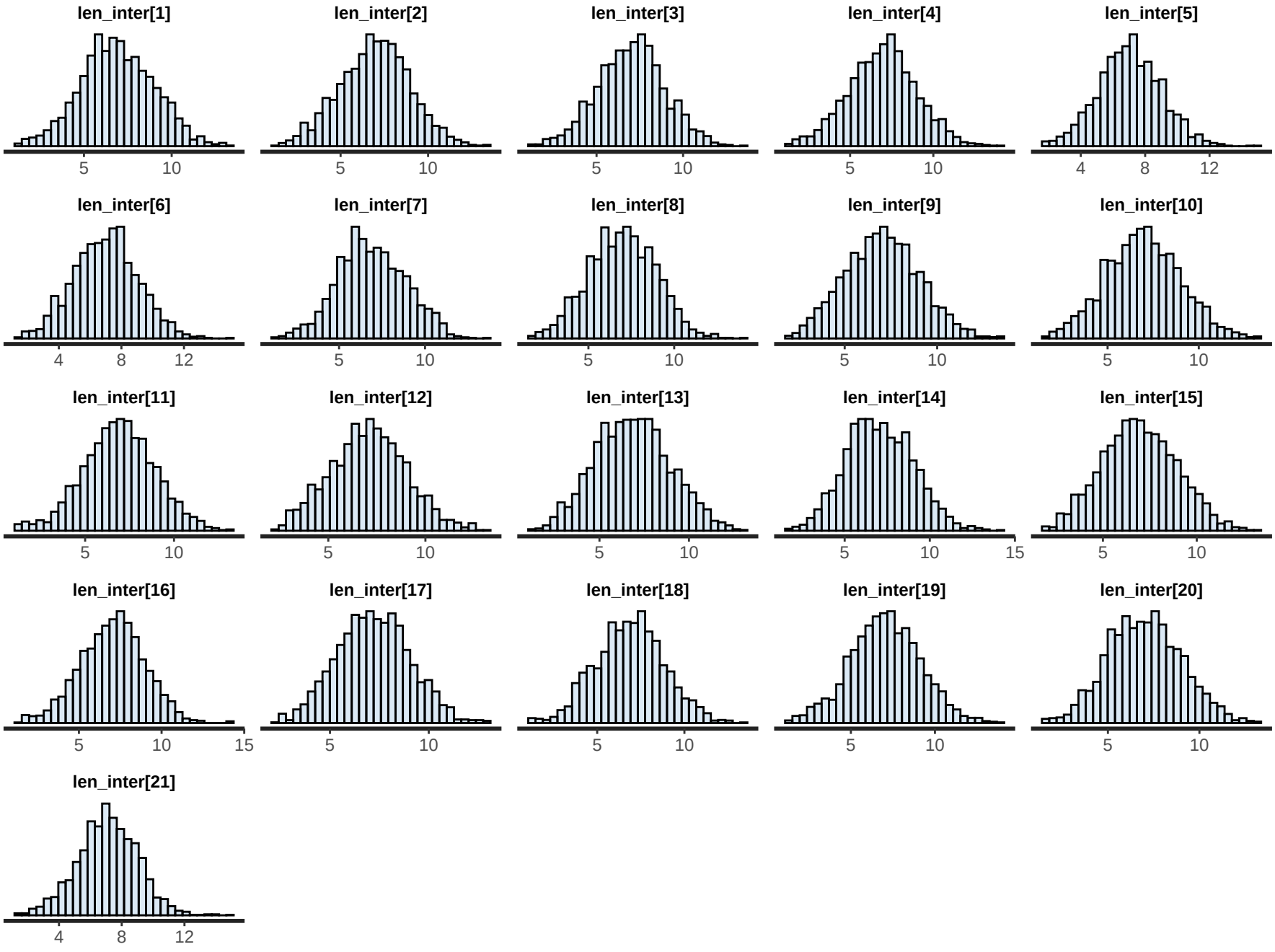

0.03
0.06
0.09
frac_hosp


0.30
0.35
0.40
frac_icu


0.3
0.4
0.5
frac_mort


beta_multiplier[1]
0 1 2
beta_multiplier[2]
0 1 2
beta_multiplier[3]
0.8 1.0 1.2
beta_multiplier[4]
0.6 0.8 1.0 1.2
beta_multiplier[5]
0.8 1.0 1.2
beta_multiplier[6]
1 2 3
beta_multiplier[7]
1 2 3
beta_multiplier[8]
0.0 0.5 1.0 1.5 2.0 2.5
beta_multiplier[9]
0.5 1.0 1.5
beta_multiplier[10]
0.5 1.0 1.5
beta_multiplier[11]
0.4 0.8 1.2 1.6
beta_multiplier[12]
1.0 1.5 2.0
beta_multiplier[13]
0.5 1.0 1.5 2.0
beta_multiplier[14]
0.5 1.0 1.5 2.0
beta_multiplier[15]
0.4 0.8 1.2 1.6
beta_multiplier[16]
0.5 1.0 1.5 2.0
beta_multiplier[17]
1.0 1.5 2.0
beta_multiplier[18]
1.0 1.4 1.8 2.2
beta_multiplier[19]
0.8 1.2 1.6
beta_multiplier[20]
0.8 1.0 1.2
beta_multiplier[21]
0.8 1.0 1.2 1.4


t_inter[1]
Mar 02
Mar 09
t_inter[2]
Mar 16
Mar 23
t_inter[3]
Mar 23
Mar 30
Apr 06
t_inter[4]
Apr 06
Apr 13
t_inter[5]
Apr 27
May 04
t_inter[6]
May 04
May 11
May 18
t_inter[7]
May 18
May 25
Jun 01
t_inter[8]
Jun 01
Jun 08
Jun 15
t_inter[9]
Jun 15
Jun 22
Jun 29
t_inter[10]
Jun 29
Jul 06
Jul 13
t_inter[11]
Jul 13
Jul 20
t_inter[12]
Aug 03
t_inter[13]
Aug 10
Aug 17
t_inter[14]
Aug 24
Aug 31
t_inter[15]
Sep 07
Sep 14
t_inter[16]
Sep 21
Sep 28
Oct 05
t_inter[17]
Oct 05
Oct 12
Oct 19
t_inter[18]
Oct 26
Nov 02
t_inter[19]
Nov 09
Nov 16
t_inter[20]
Nov 23
Nov 30
t_inter[21]
Nov 30
Dec 07
Dec 14


len_inter[1]
5
10
len_inter[2]
5
10
len_inter[3]
5
10
len_inter[4]
5
10
len_inter[5]
4
8
12
len_inter[6]
4
8
12
len_inter[7]
5
10
len_inter[8]
5
10
len_inter[9]
5
10
len_inter[10]
5
10
len_inter[11]
5
10
len_inter[12]
5
10
len_inter[13]
5
10
len_inter[14]
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len_inter[15]
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5
10
15
len_inter[17]
5
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len_inter[18]
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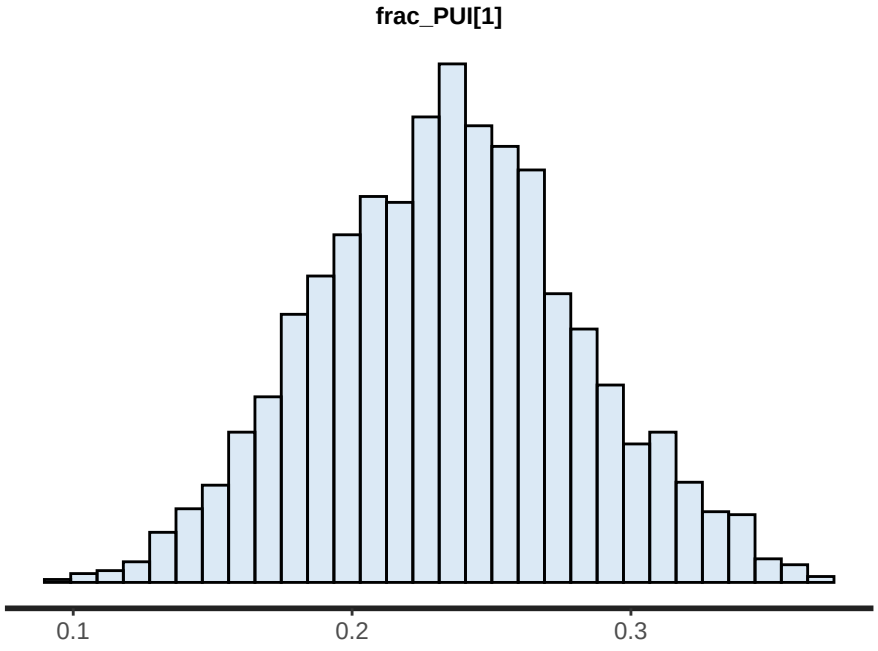
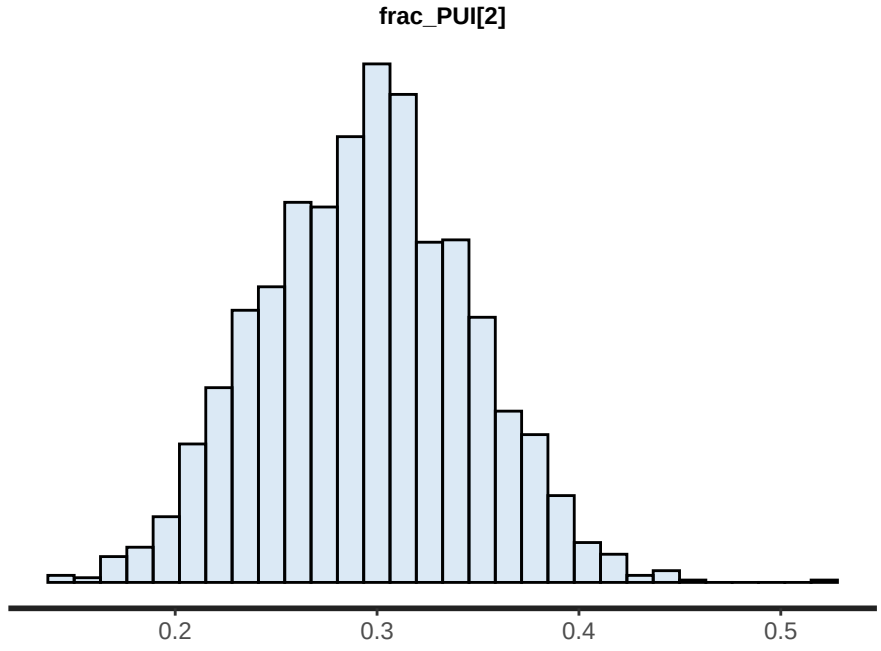
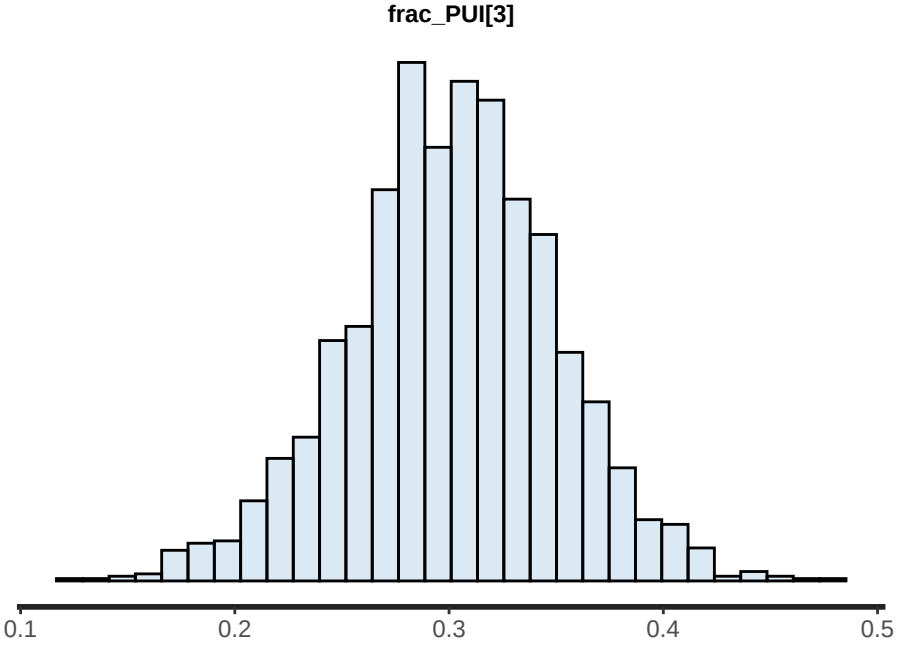
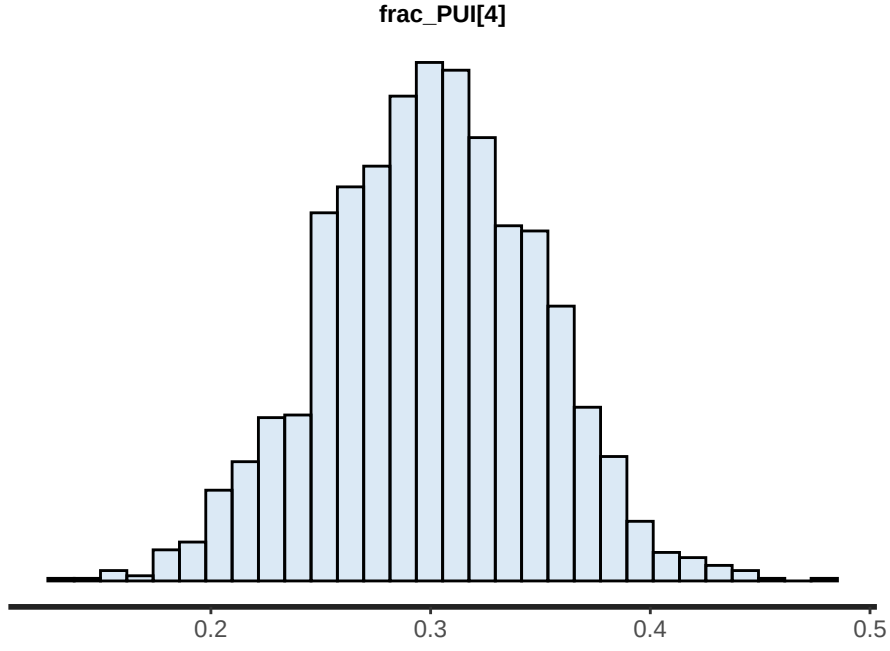
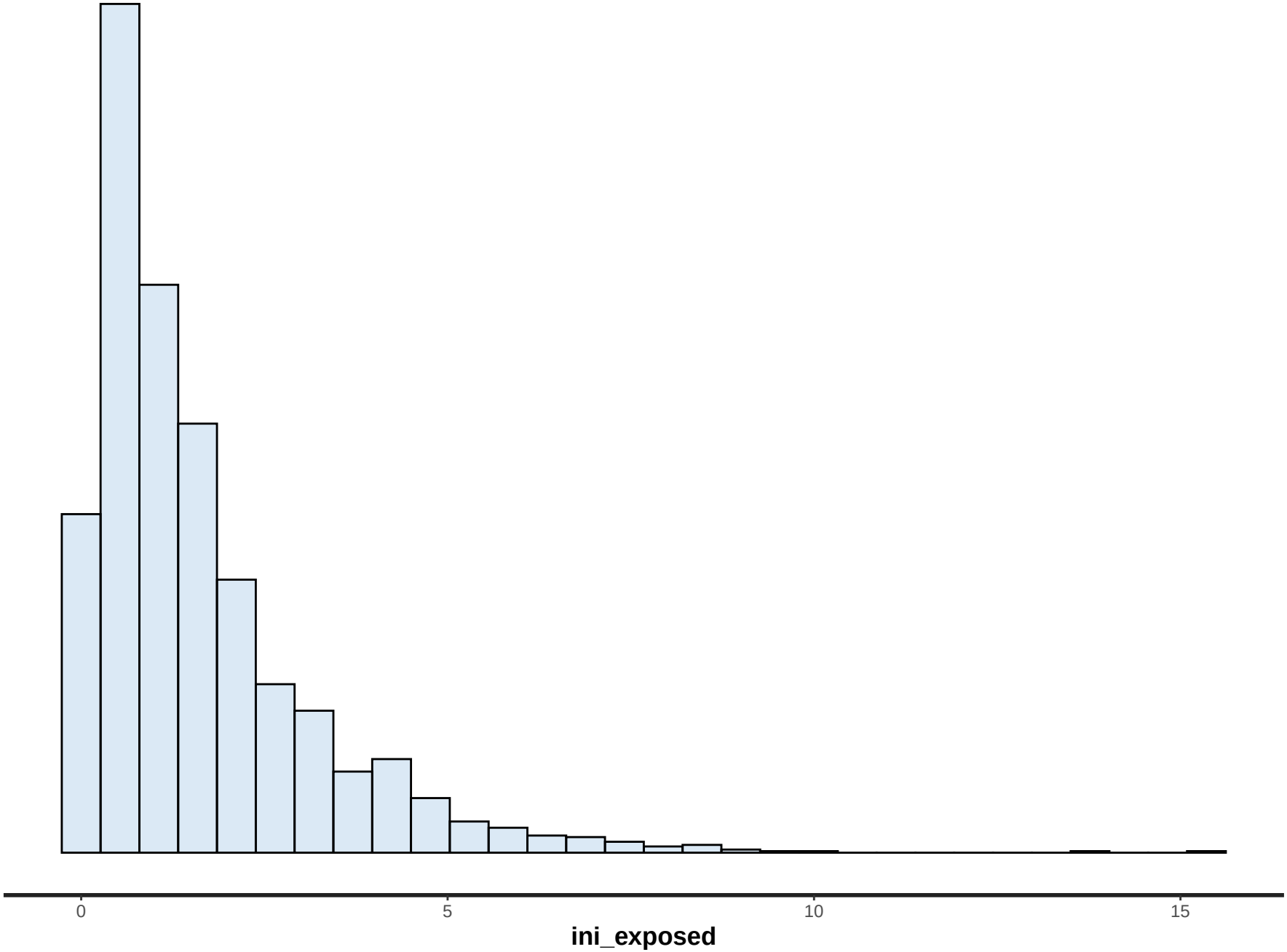
len_inter[19]
5
10
len_inter[20]
5
10
len_inter[21]
4
8
12

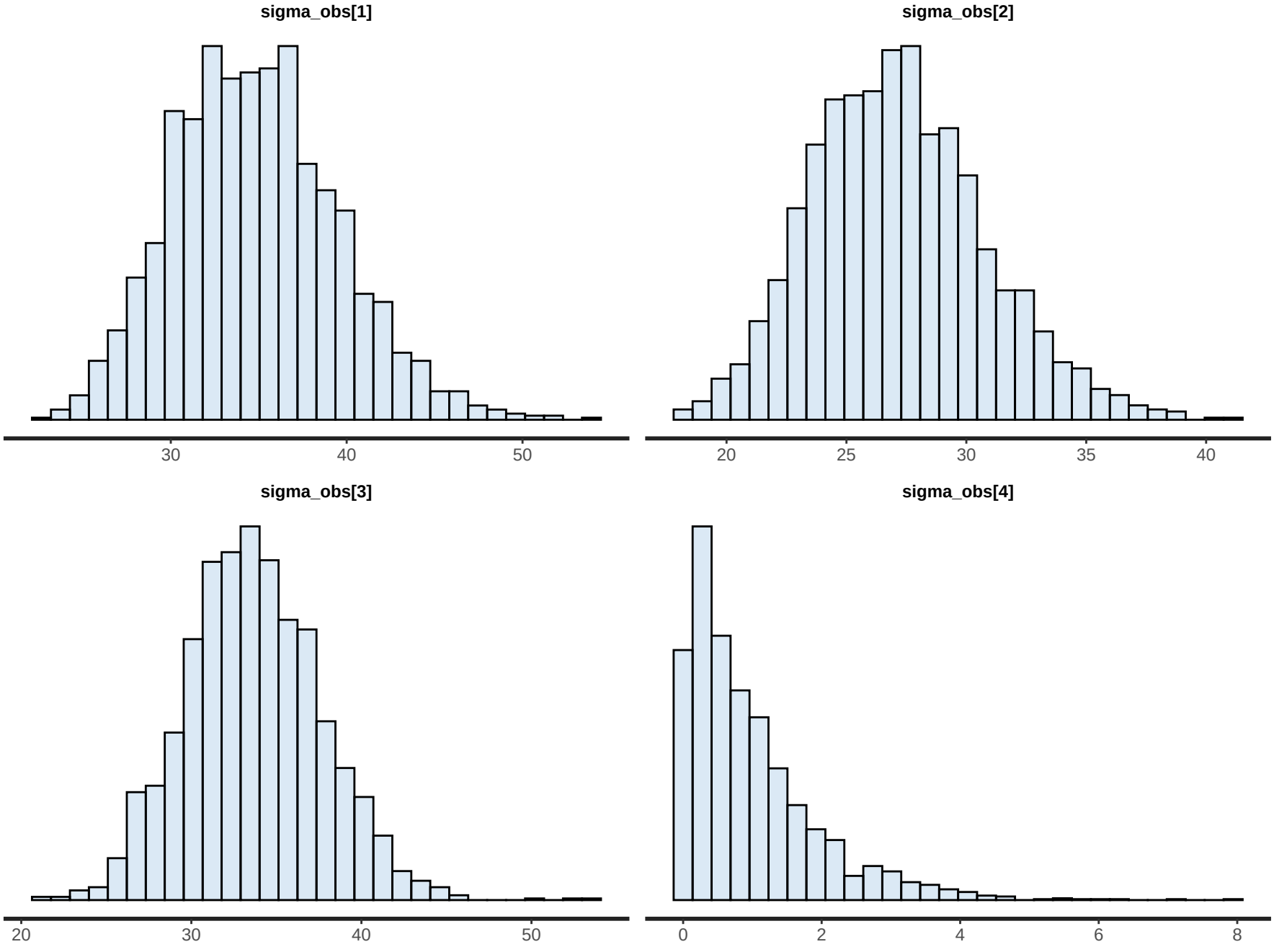

frac_PUI[1]
0.1
0.2
0.3


frac_PUI[2]
0.2
0.3
0.4
0.5


frac_PUI[3]
0.1
0.2
0.3
0.4
0.5


frac_PUI[4]
0.2
0.3
0.4
0.5


0
5
10
15
ini_exposed


sigma_obs[1]
30
40
50
sigma_obs[2]
20
25
30
35
40
sigma_obs[3]
20
30
40
50
sigma_obs[4]
0
2
4
6
8