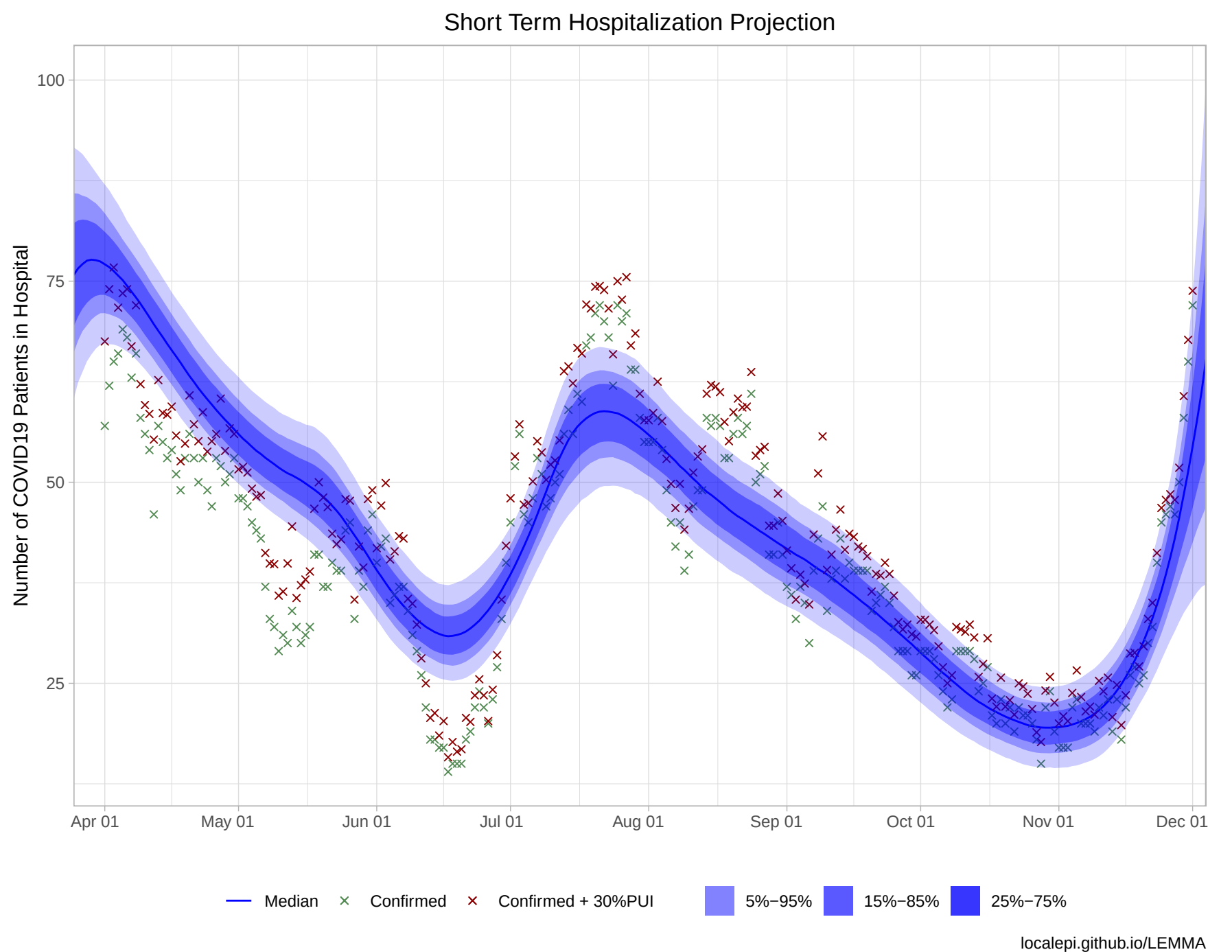
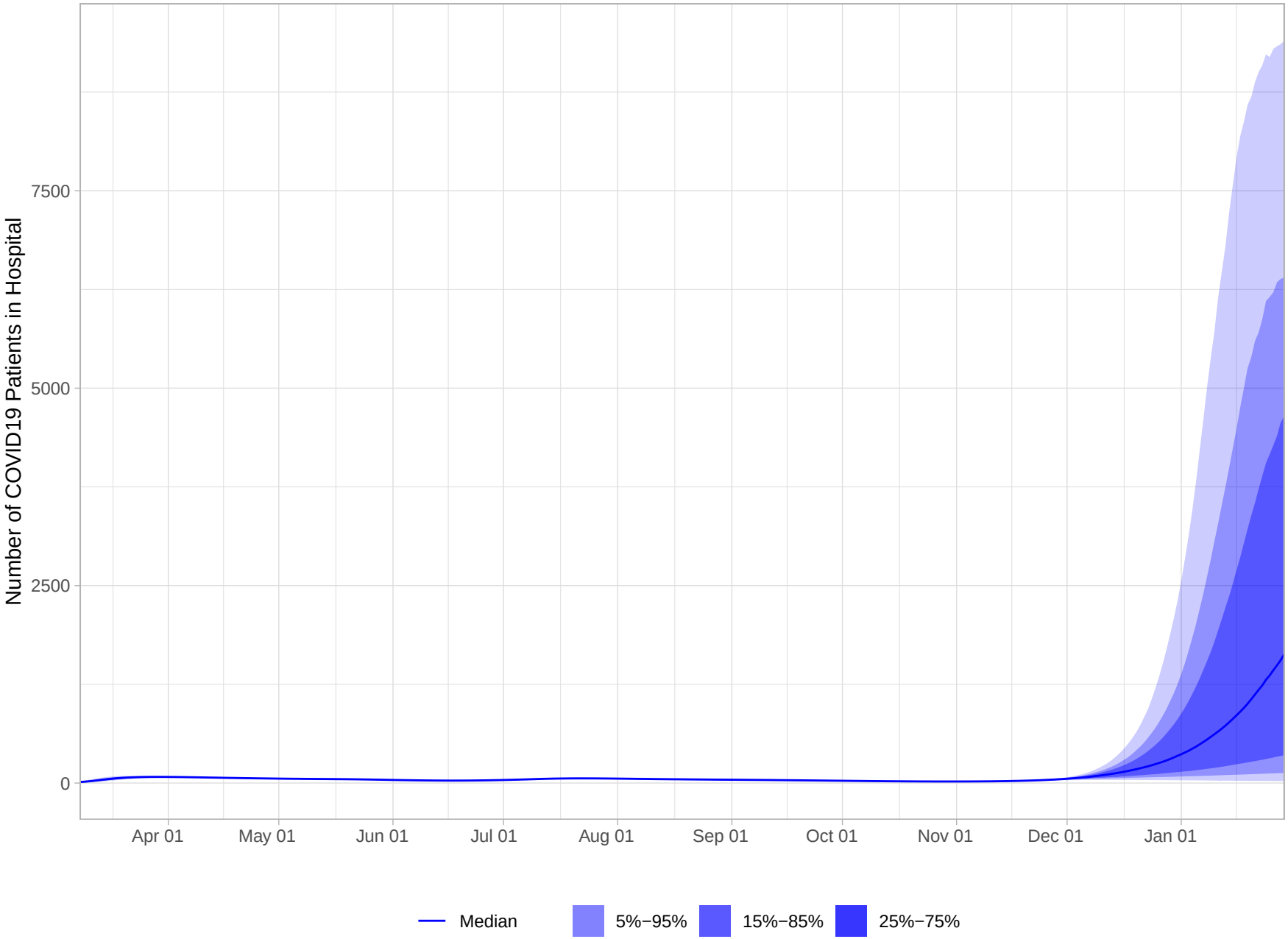
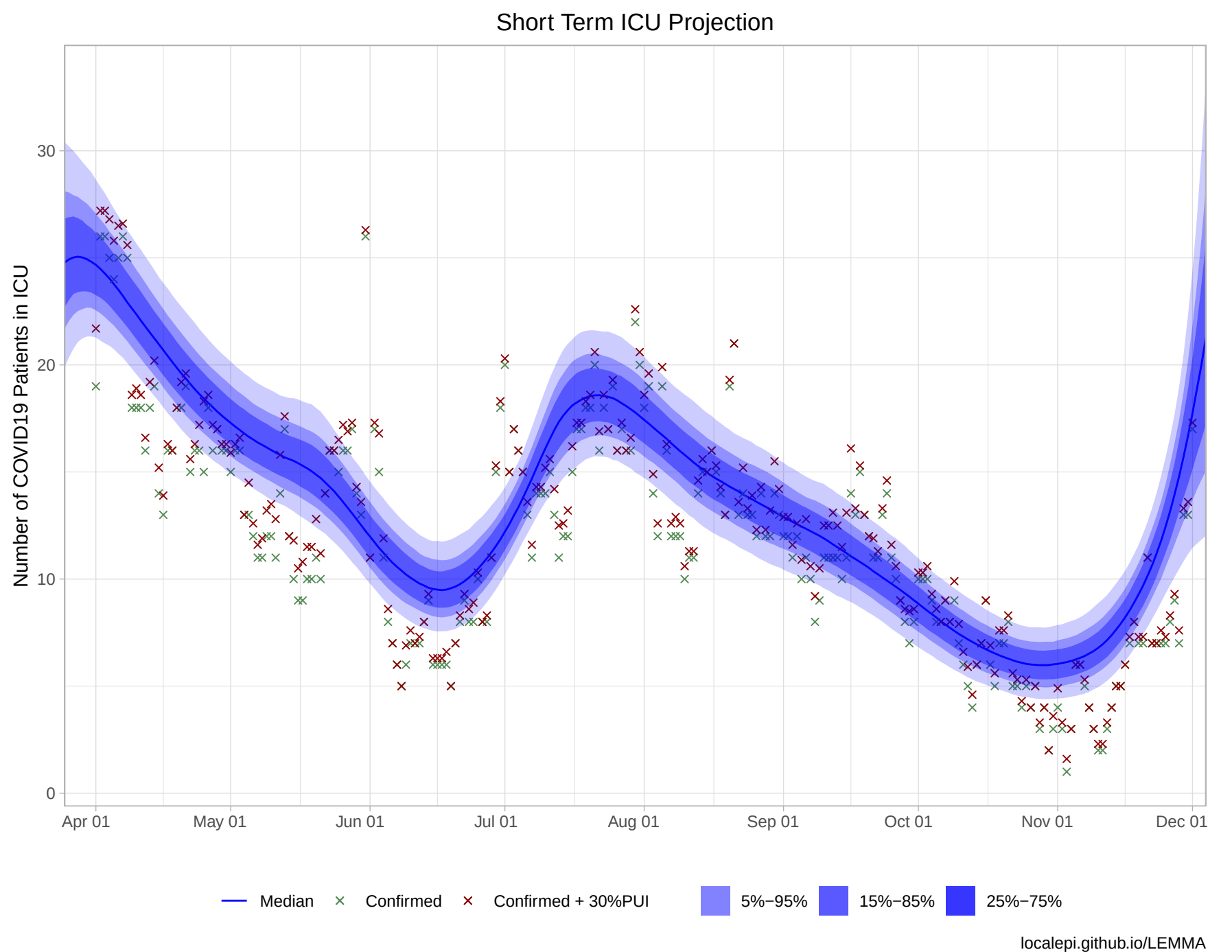
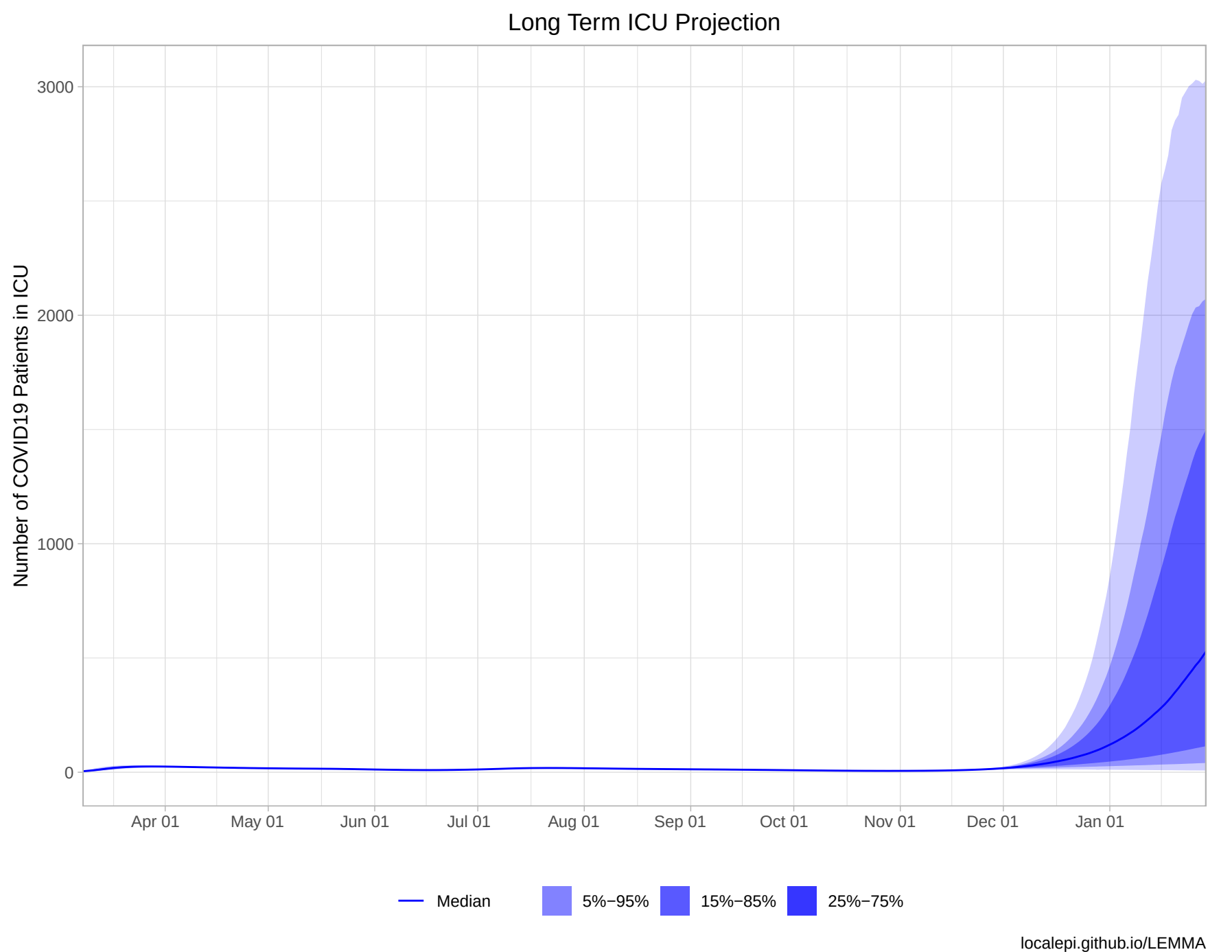
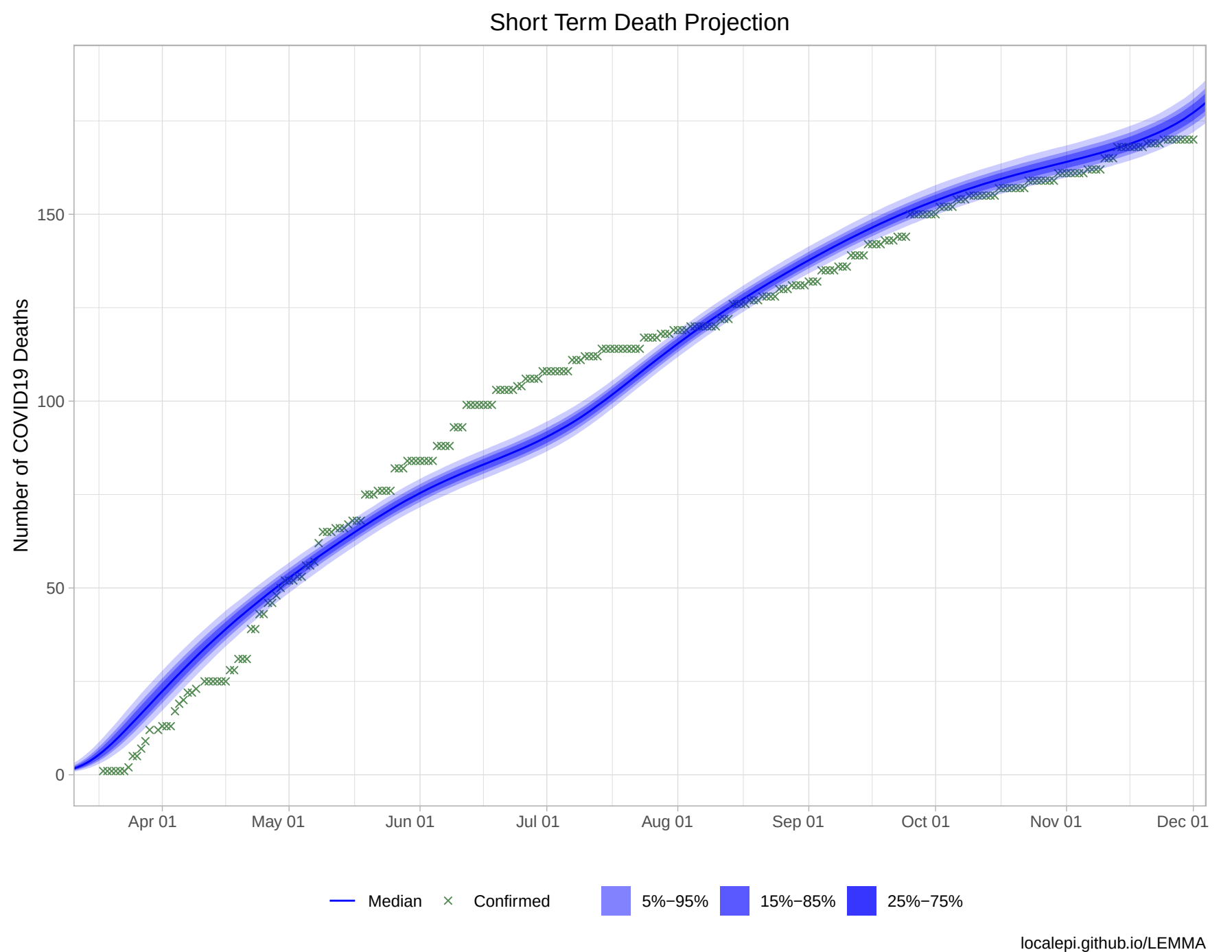
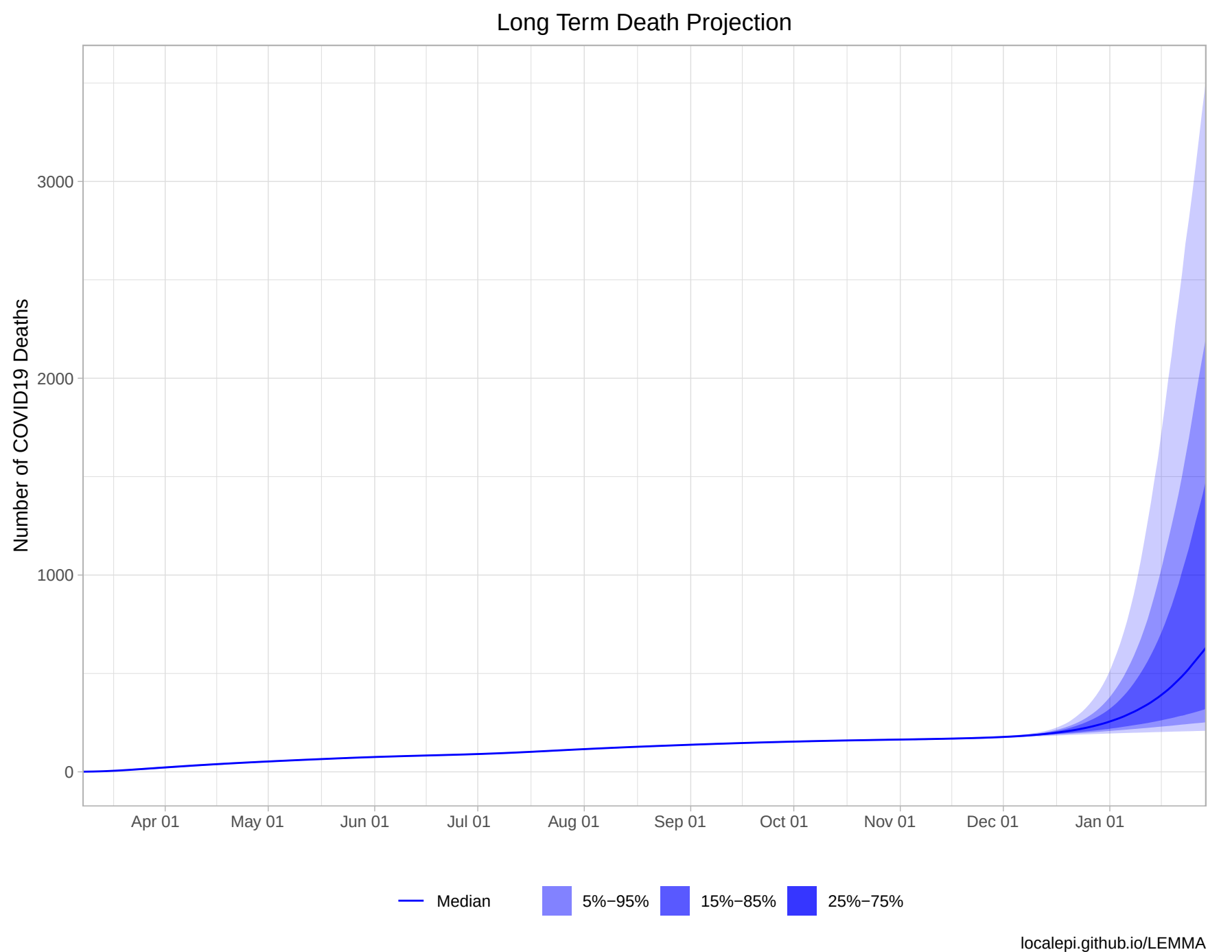

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
100
75
50
25
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

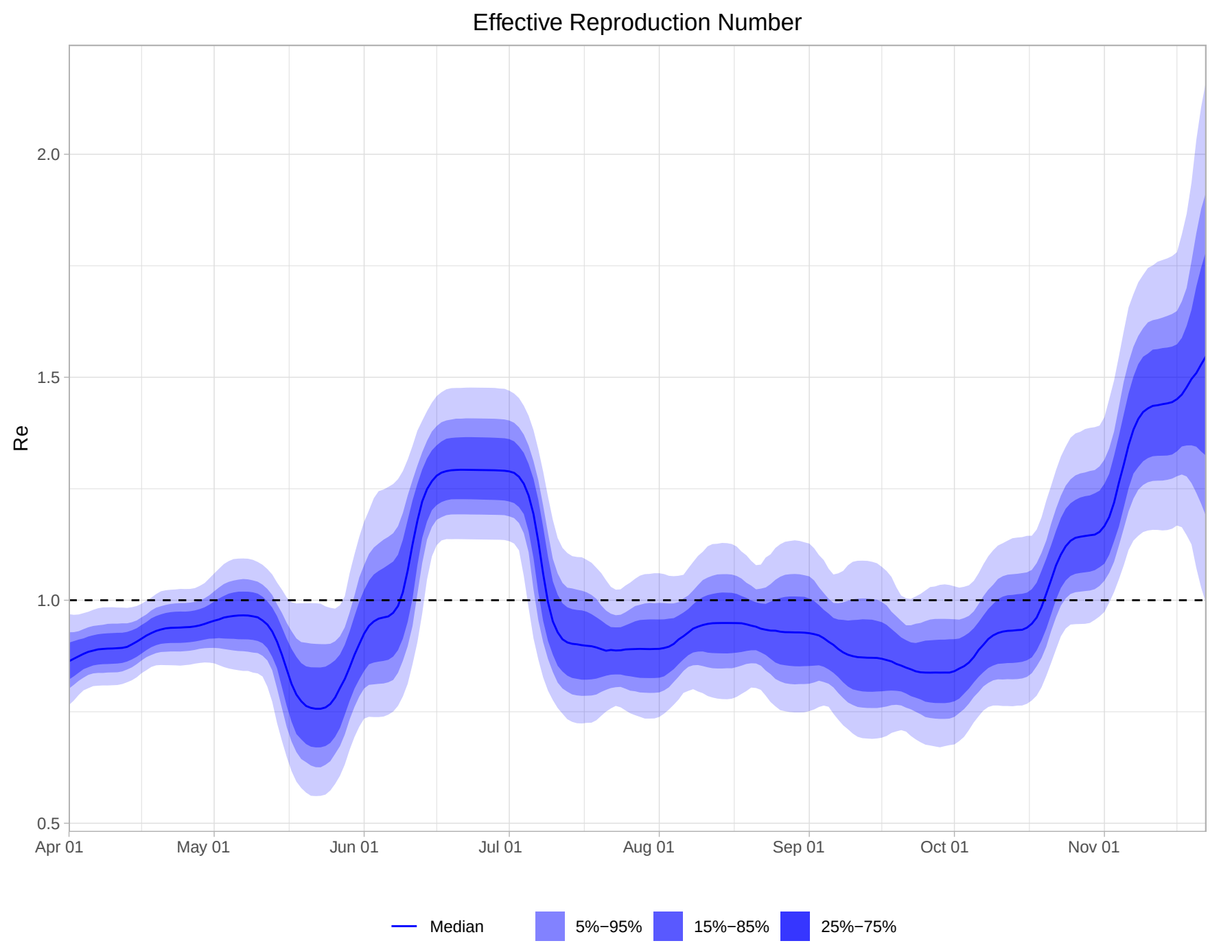

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
7500
5000
2500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
0
10
20
30
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
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

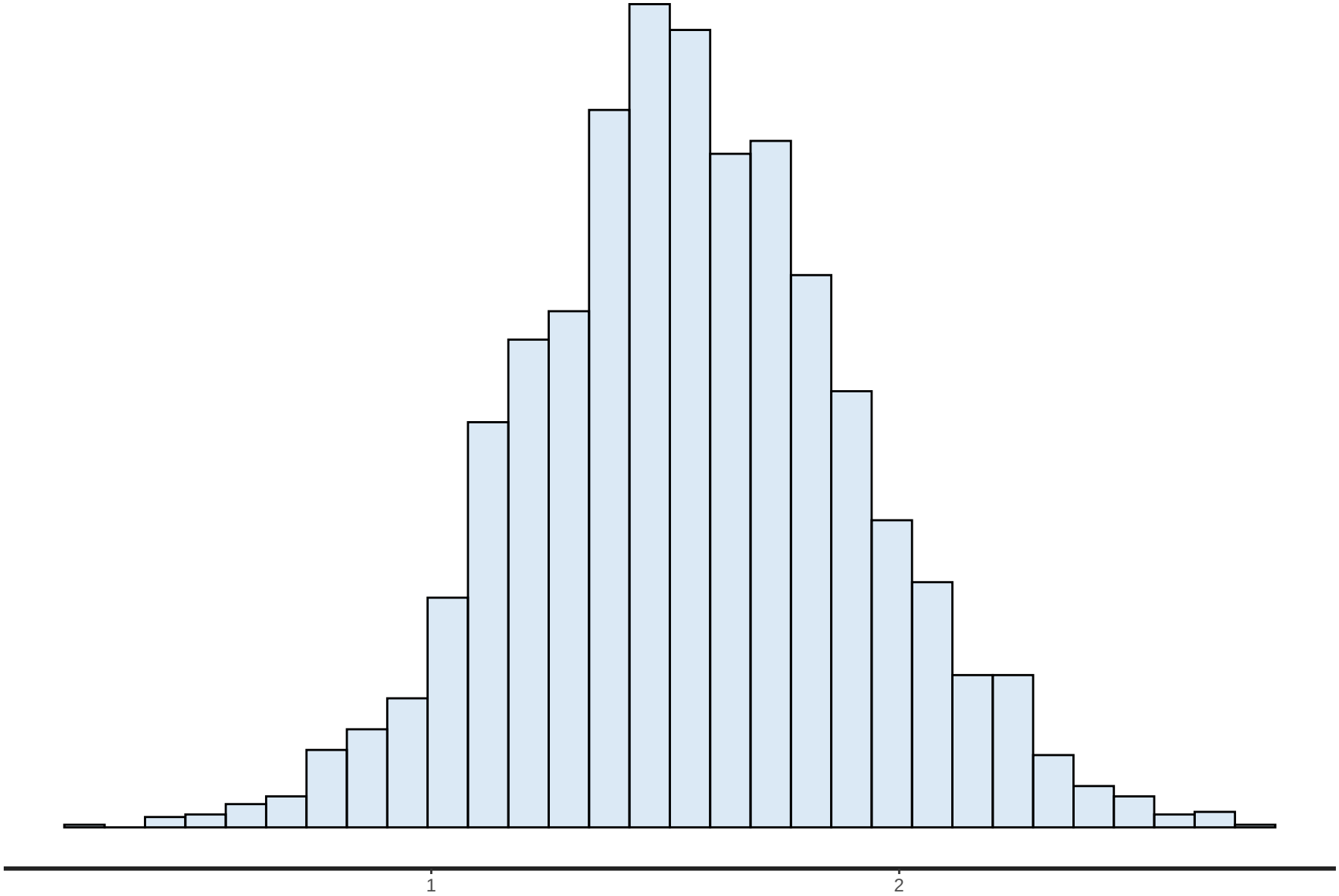

Short Term Death Projection
Number of COVID19 Deaths
0
50
100
150
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

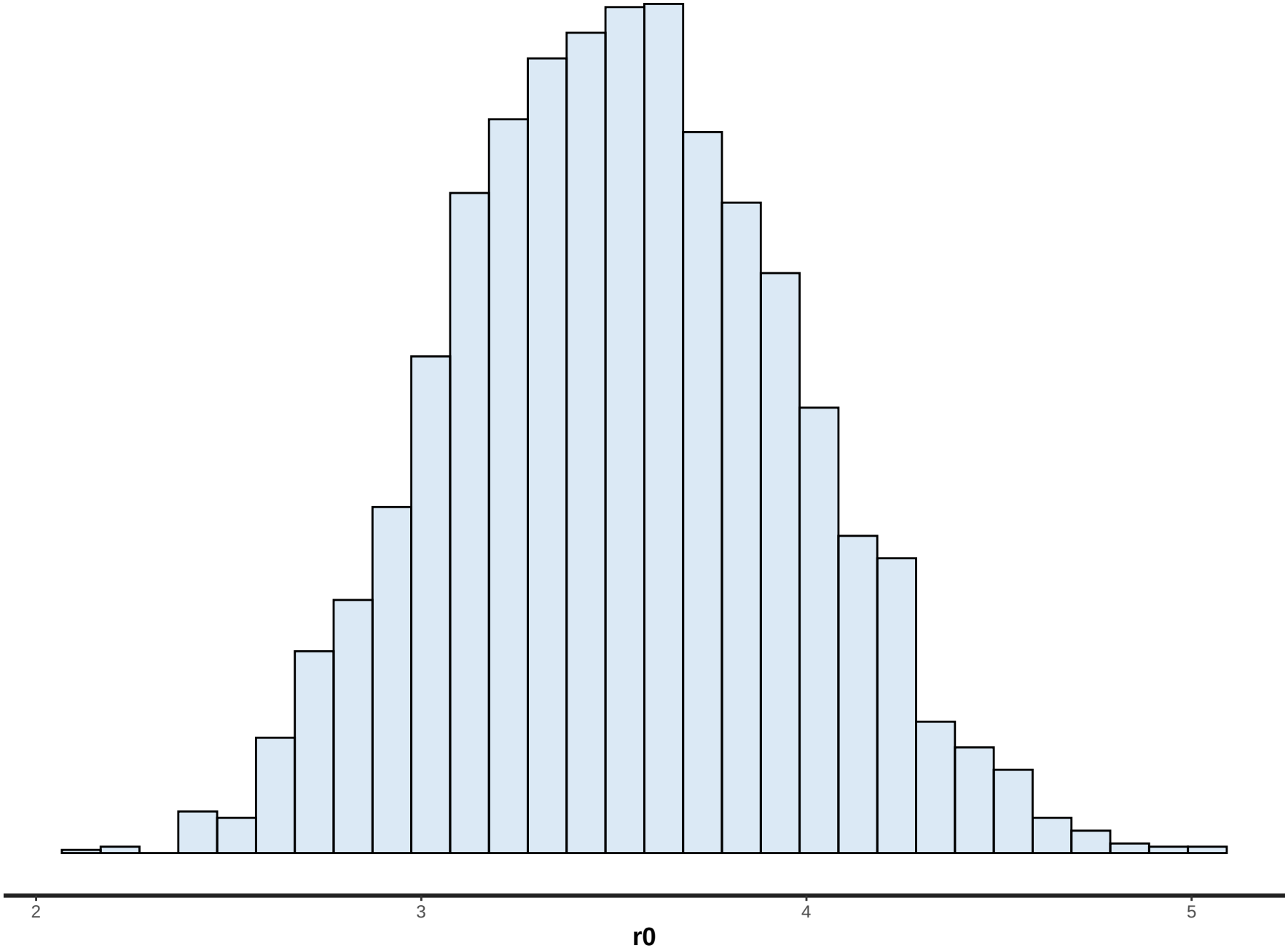

Long Term Death Projection
Number of COVID19 Deaths
3000
2000
1000
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

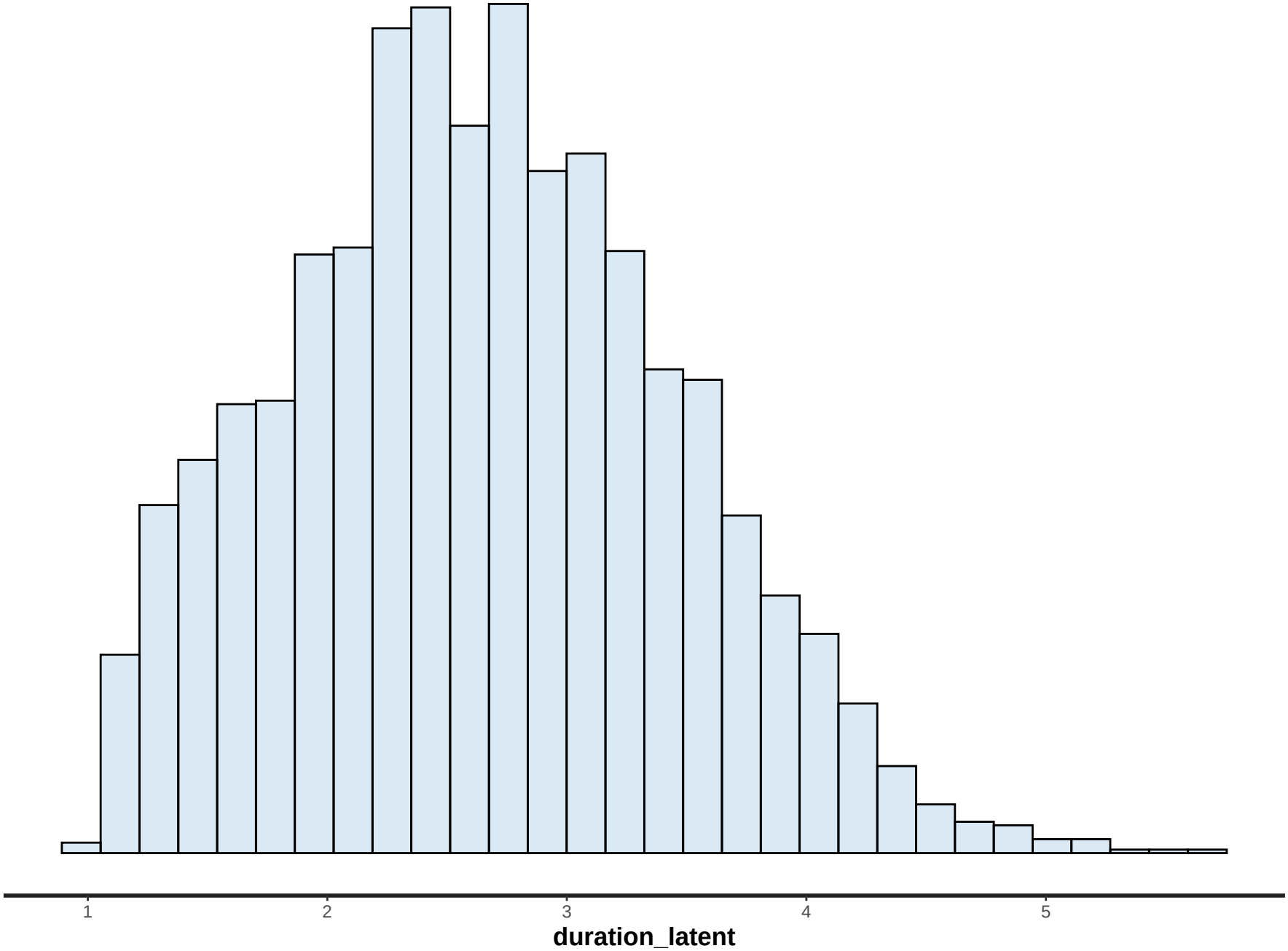

Effective Reproduction Number
Re
2.0
1.5
1.0
0.5
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

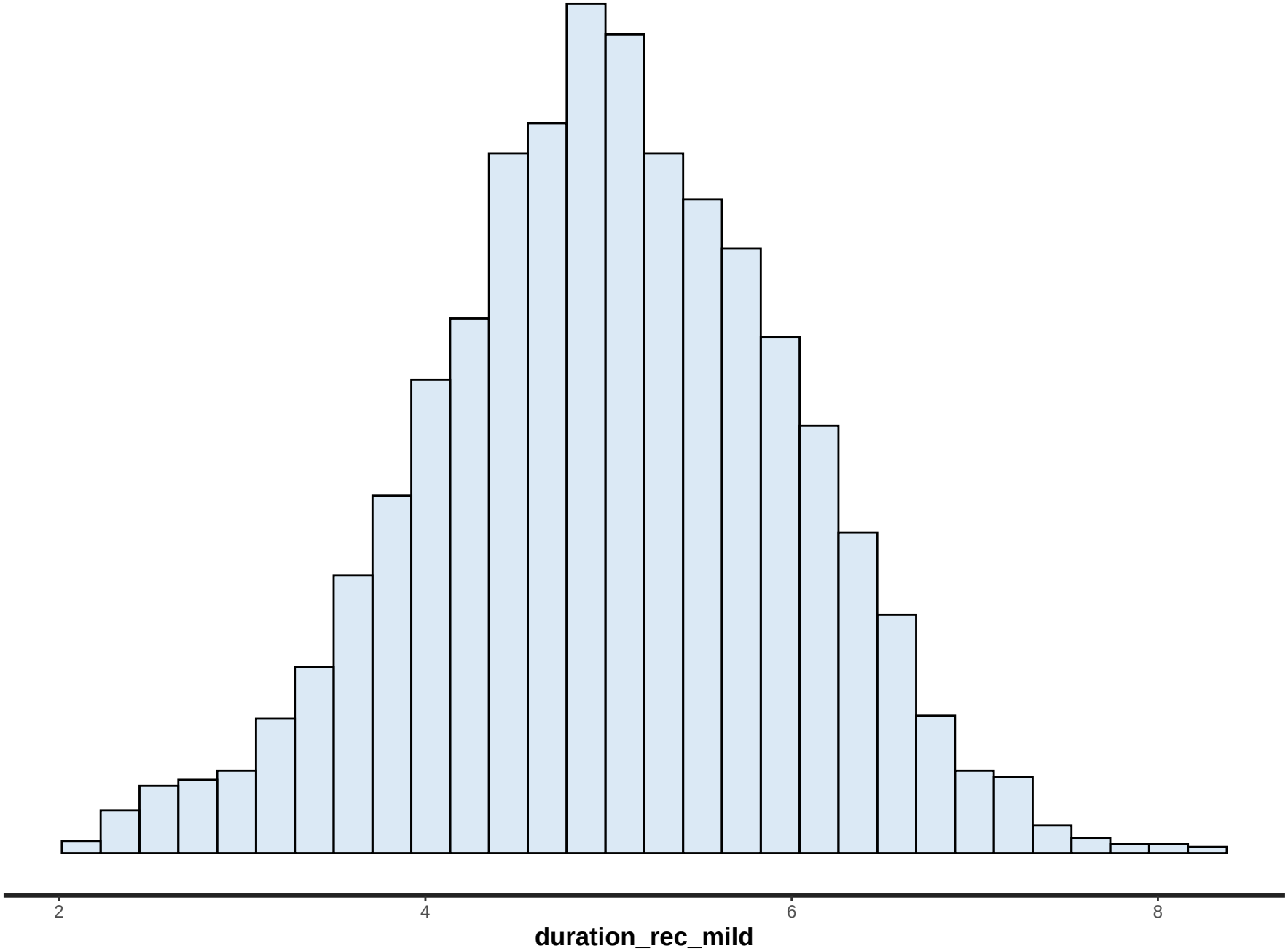
Rt as of 2020−11−22

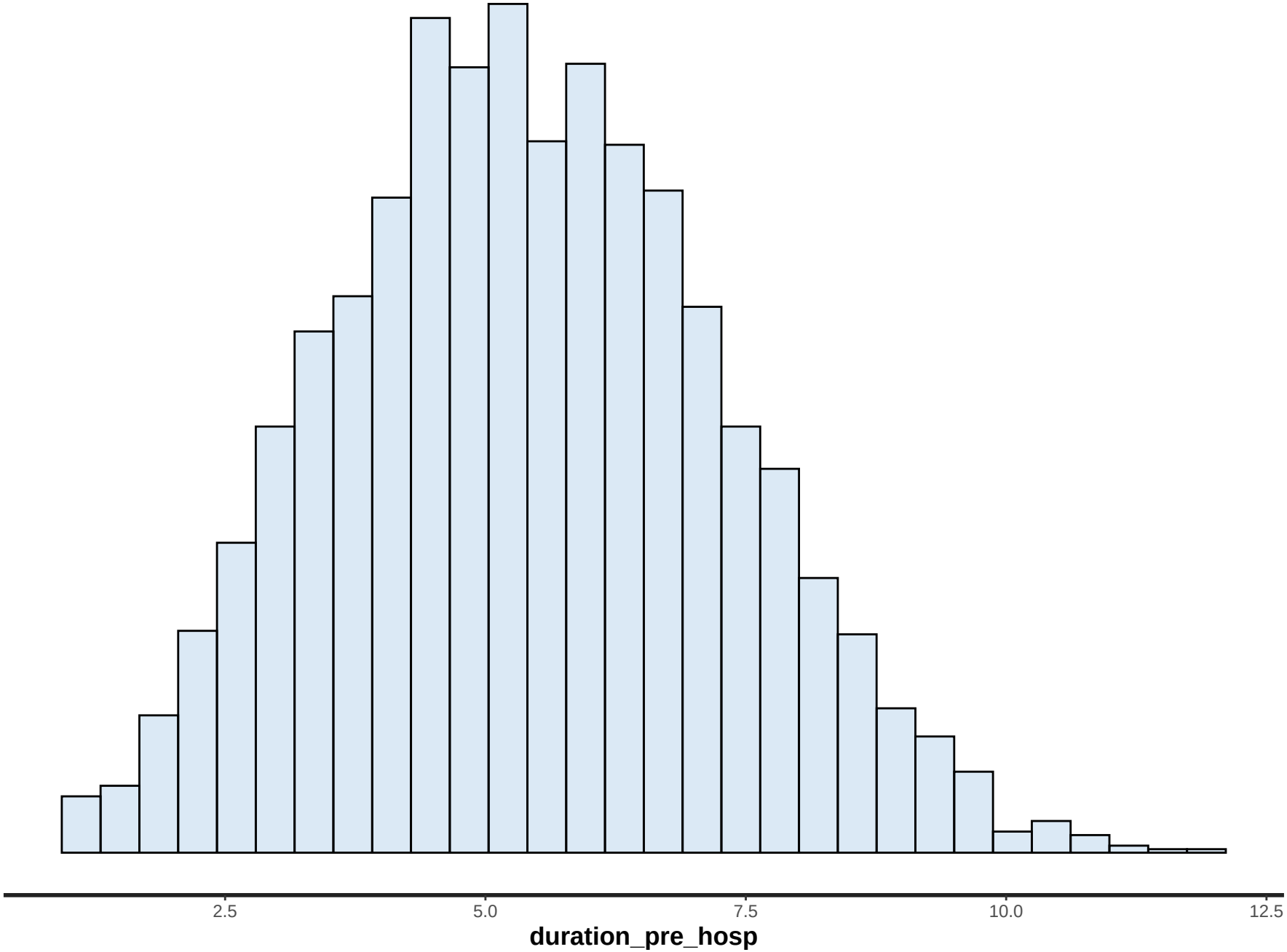
5%	10%	25%	50%	75%	90%	95%
0.99	1.12	1.32	1.55	1.78	2.02	2.16

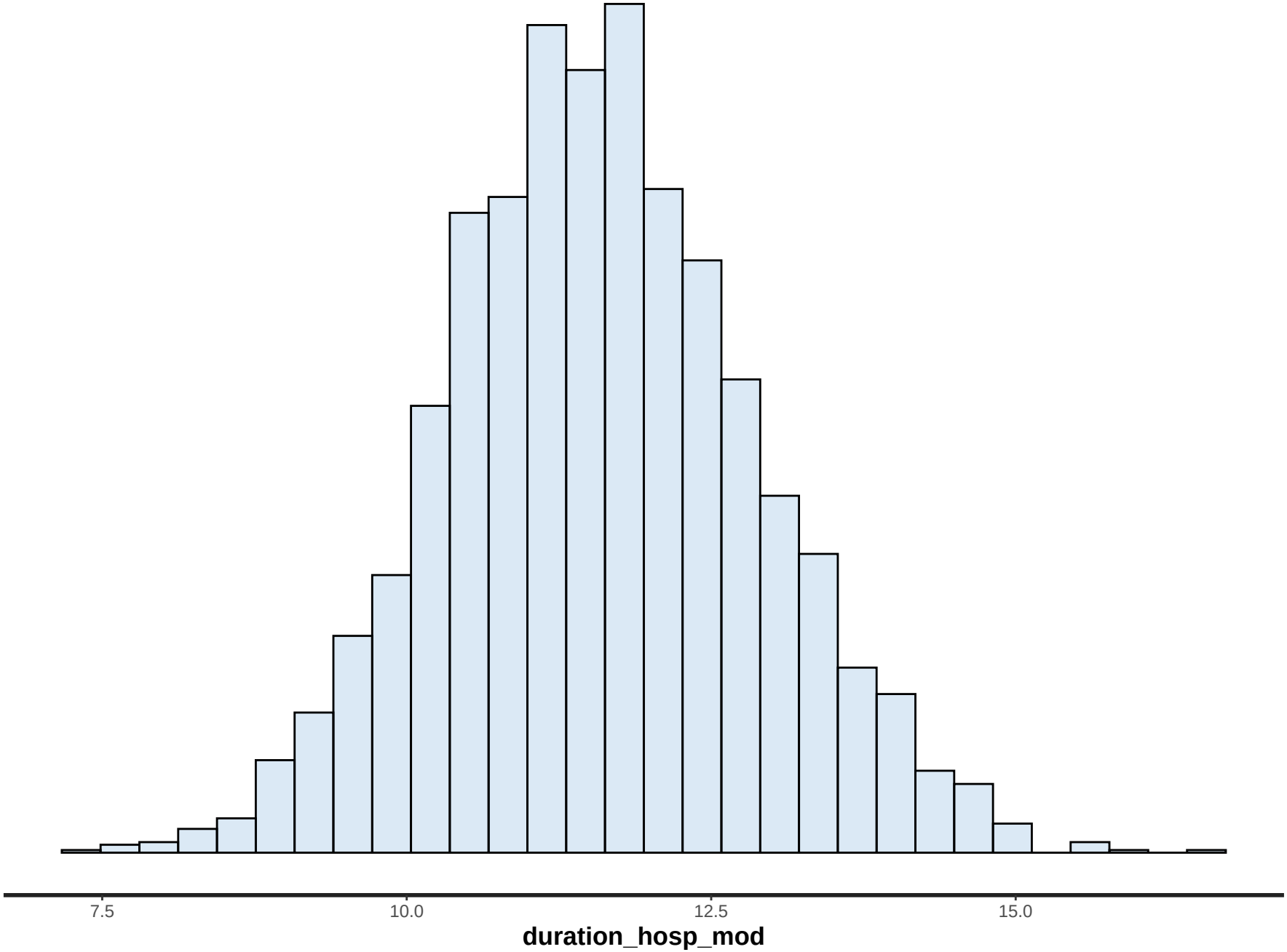


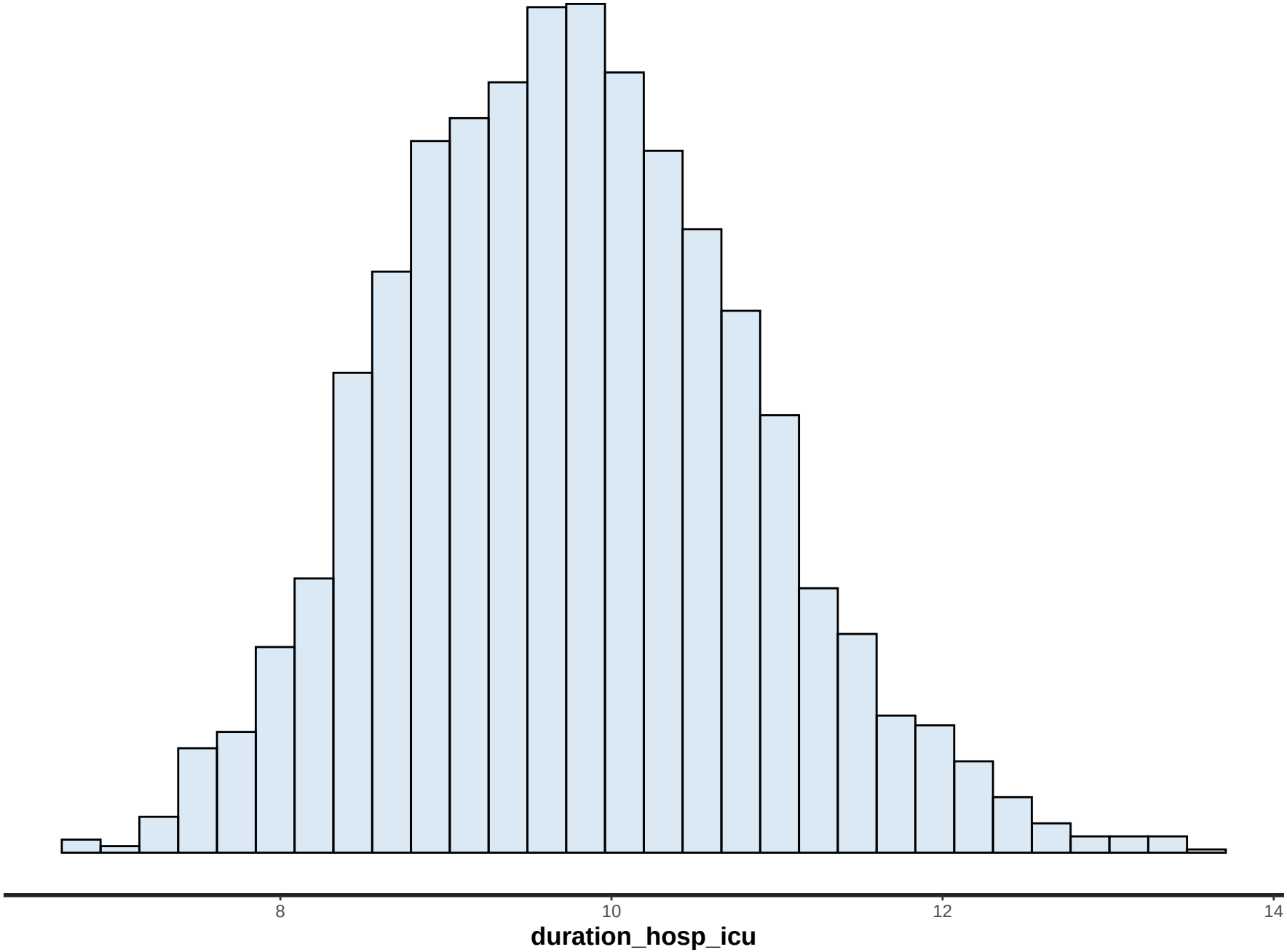

2
3
4
5
r0

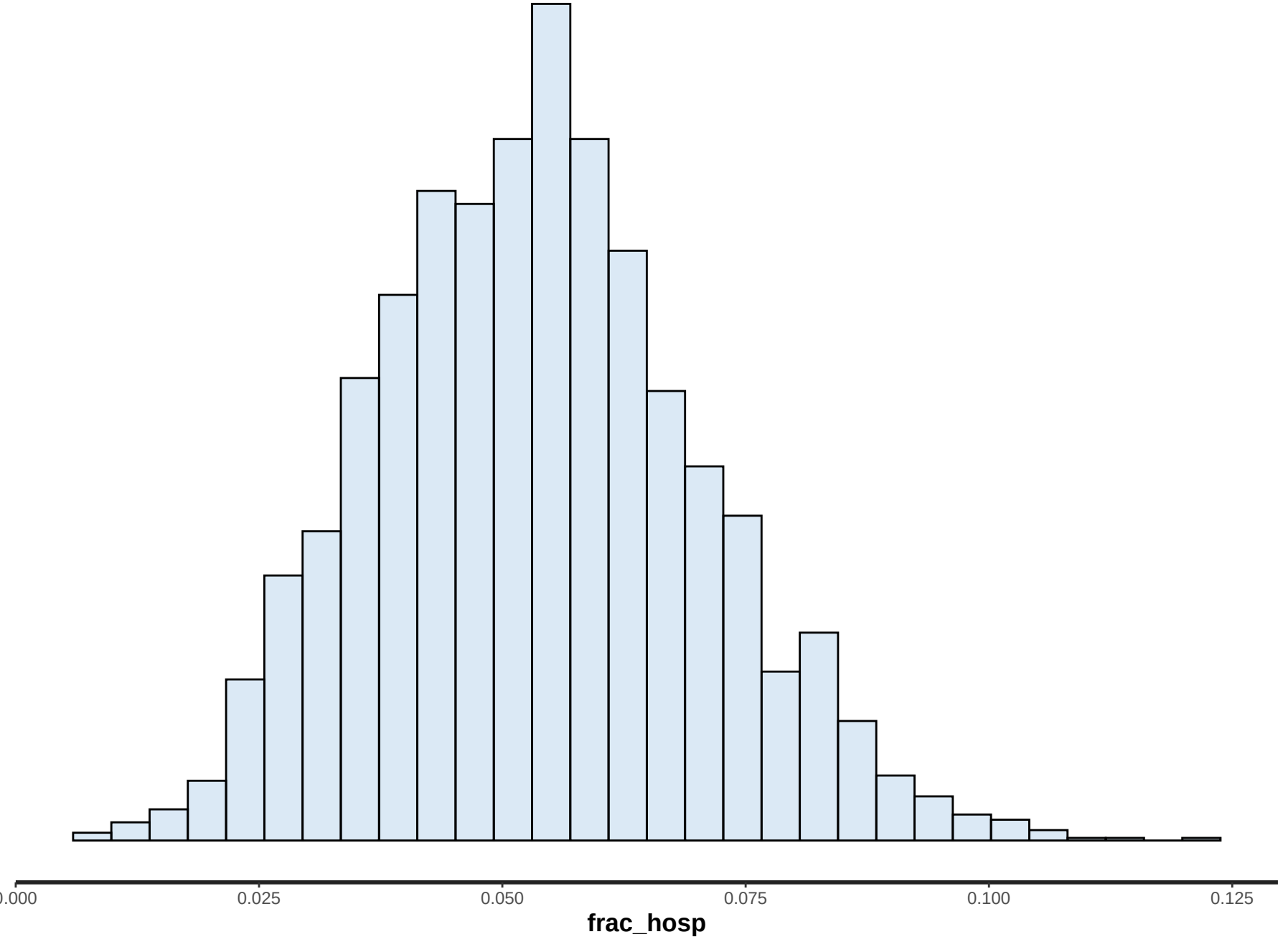

1
2
3
4
5
duration_latent

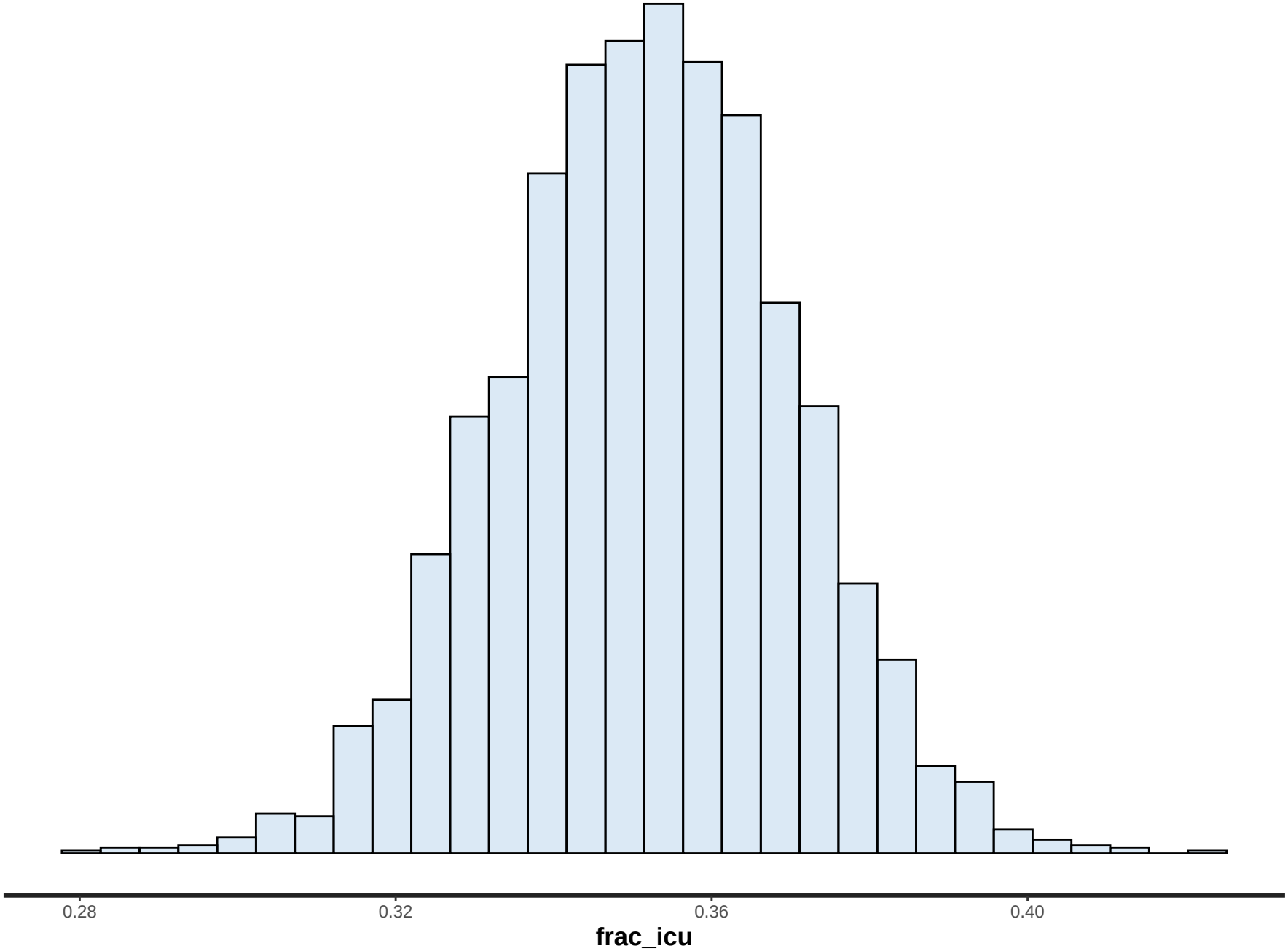

2
4
6
8
duration_rec_mild

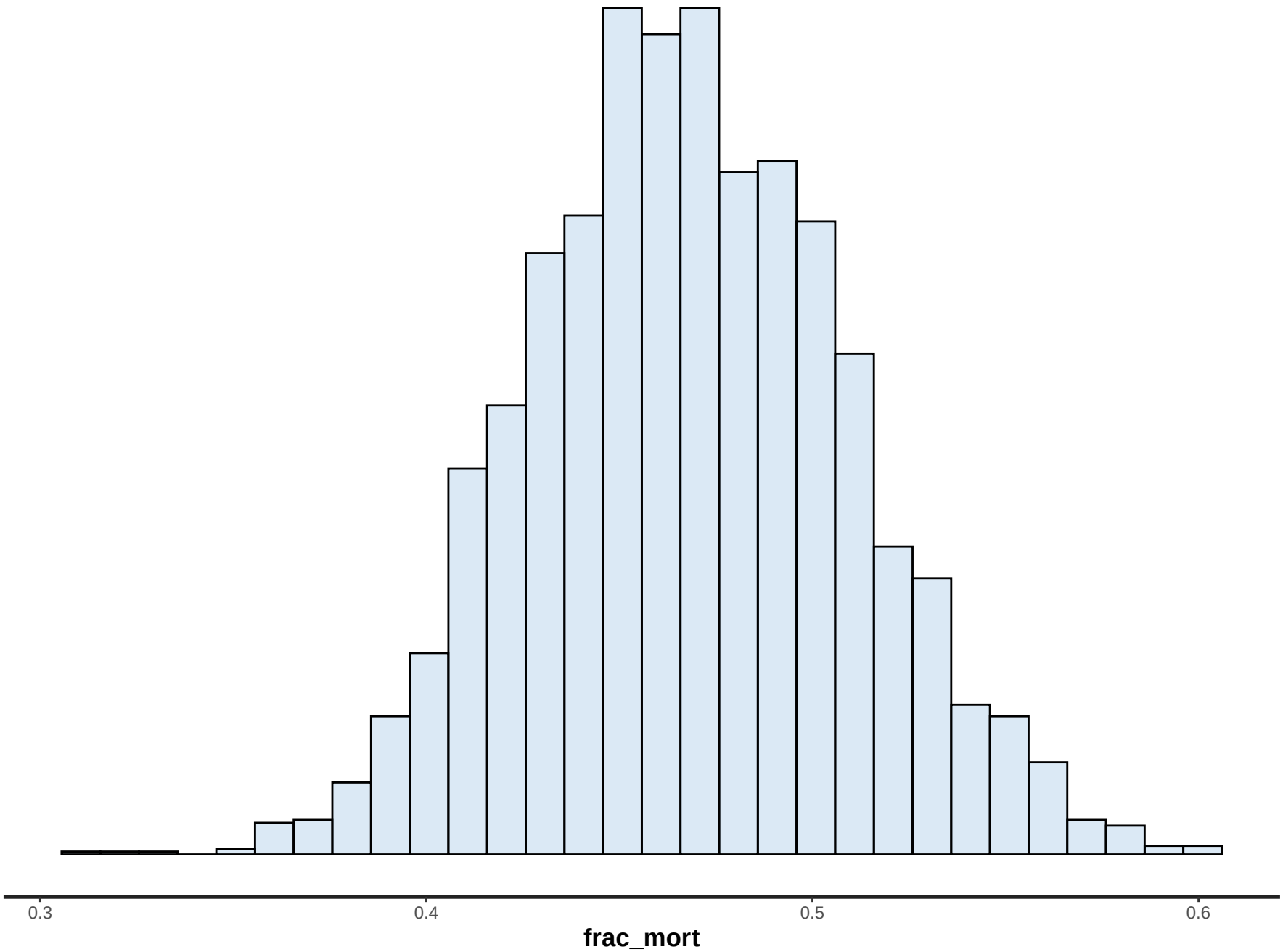

2.5
5.0
7.5
10.0
12.5
duration_pre_hosp

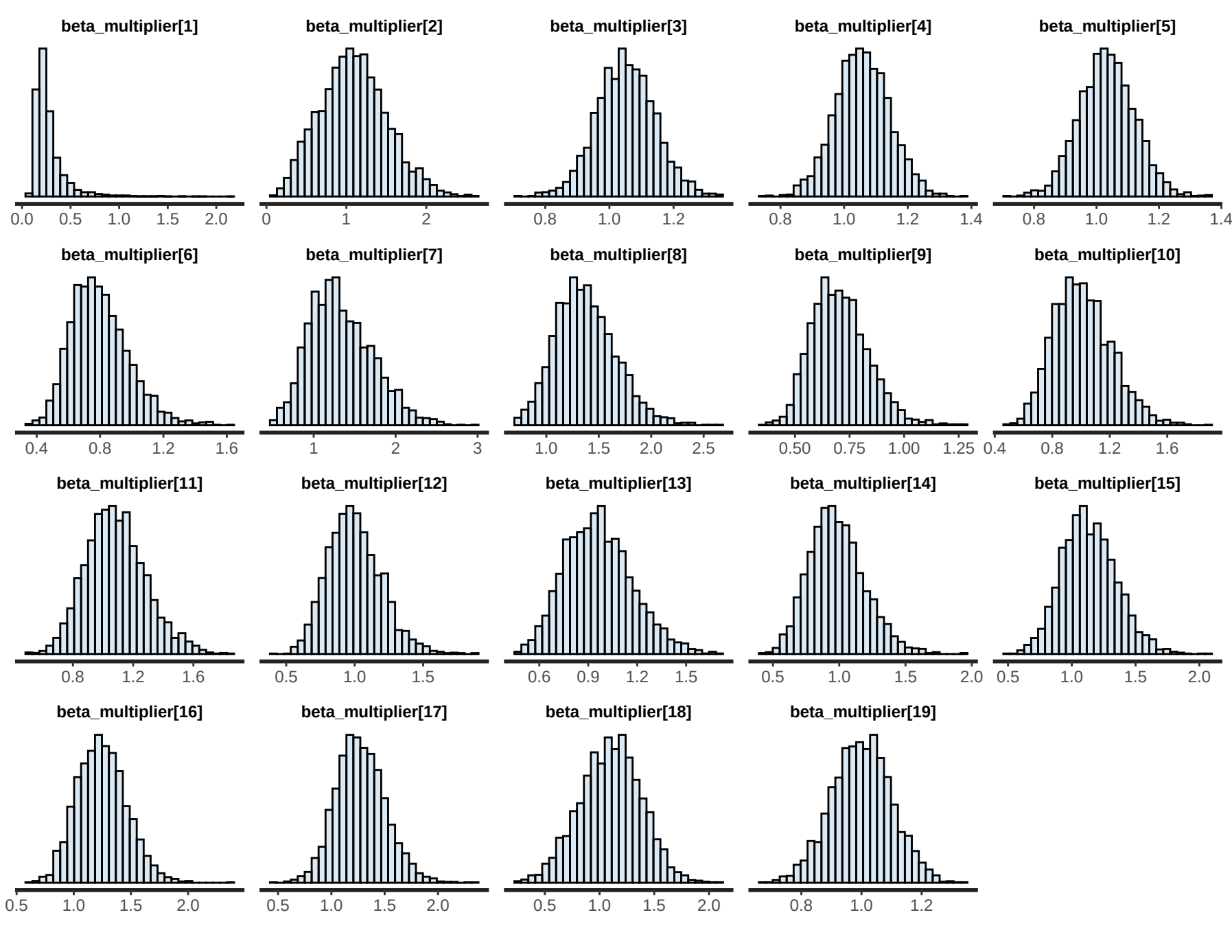

7.5
10.0
12.5
15.0
duration_hosp_mod

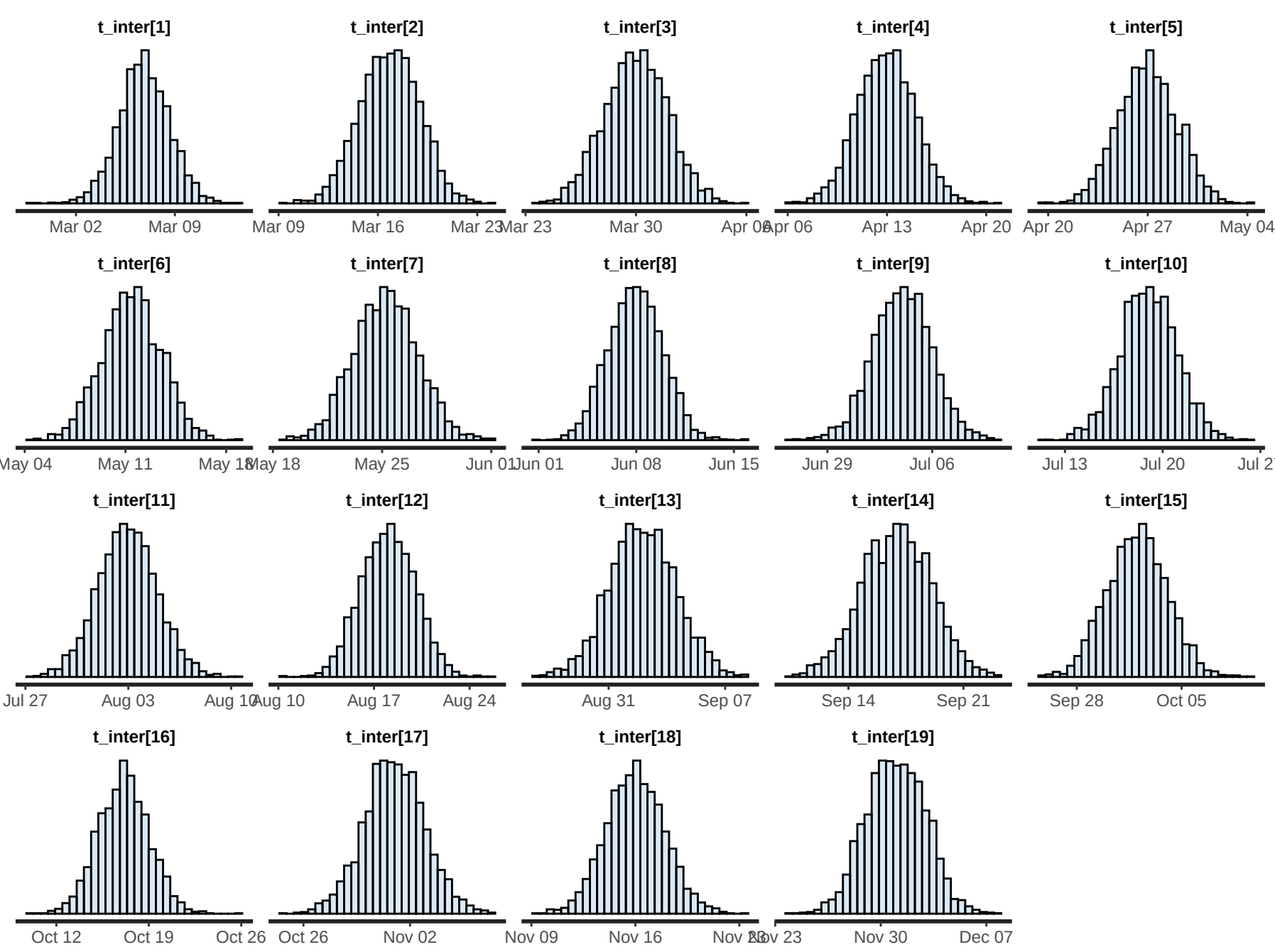

8
10
12
14
duration_hosp_icu

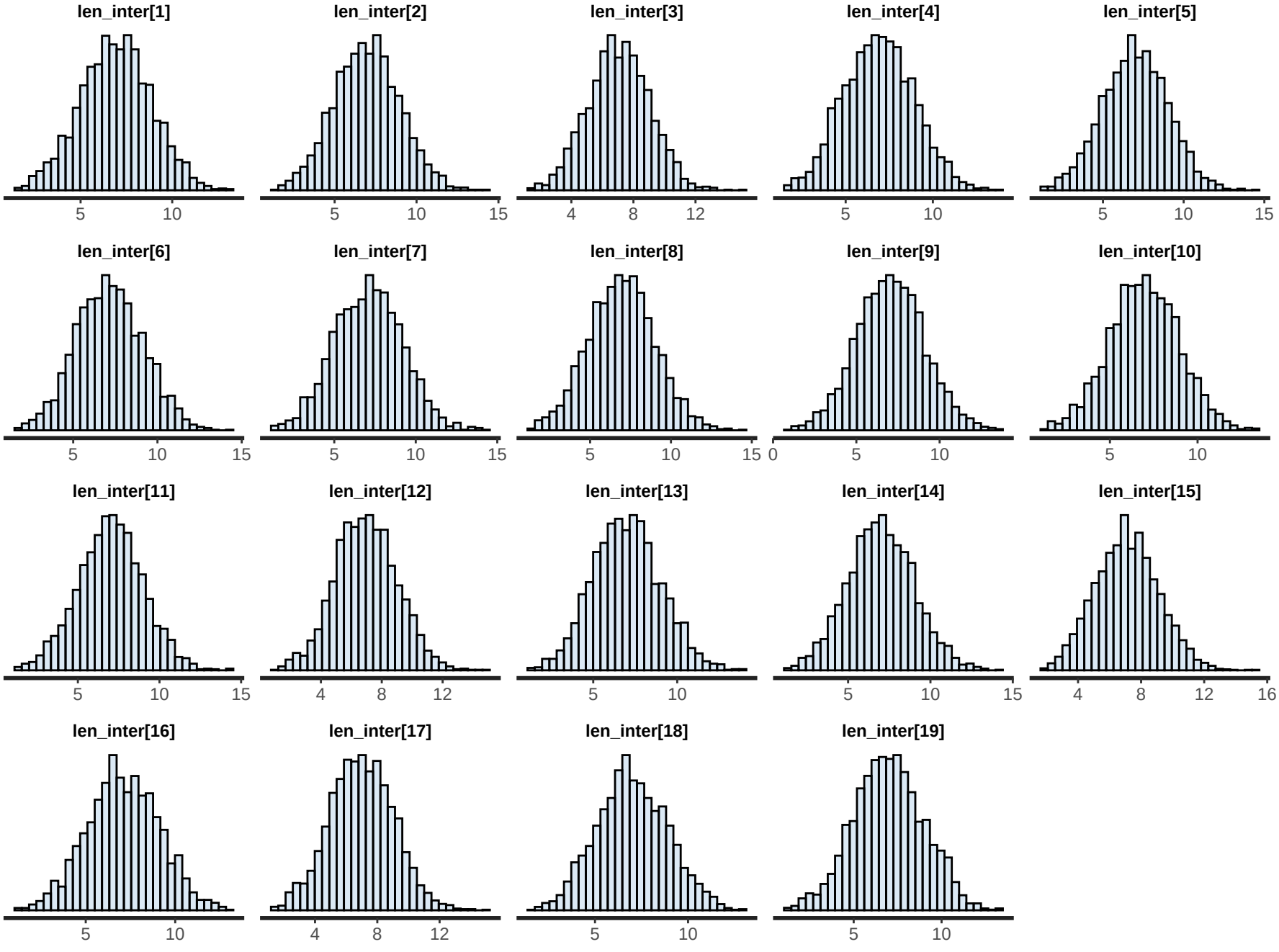

0.000
0.025
0.050
0.075
0.100
0.125
frac_hosp

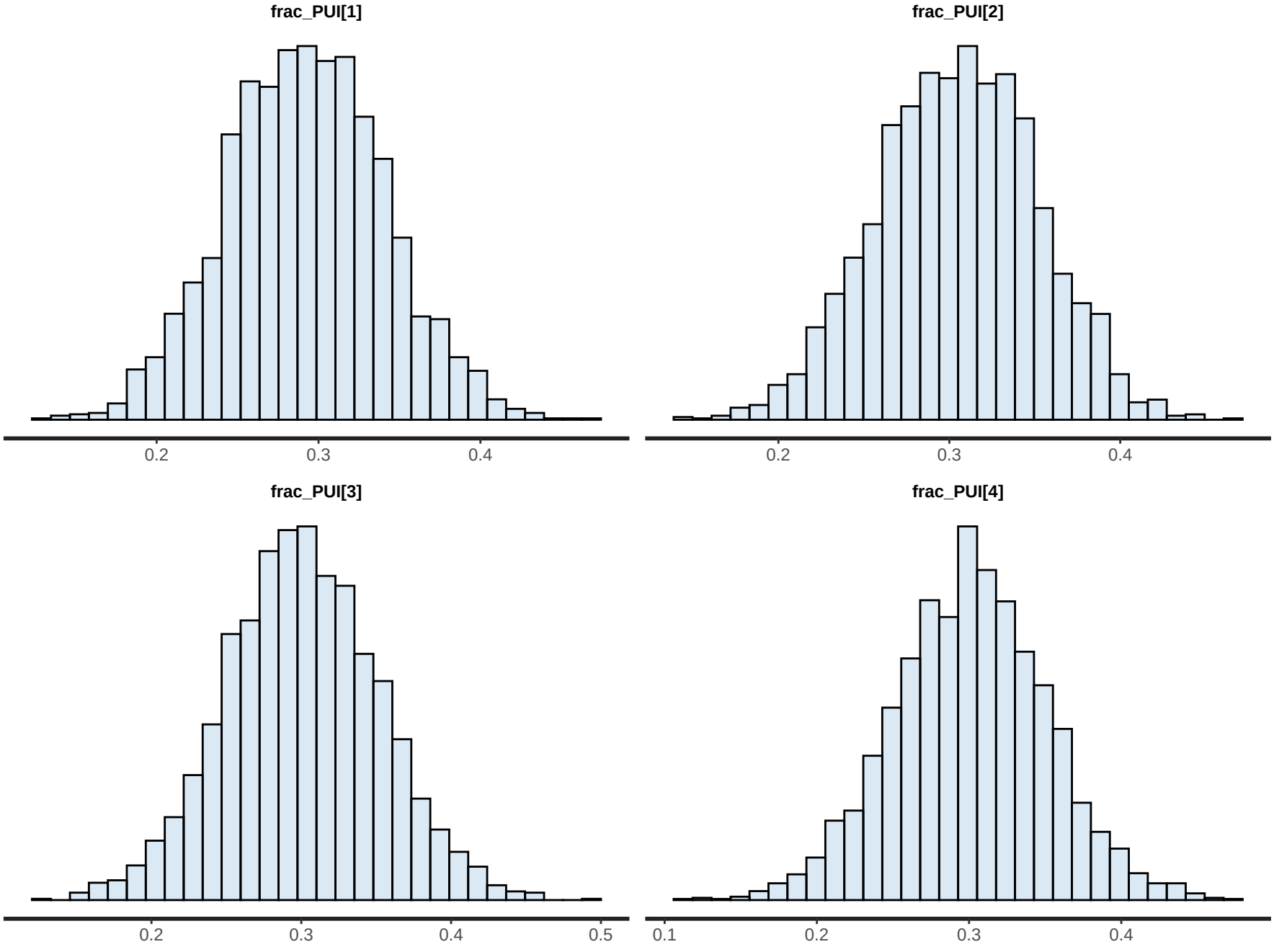

0.28
0.32
0.36
0.40
frac_icu

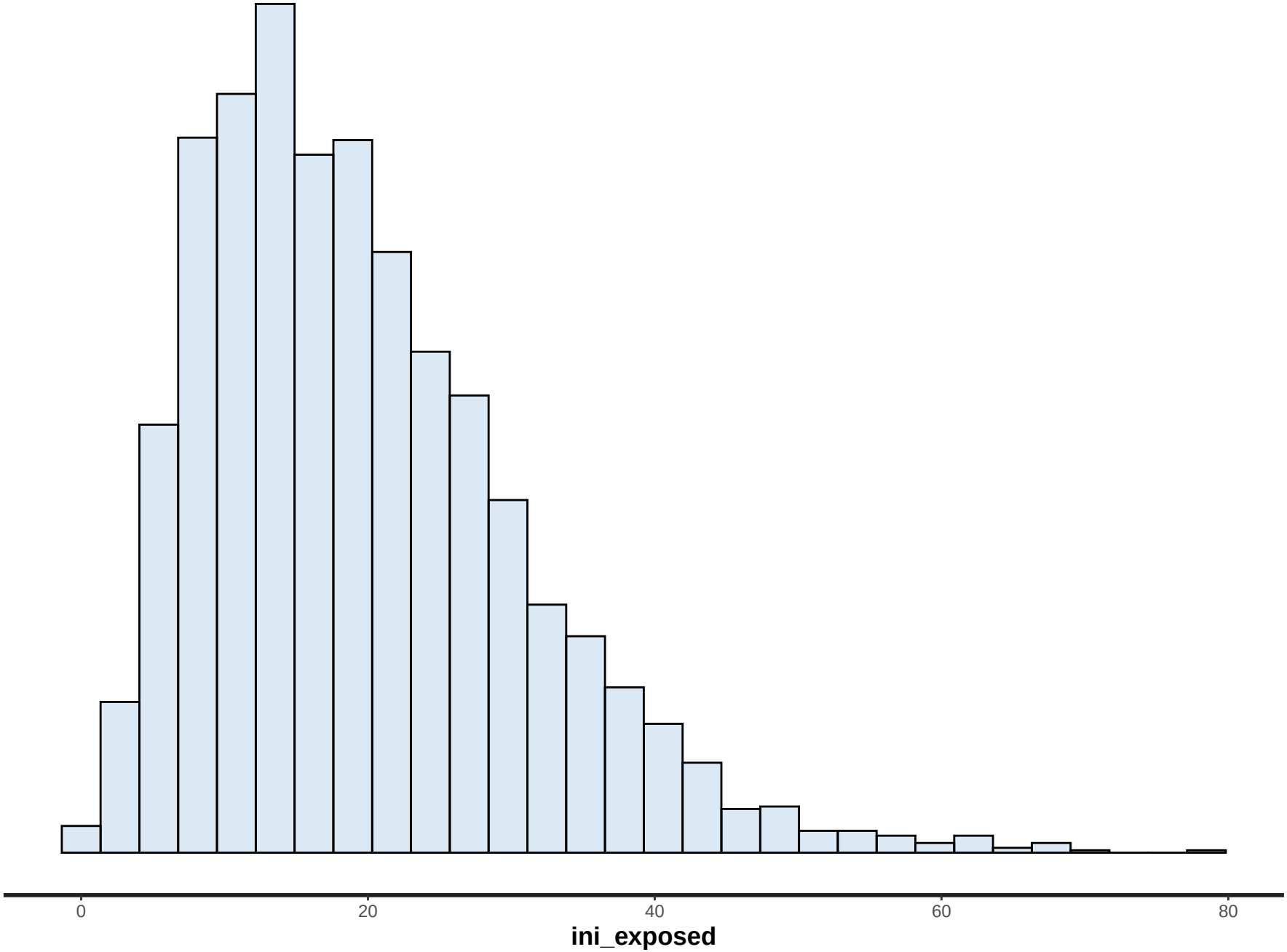

0.3
0.4
0.5
0.6
frac_mort

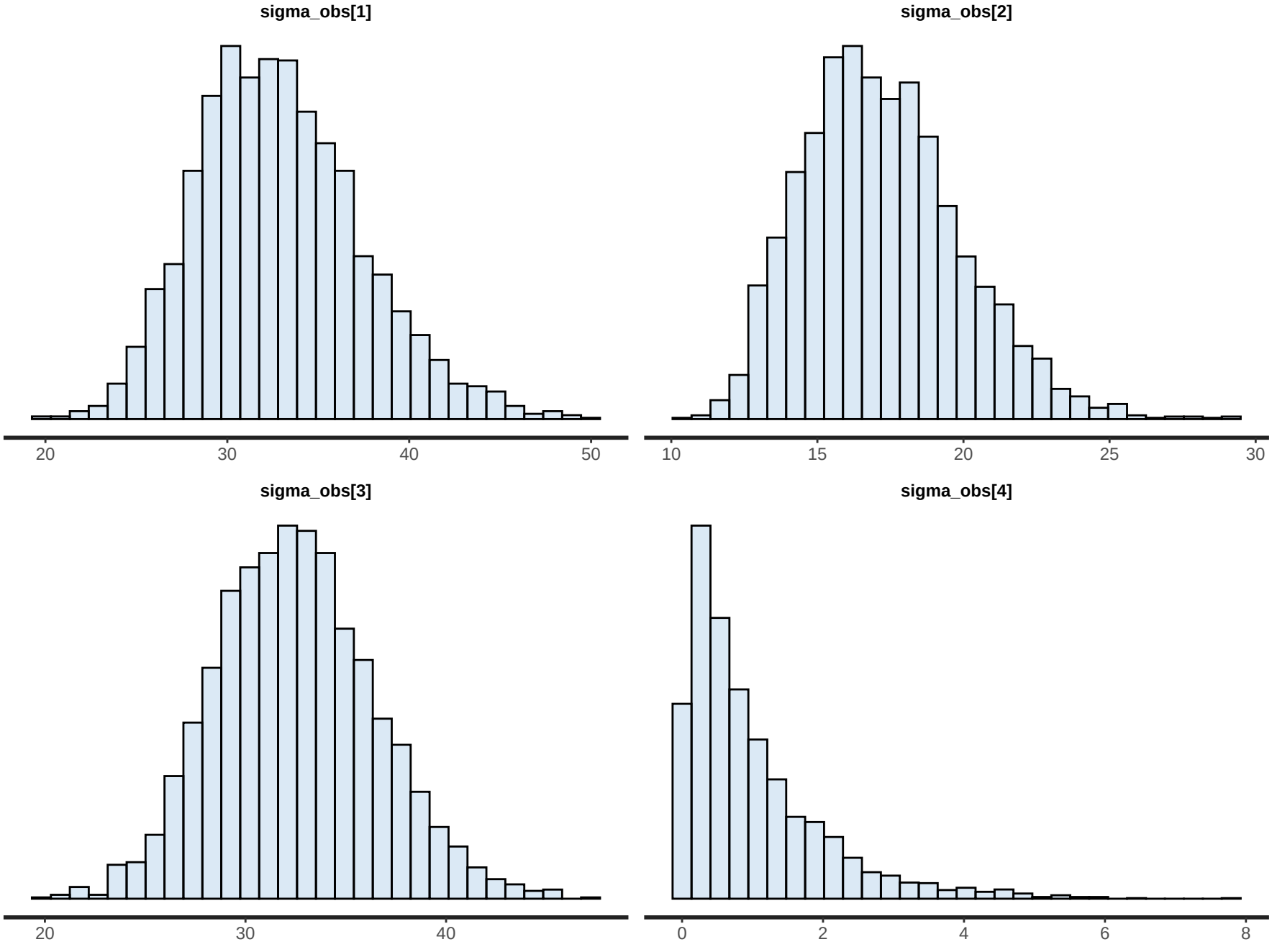

beta_multiplier[1]
0.0 0.5 1.0 1.5 2.0
beta_multiplier[2]
0 1 2
beta_multiplier[3]
0.8 1.0 1.2
beta_multiplier[4]
0.8 1.0 1.2 1.4
beta_multiplier[5]
0.8 1.0 1.2 1.4
beta_multiplier[6]
0.4 0.8 1.2 1.6
beta_multiplier[7]
1 2 3
beta_multiplier[8]
1.0 1.5 2.0 2.5
beta_multiplier[9]
0.50 0.75 1.00 1.25
beta_multiplier[10]
0.4 0.8 1.2 1.6
beta_multiplier[11]
0.8 1.2 1.6
beta_multiplier[12]
0.5 1.0 1.5
beta_multiplier[13]
0.6 0.9 1.2 1.5
beta_multiplier[14]
0.5 1.0 1.5 2.0
beta_multiplier[15]
0.5 1.0 1.5 2.0
beta_multiplier[16]
0.5 1.0 1.5 2.0
beta_multiplier[17]
0.5 1.0 1.5 2.0
beta_multiplier[18]
0.5 1.0 1.5 2.0
beta_multiplier[19]
0.8 1.0 1.2


t_inter[1]
Mar 02
Mar 09
t_inter[2]
Mar 09
Mar 16
Mar 23
t_inter[3]
Mar 23
Mar 30
Apr 06
t_inter[4]
Apr 06
Apr 13
Apr 20
t_inter[5]
Apr 20
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 29
Jul 06
t_inter[10]
Jul 13
Jul 20
t_inter[11]
Jul 27
Aug 03
Aug 10
t_inter[12]
Aug 10
Aug 17
Aug 24
t_inter[13]
Aug 31
Sep 07
t_inter[14]
Sep 14
Sep 21
t_inter[15]
Sep 28
Oct 05
t_inter[16]
Oct 12
Oct 19
Oct 26
t_inter[17]
Oct 26
Nov 02
t_inter[18]
Nov 09
Nov 16
Nov 23
t_inter[19]
Nov 23
Nov 30
Dec 07


len_inter[1]
len_inter[2]
len_inter[3]
len_inter[4]
len_inter[5]
len_inter[6]
len_inter[7]
len_inter[8]
len_inter[9]
len_inter[10]
len_inter[11]
len_inter[12]
len_inter[13]
len_inter[14]
len_inter[15]
len_inter[16]
len_inter[17]
len_inter[18]
len_inter[19]


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


0
20
40
60
80
ini_exposed


sigma_obs[1]
20
30
40
50
sigma_obs[2]
10
15
20
25
30
sigma_obs[3]
20
30
40
sigma_obs[4]
0
2
4
6
8