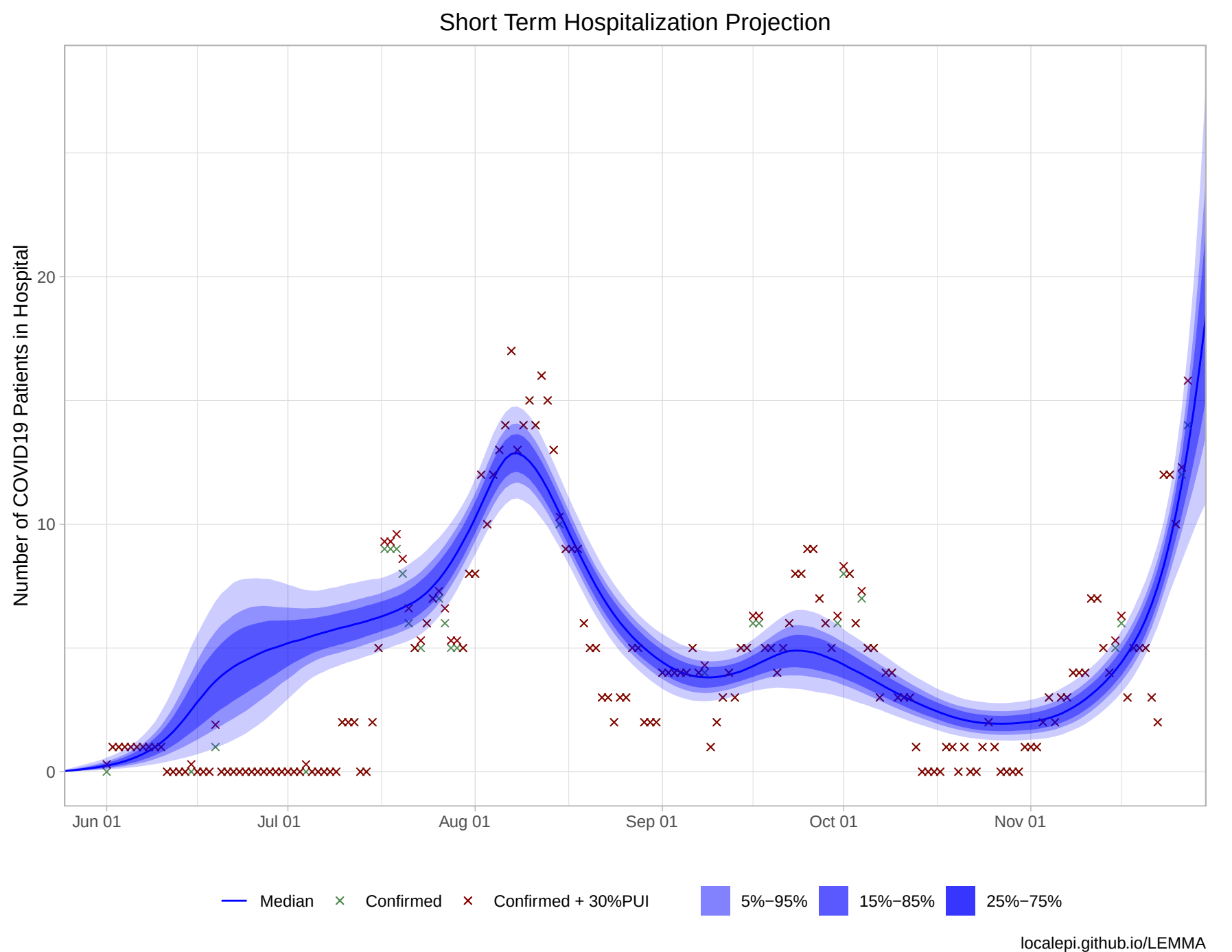
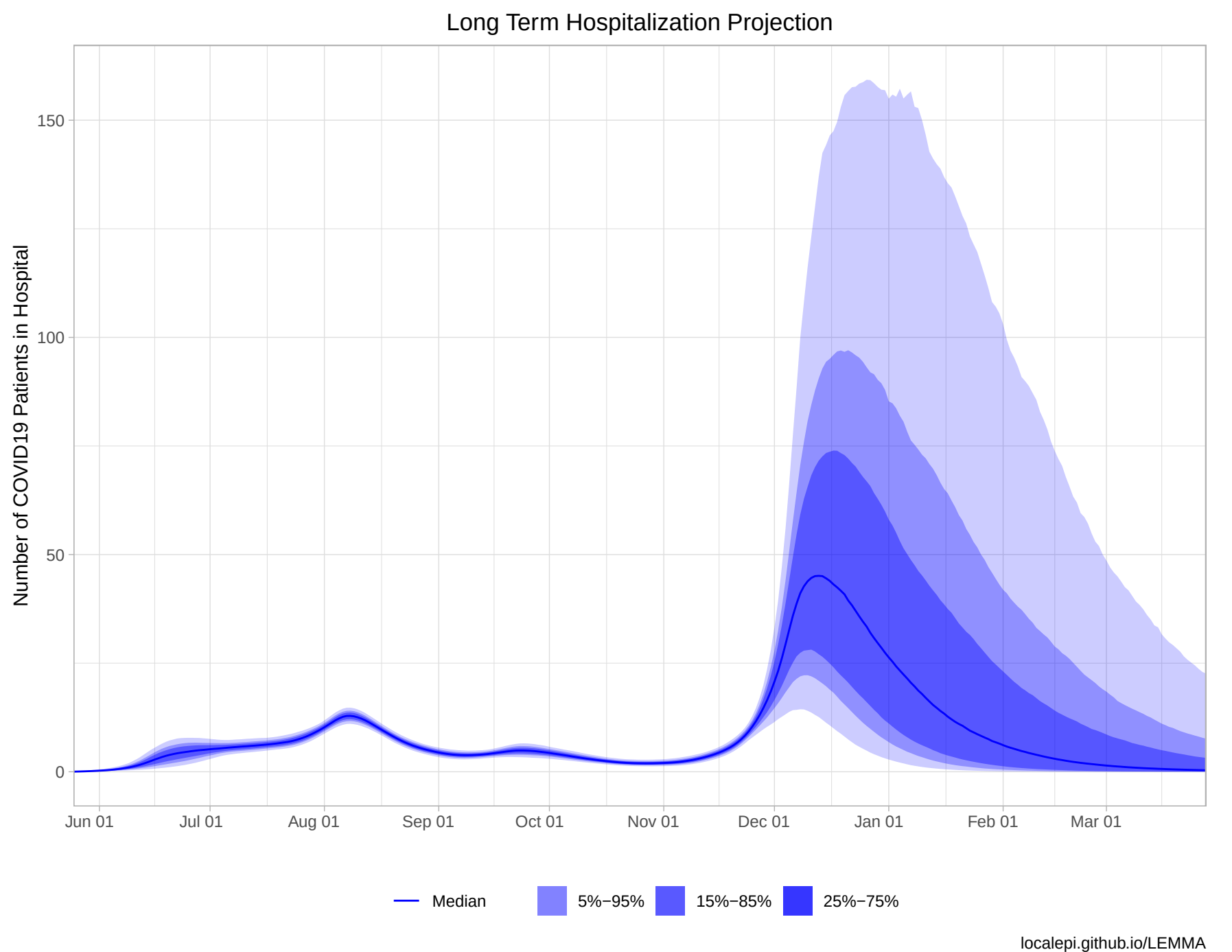
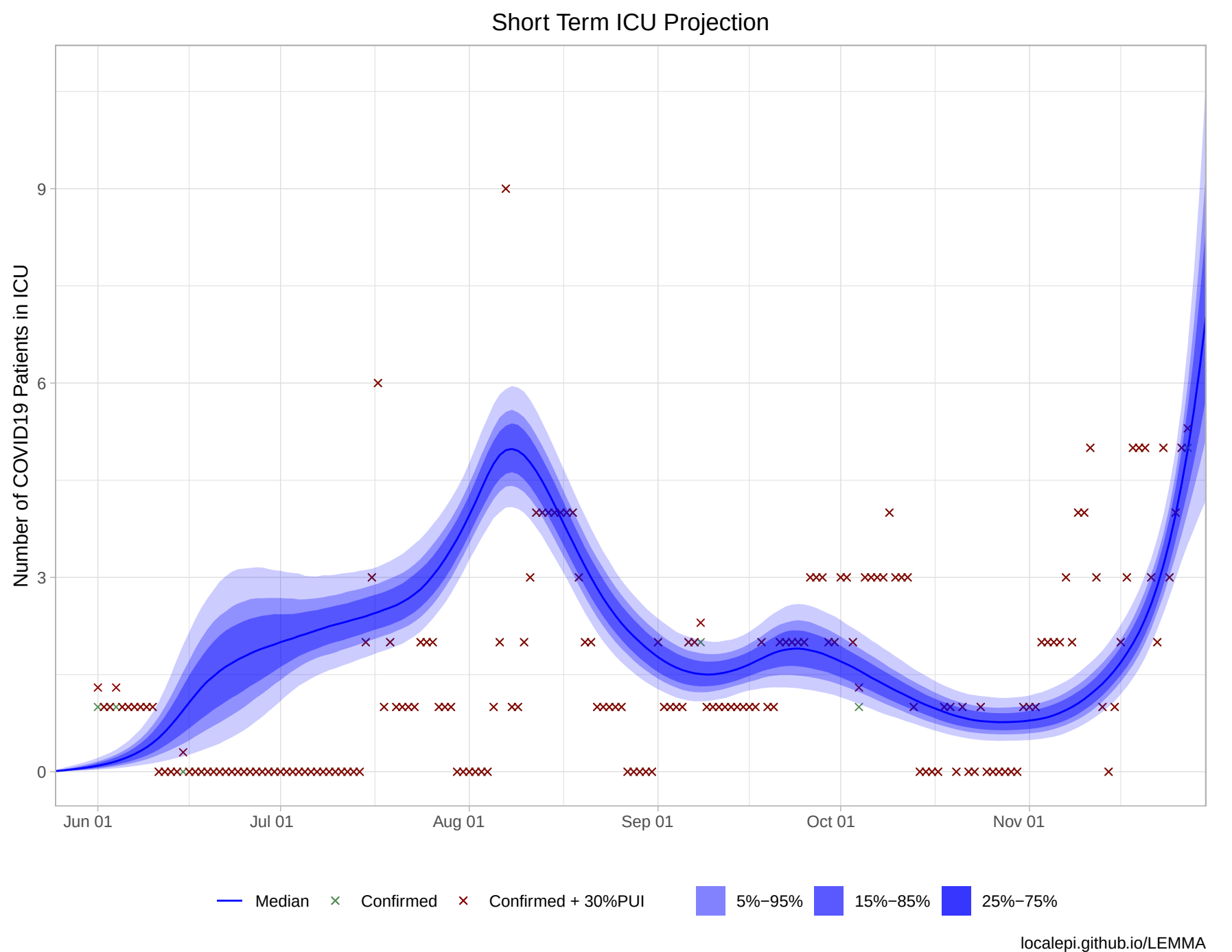
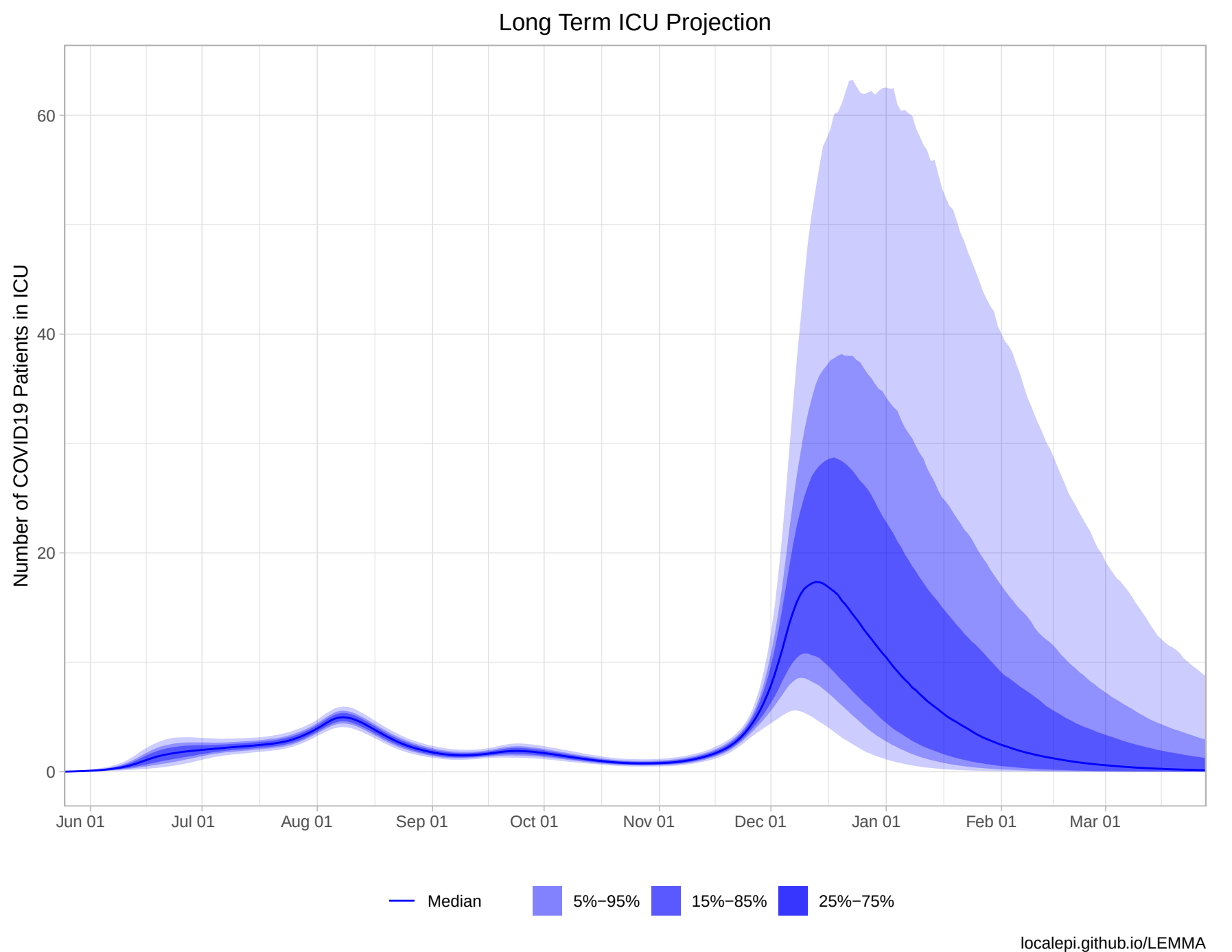
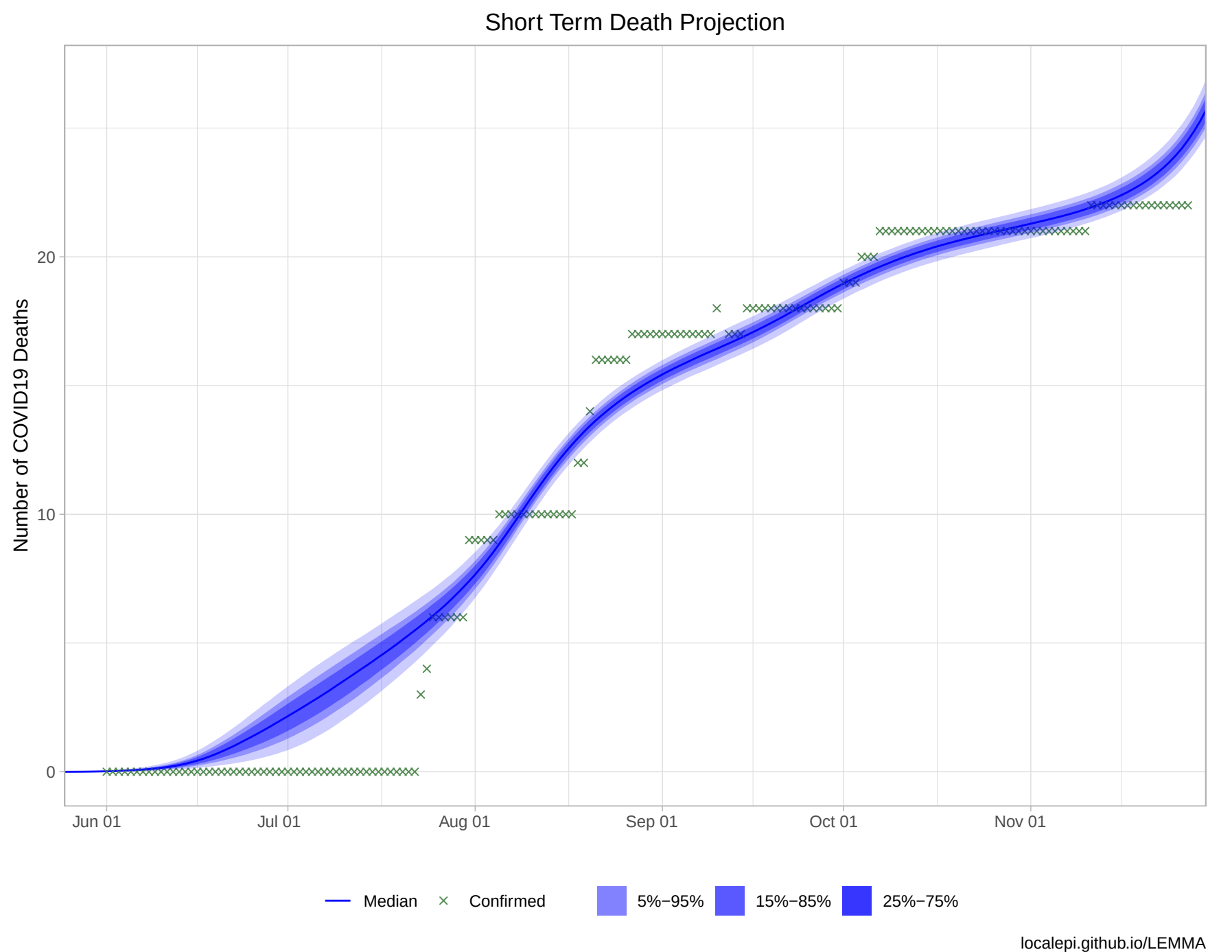
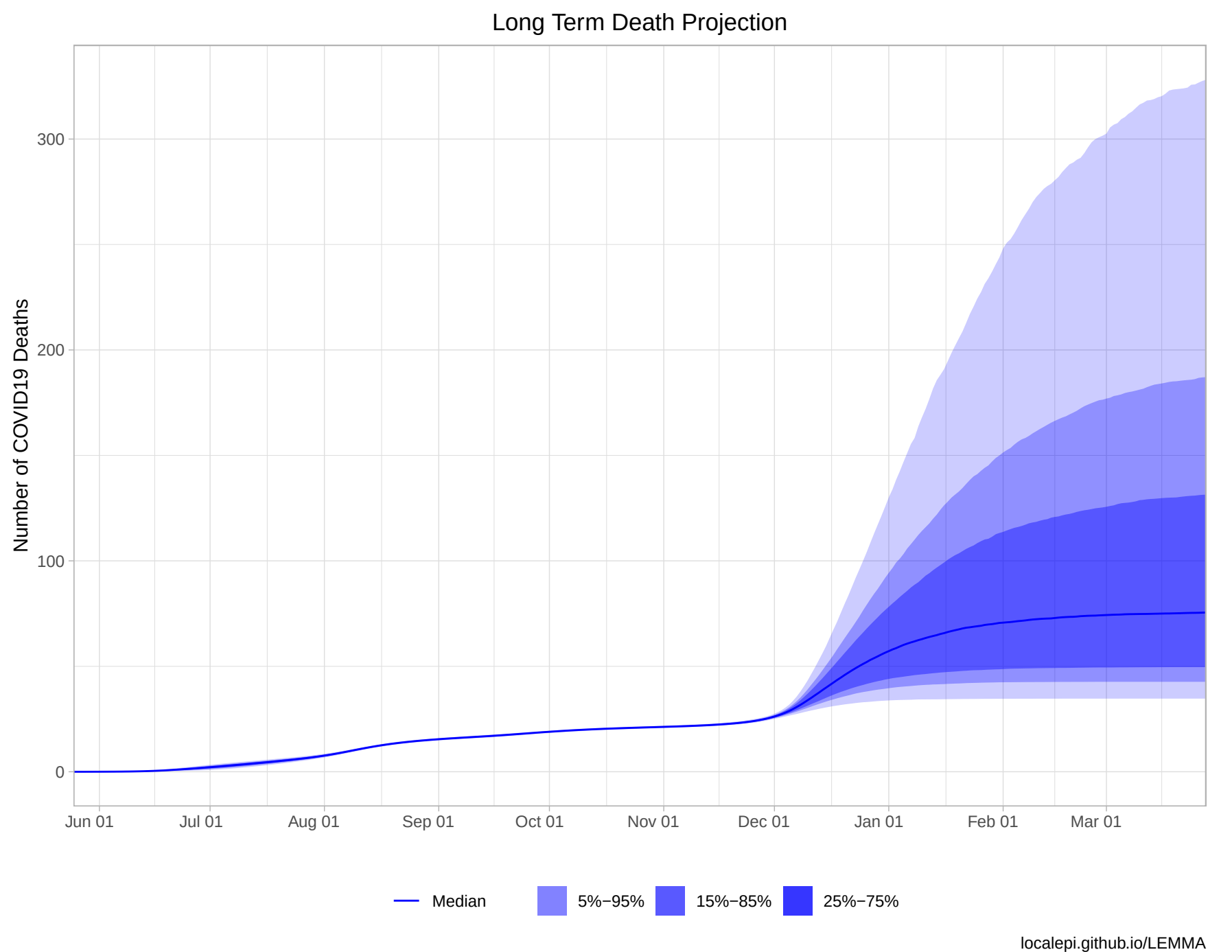

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
10
20
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

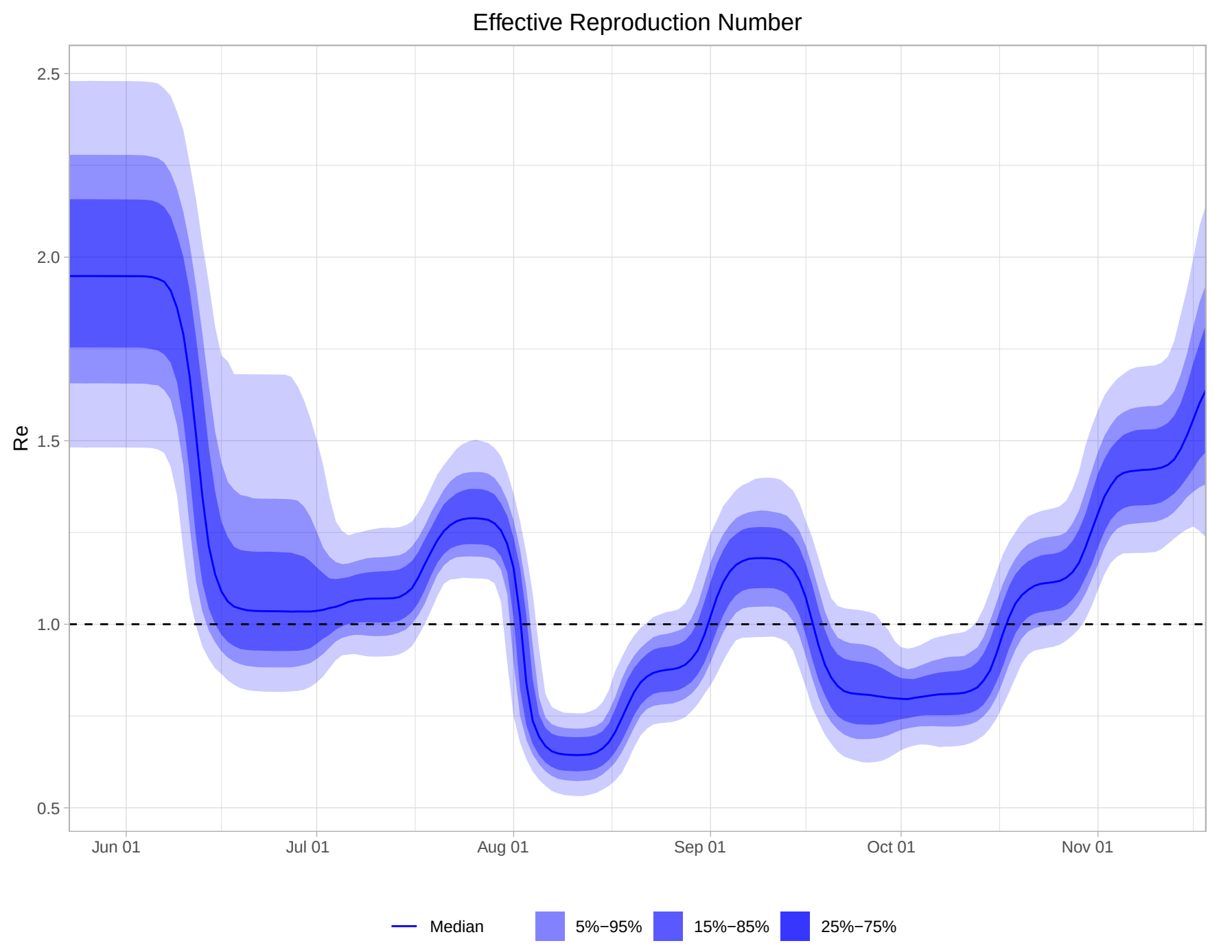

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
150
100
50
0
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
0
3
6
9
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 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
60
40
20
0
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

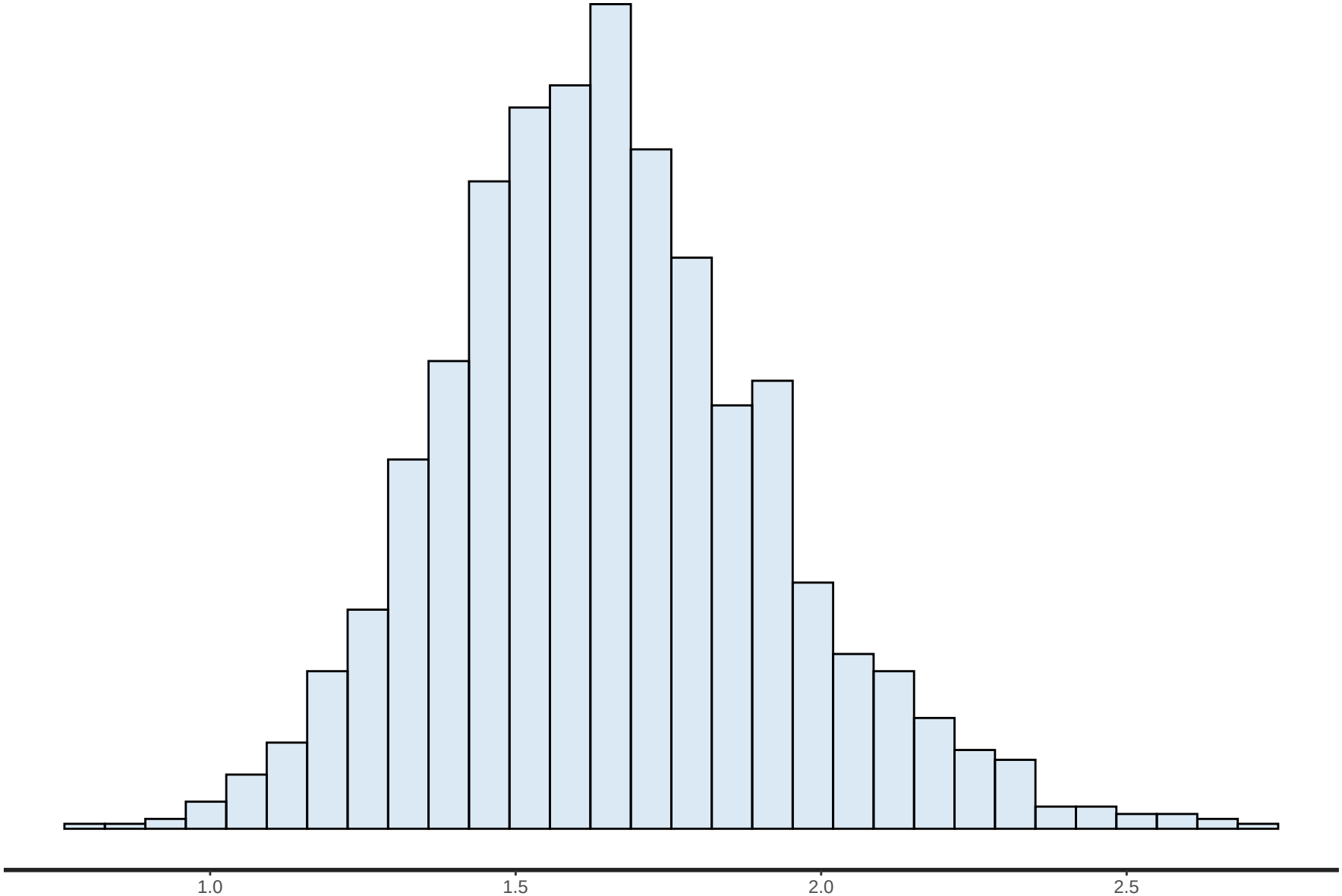

Short Term Death Projection
Number of COVID19 Deaths
0
10
20
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

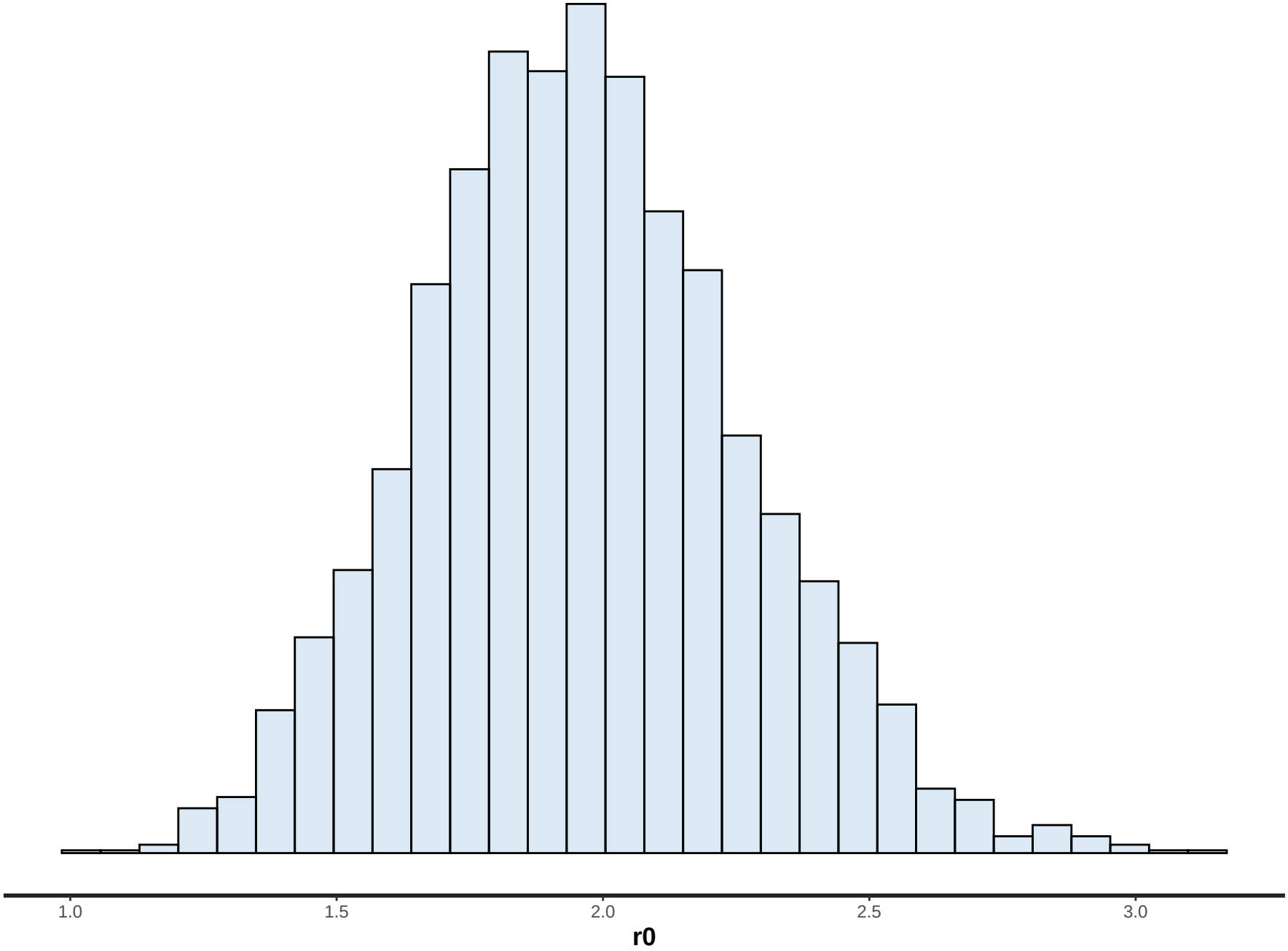

Long Term Death Projection
Number of COVID19 Deaths
300
200
100
0
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

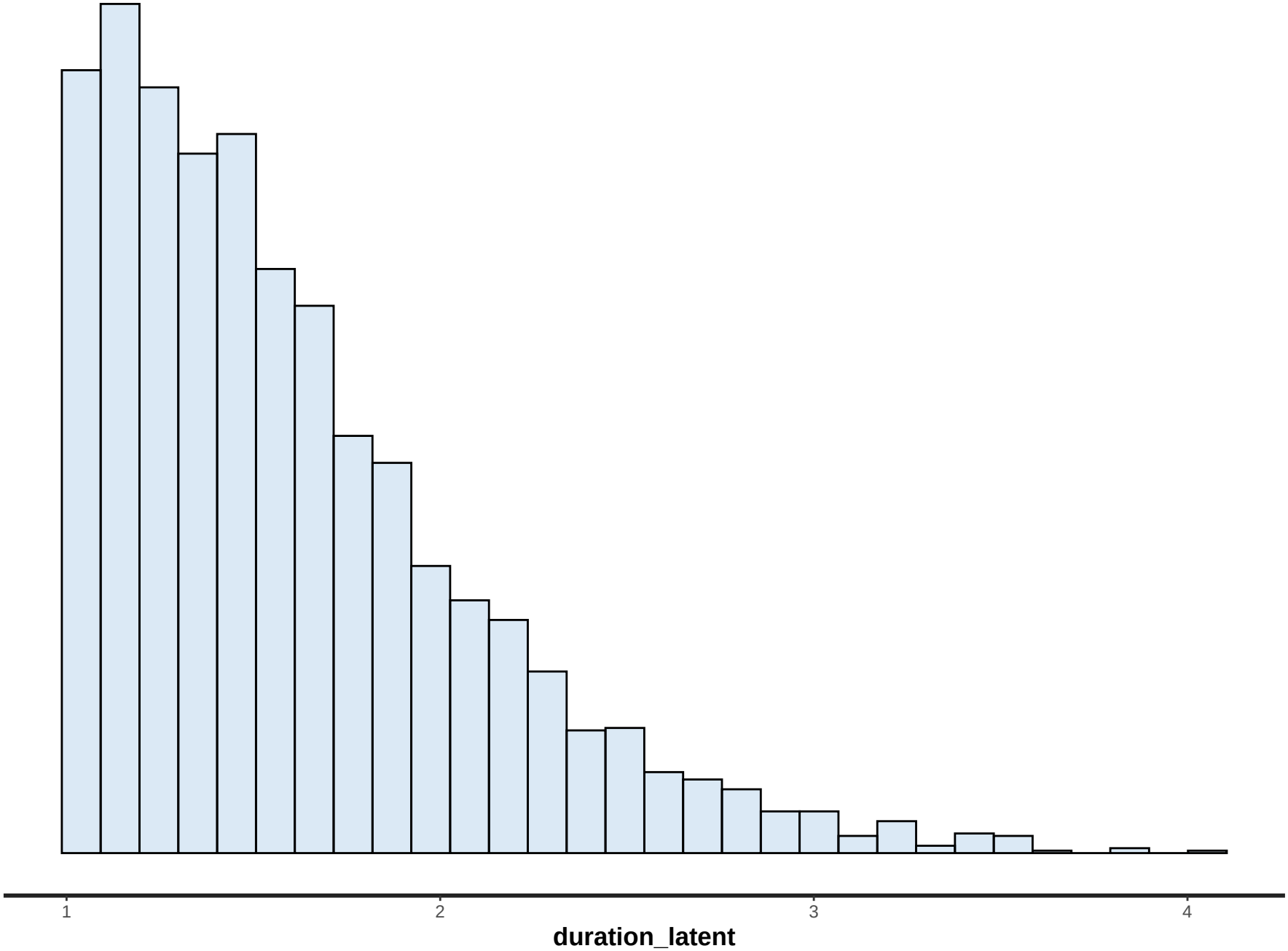

Effective Reproduction Number
Re
2.5
2.0
1.5
1.0
0.5
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

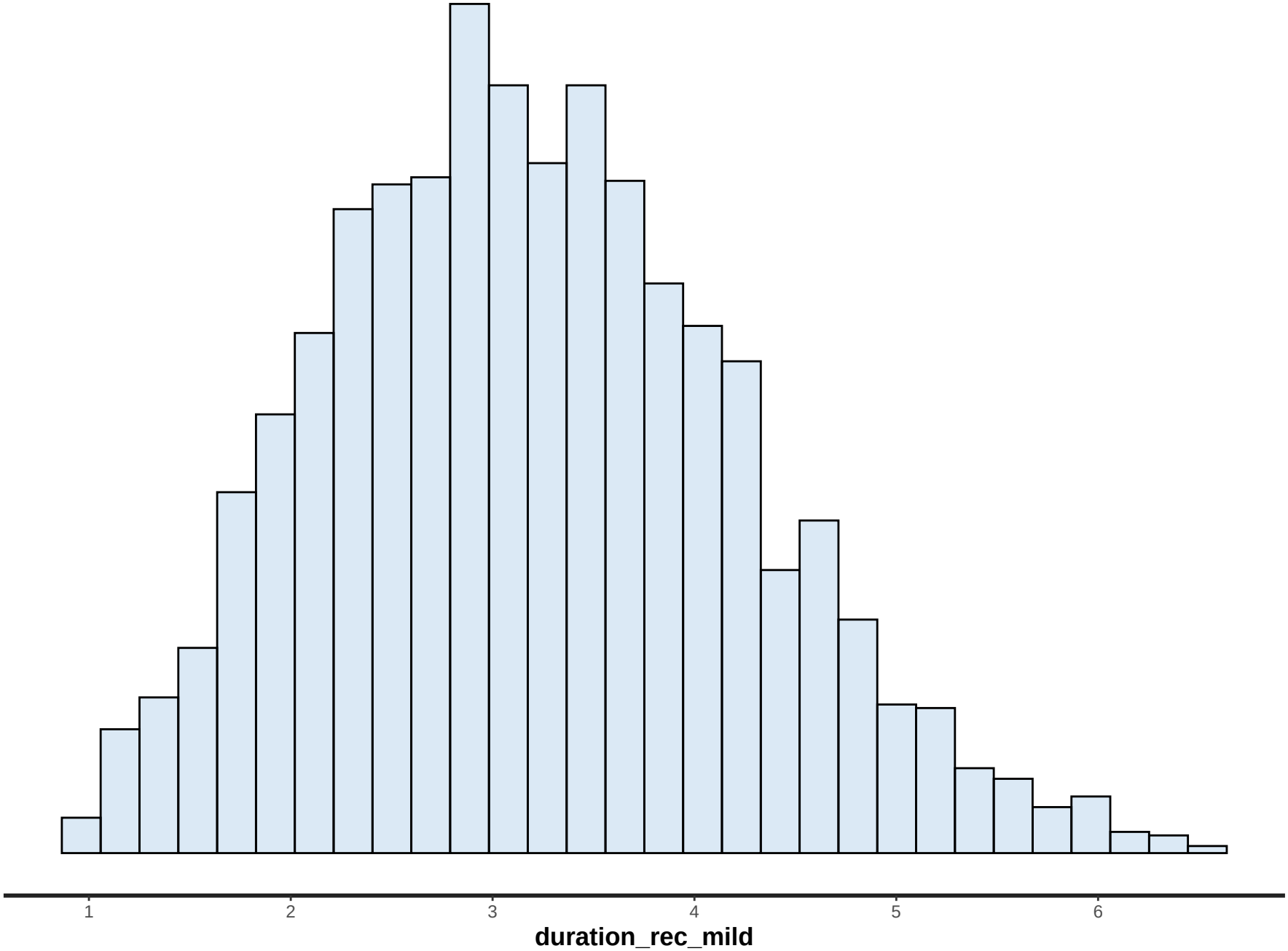
Rt as of 2020−11−18

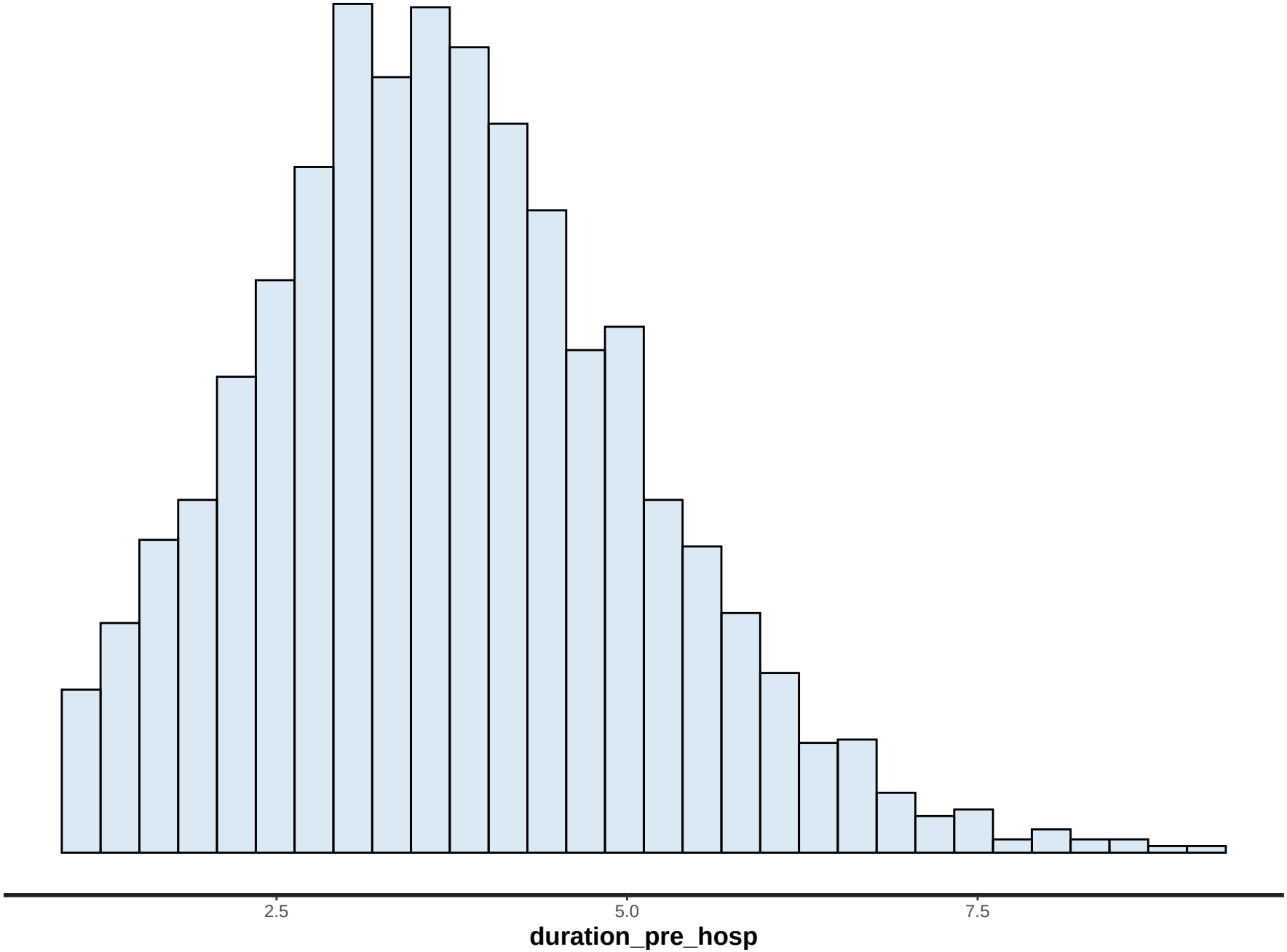
5%	10%	25%	50%	75%	90%	95%
1.24	1.33	1.47	1.64	1.82	2.00	2.14

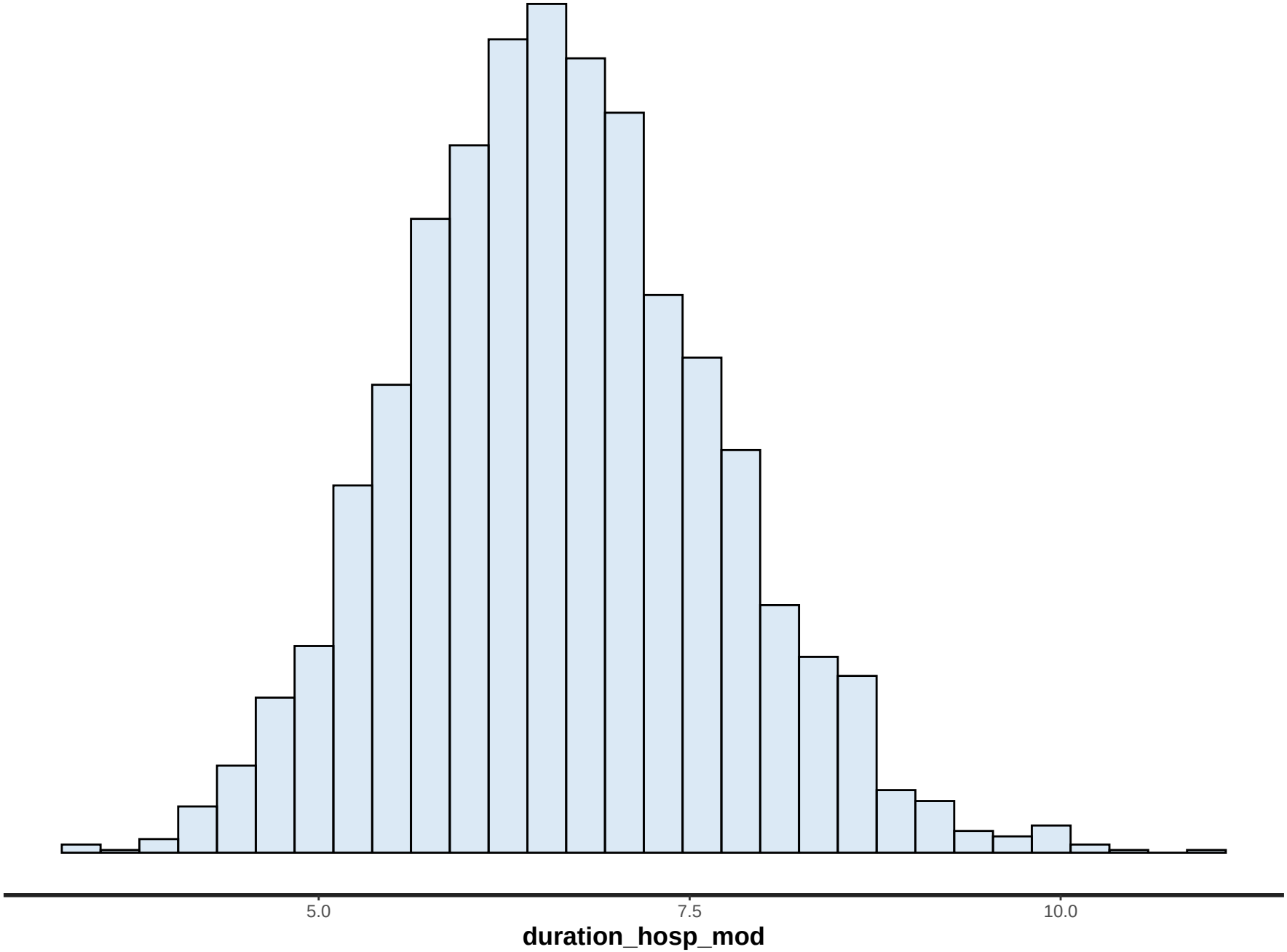


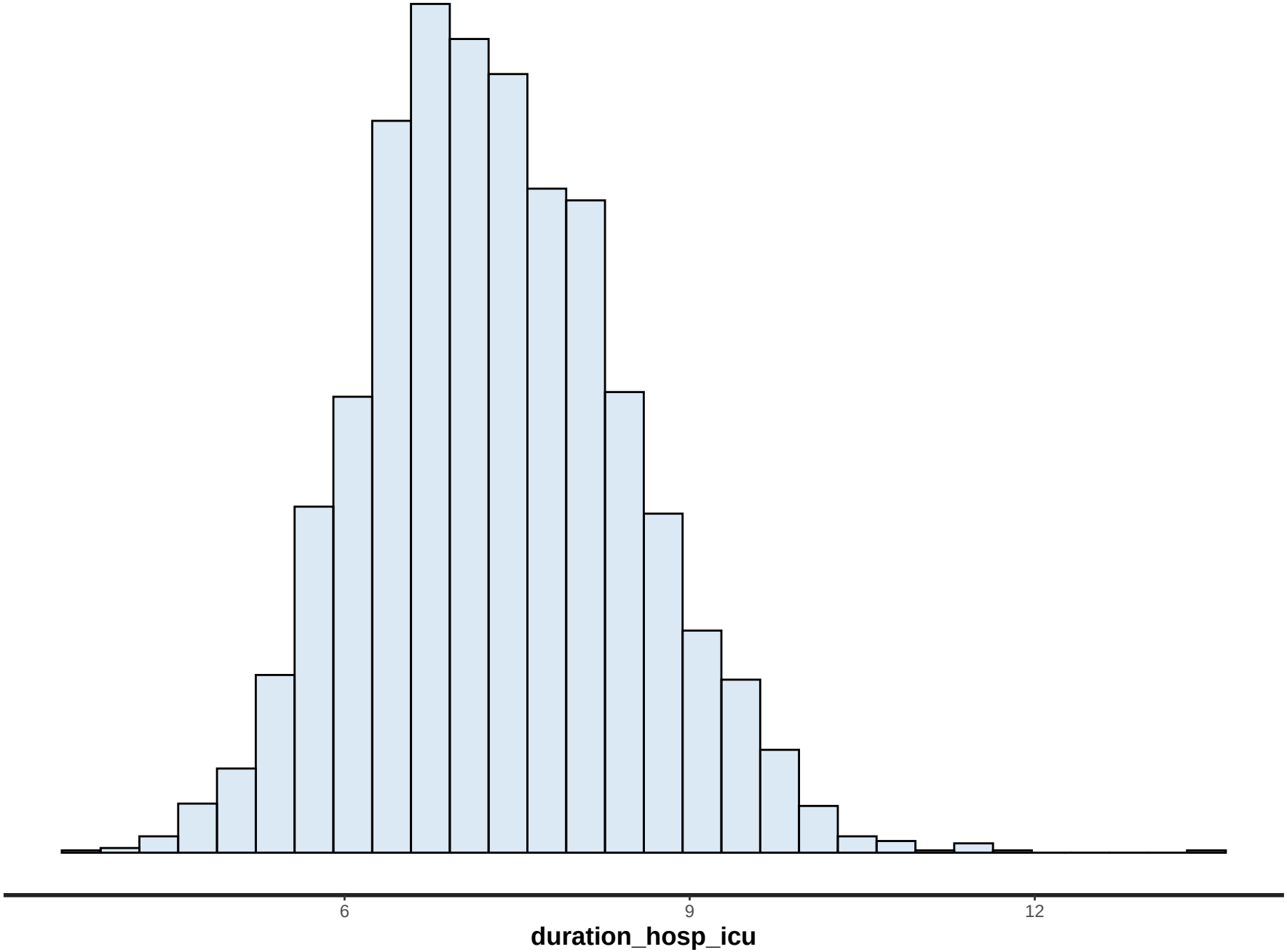

1.0
1.5
2.0
2.5
3.0
r0

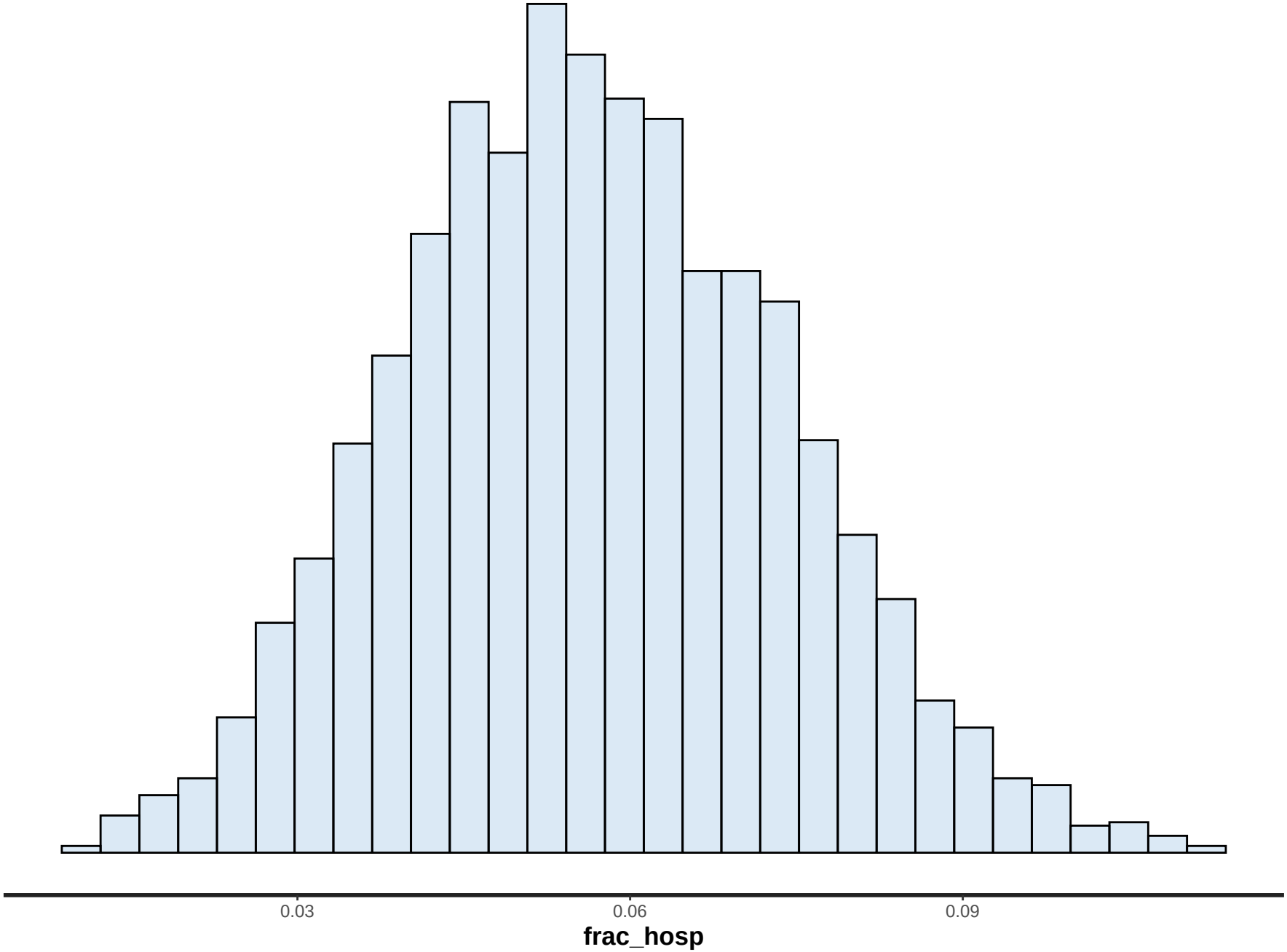

1
2
3
4
duration_latent

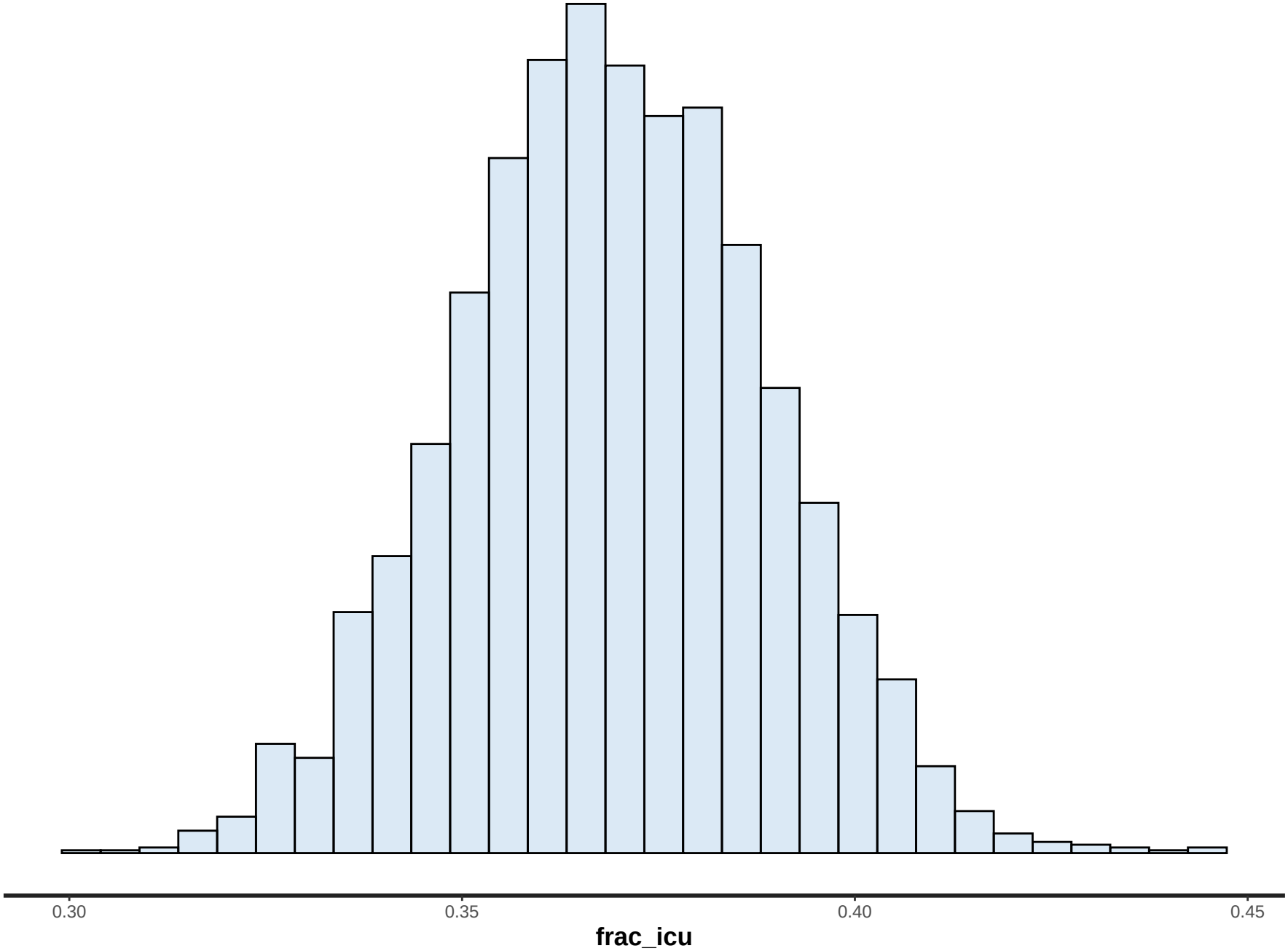

1
2
3
4
5
6
duration_rec_mild

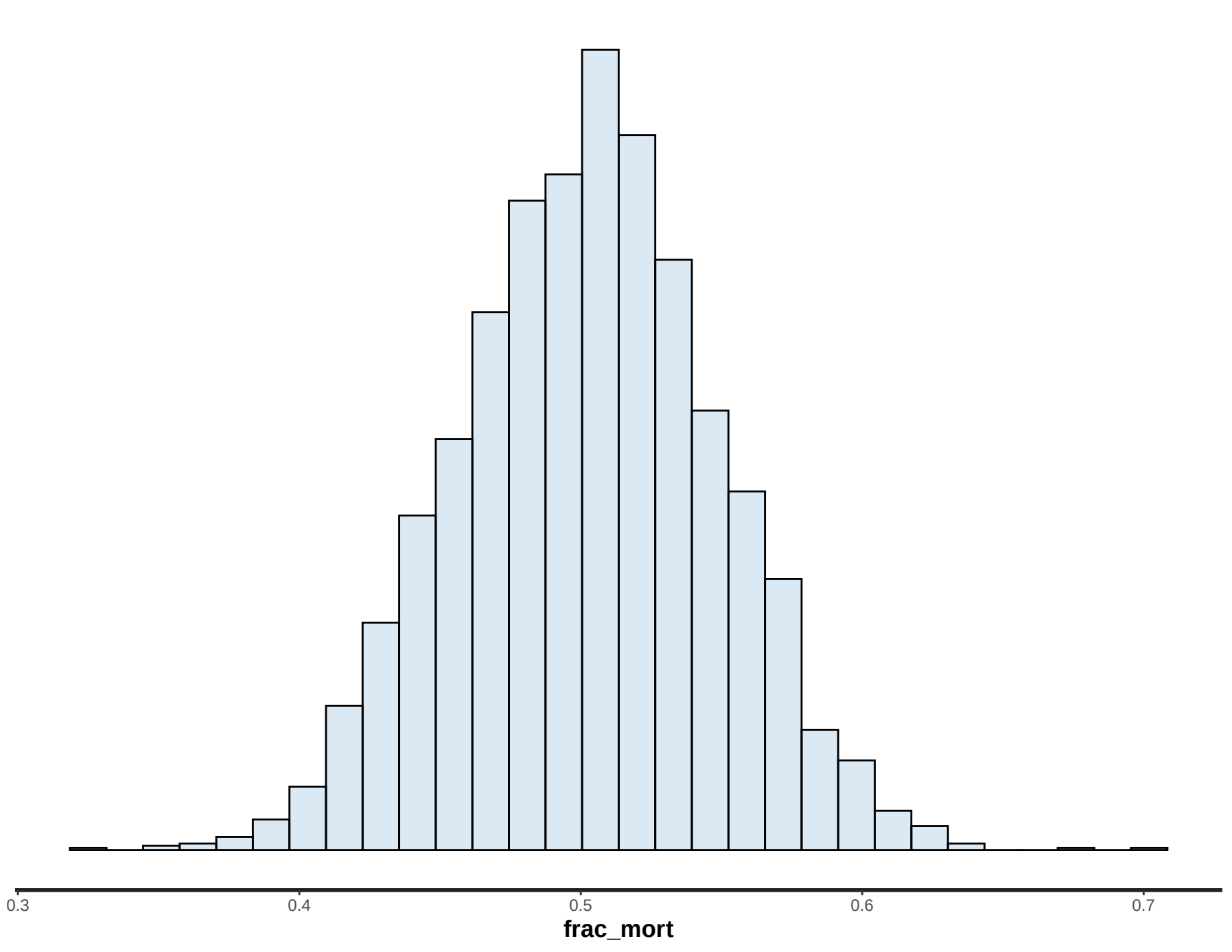

2.5
5.0
7.5
duration_pre_hosp

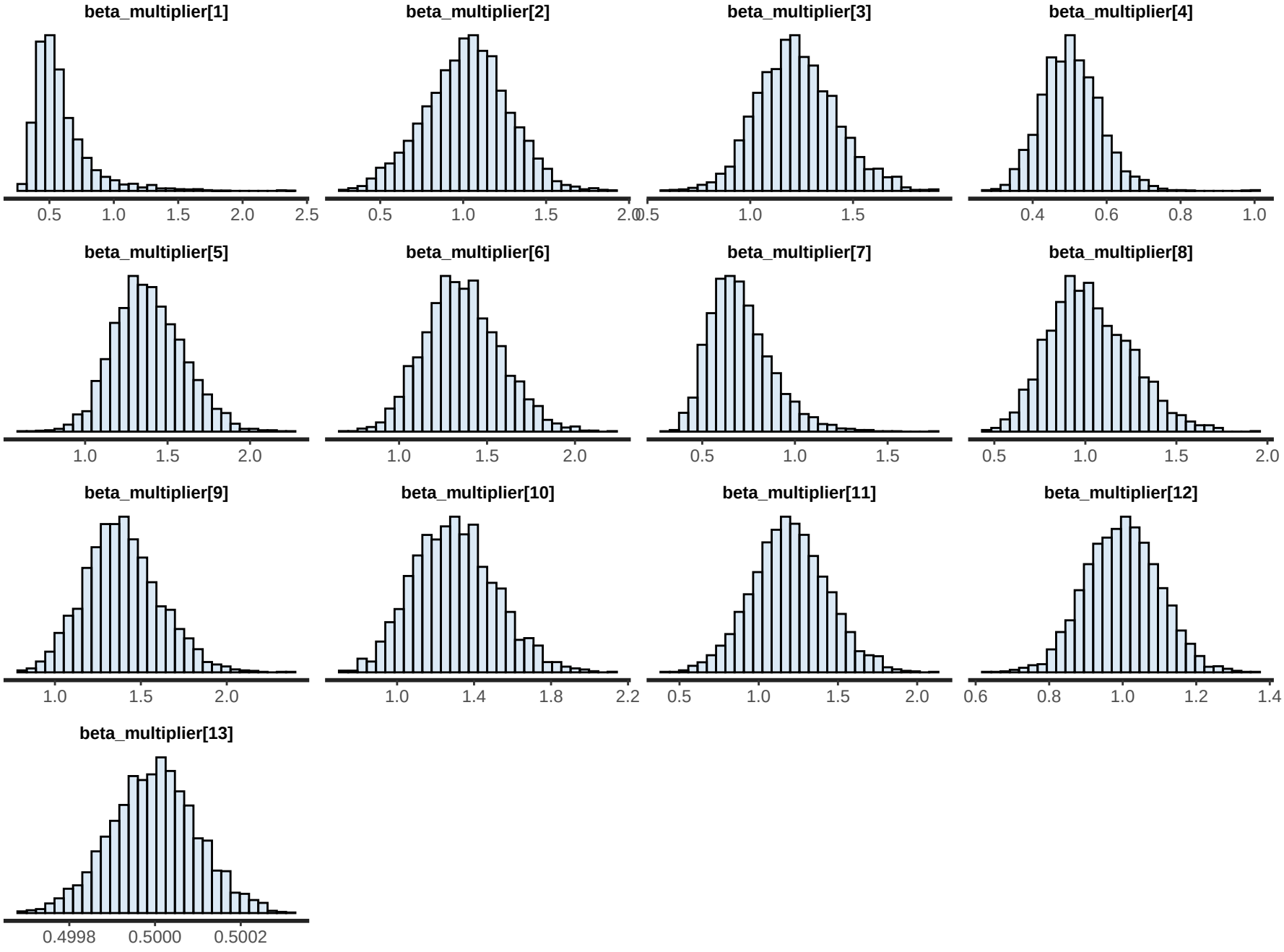

5.0
7.5
10.0
duration_hosp_mod

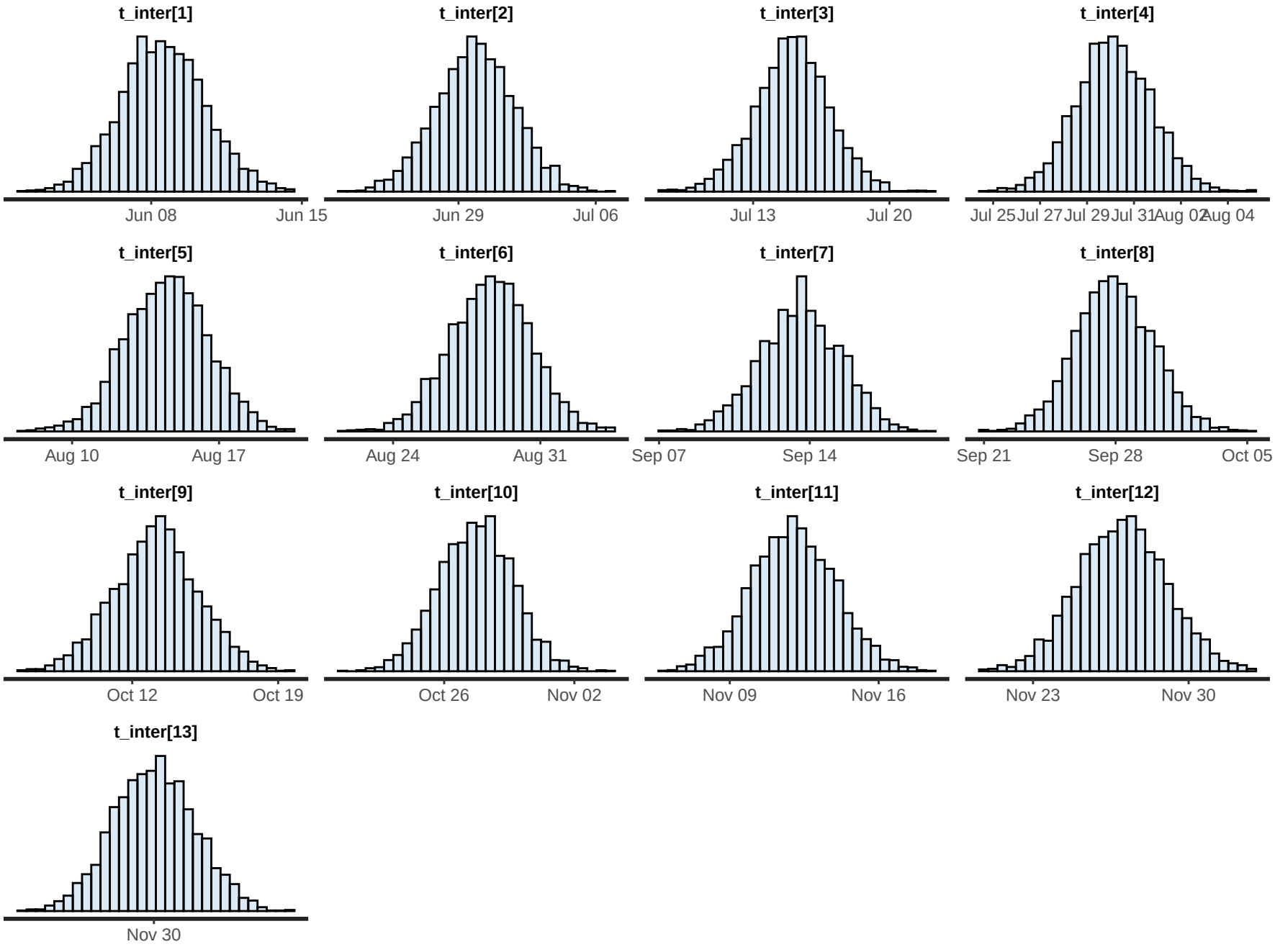

6
9
12
duration_hosp_icu

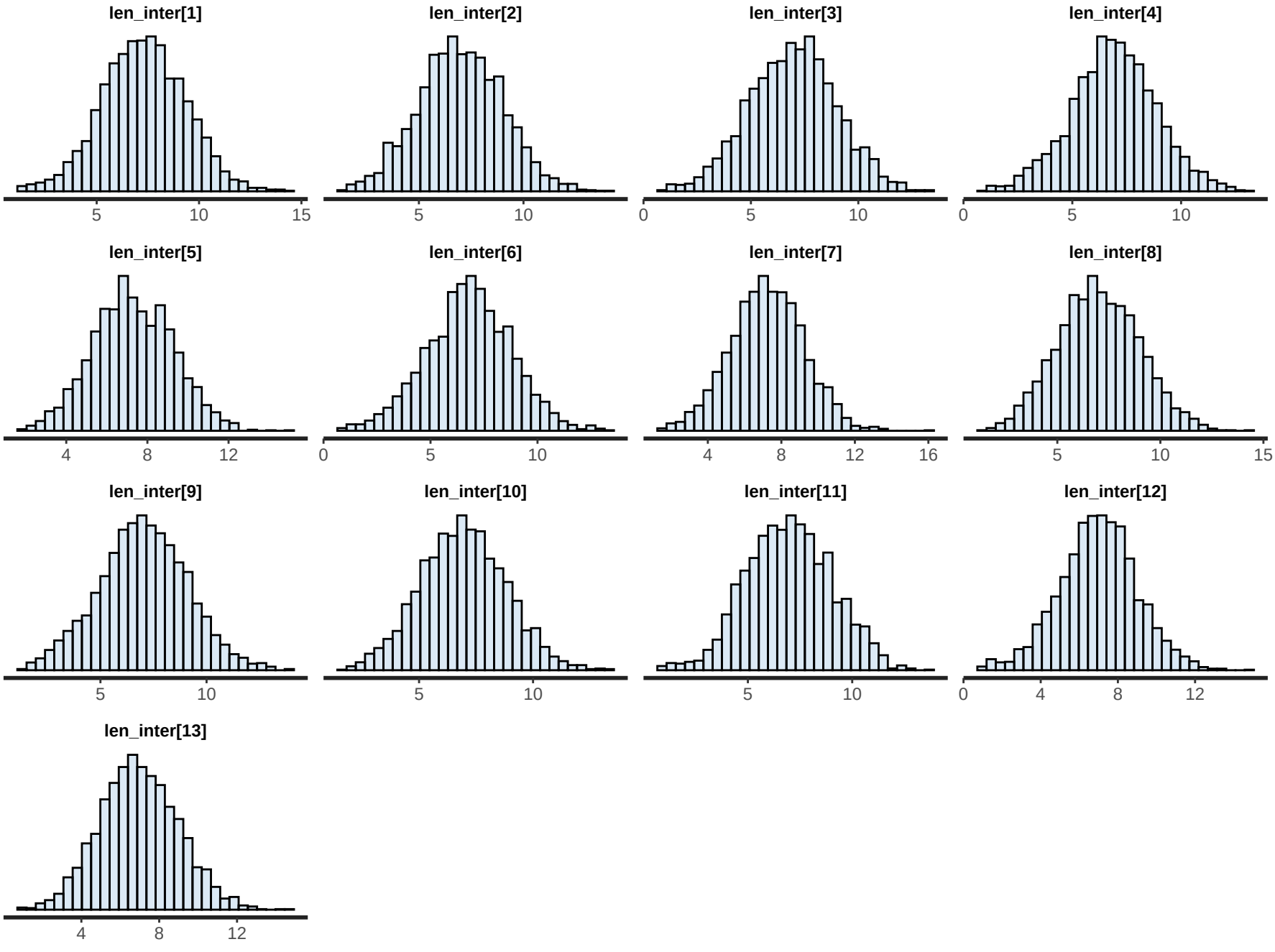

0.03
0.06
0.09
frac_hosp

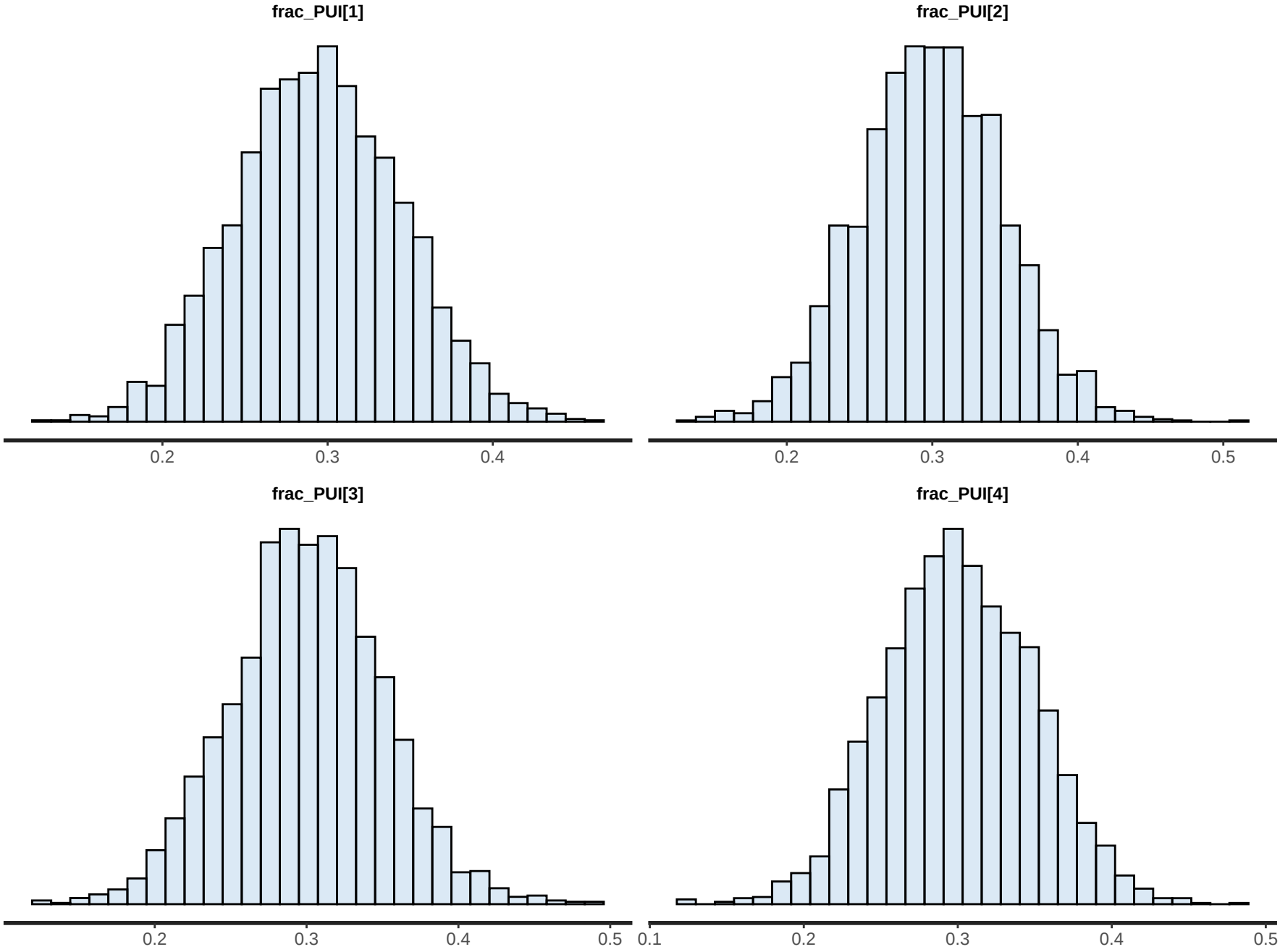

0.30
0.35
0.40
0.45
frac_icu

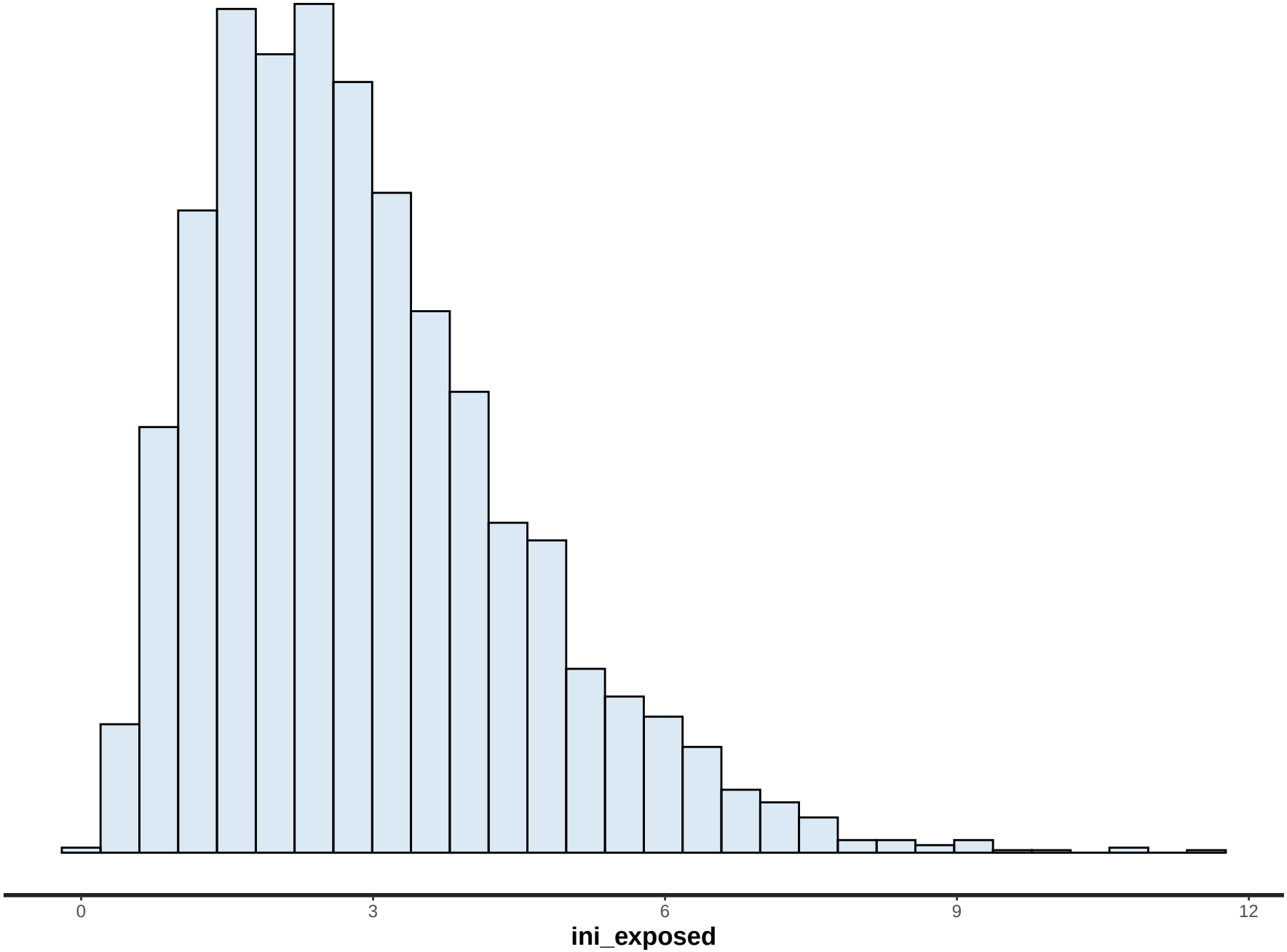

0.3
0.4
0.5
0.6
0.7
frac_mort

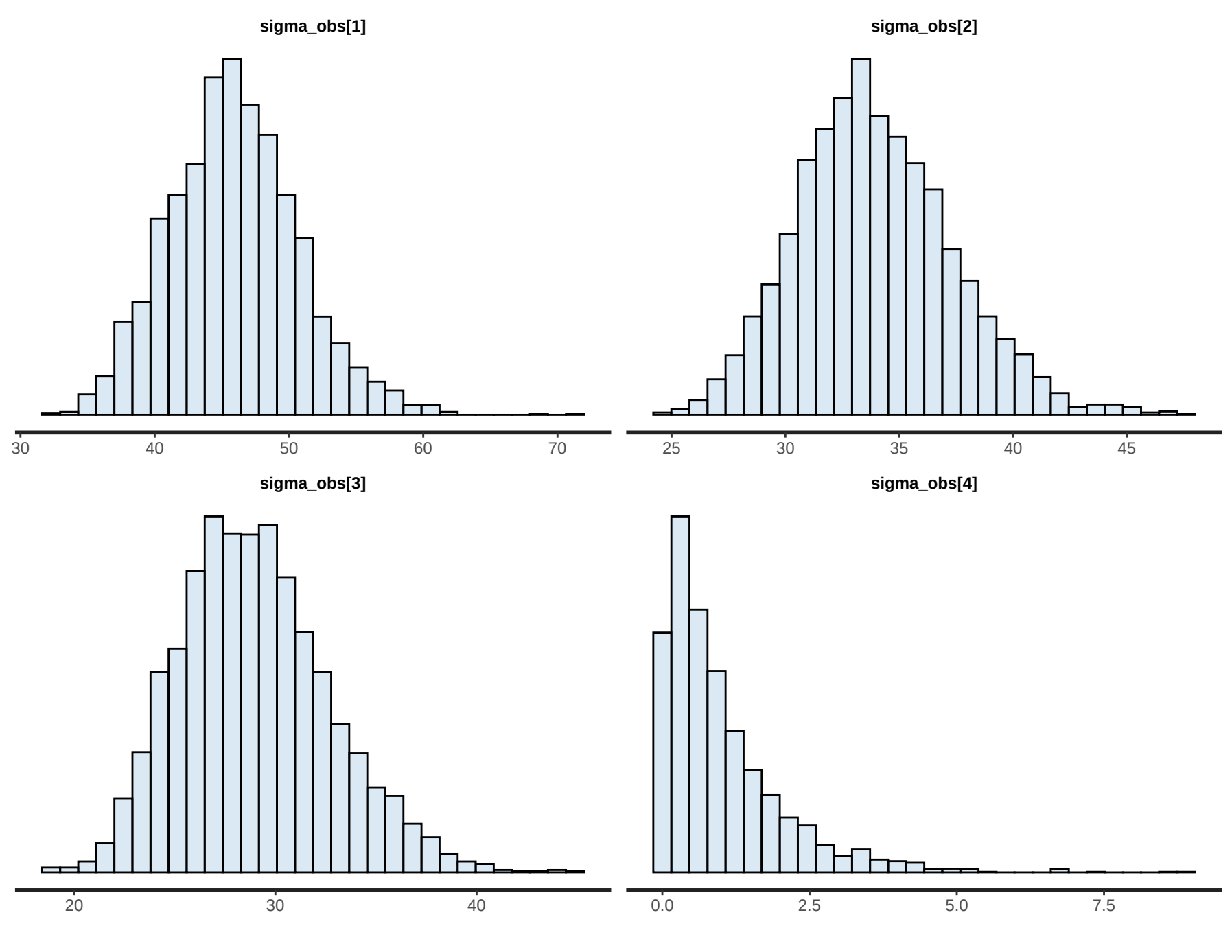

beta_multiplier[1]
0.5 1.0 1.5 2.0 2.5
beta_multiplier[2]
0.5 1.0 1.5 2.0
beta_multiplier[3]
0.5 1.0 1.5
beta_multiplier[4]
0.4 0.6 0.8 1.0
beta_multiplier[5]
1.0 1.5 2.0
beta_multiplier[6]
1.0 1.5 2.0
beta_multiplier[7]
0.5 1.0 1.5
beta_multiplier[8]
0.5 1.0 1.5 2.0
beta_multiplier[9]
1.0 1.5 2.0
beta_multiplier[10]
1.0 1.4 1.8 2.2
beta_multiplier[11]
0.5 1.0 1.5 2.0
beta_multiplier[12]
0.6 0.8 1.0 1.2 1.4
beta_multiplier[13]
0.4998 0.5000 0.5002


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


len_inter[1]
5
10
15
len_inter[2]
5
10
len_inter[3]
0
5
10
len_inter[4]
0
5
10
len_inter[5]
4
8
12
len_inter[6]
0
5
10
len_inter[7]
4
8
12
16
len_inter[8]
5
10
15
len_inter[9]
5
10
len_inter[10]
5
10
len_inter[11]
5
10
len_inter[12]
0
4
8
12
len_inter[13]
4
8
12


frac_PUI[1]
0.2
0.3
0.4
frac_PUI[2]
0.2
0.3
0.4
0.5
frac_PUI[3]
0.2
0.3
0.4
0.5
frac_PUI[4]
0.1
0.2
0.3
0.4
0.5


0
3
6
9
12
ini_exposed


sigma_obs[1]
30
40
50
60
70
sigma_obs[2]
25
30
35
40
45
sigma_obs[3]
20
30
40
sigma_obs[4]
0.0
2.5
5.0
7.5