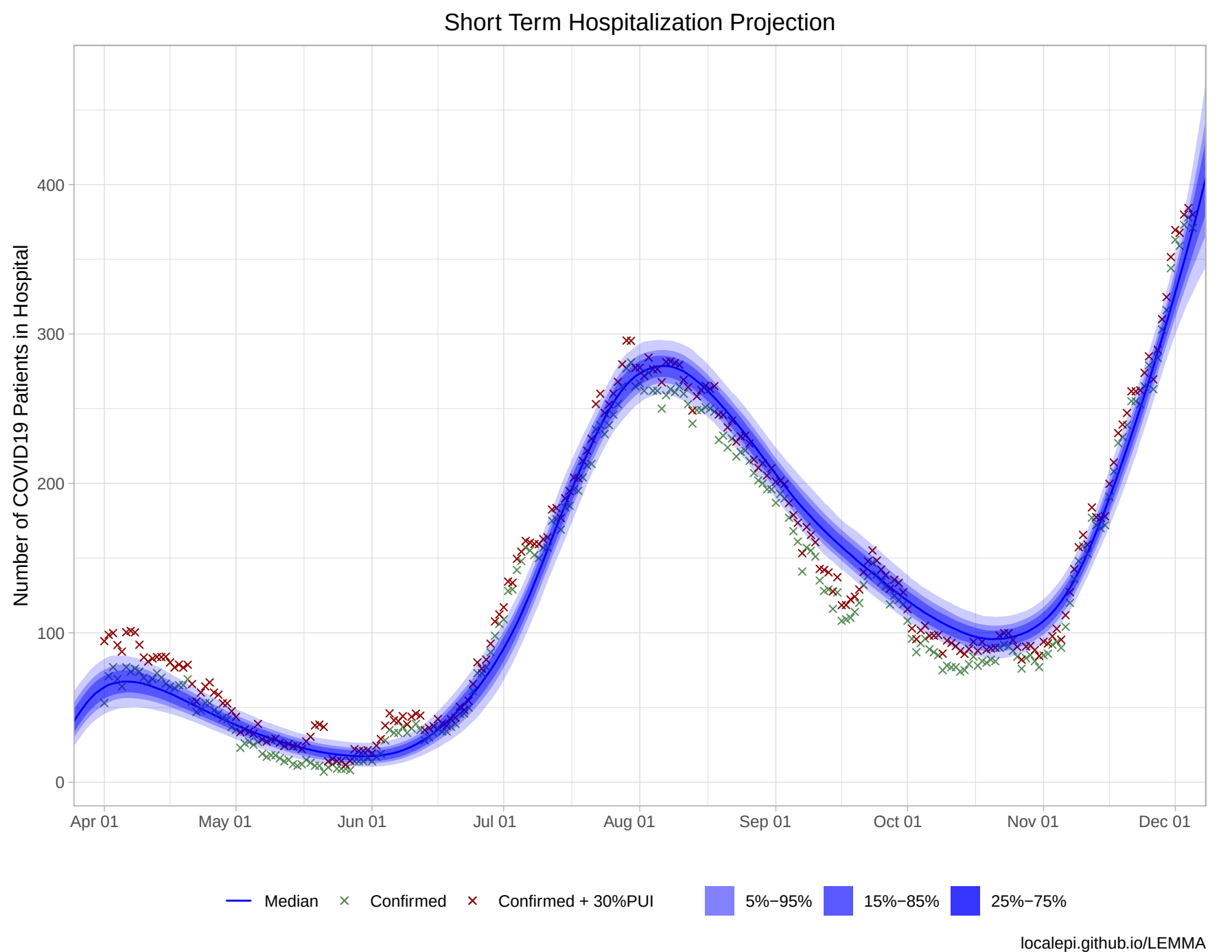
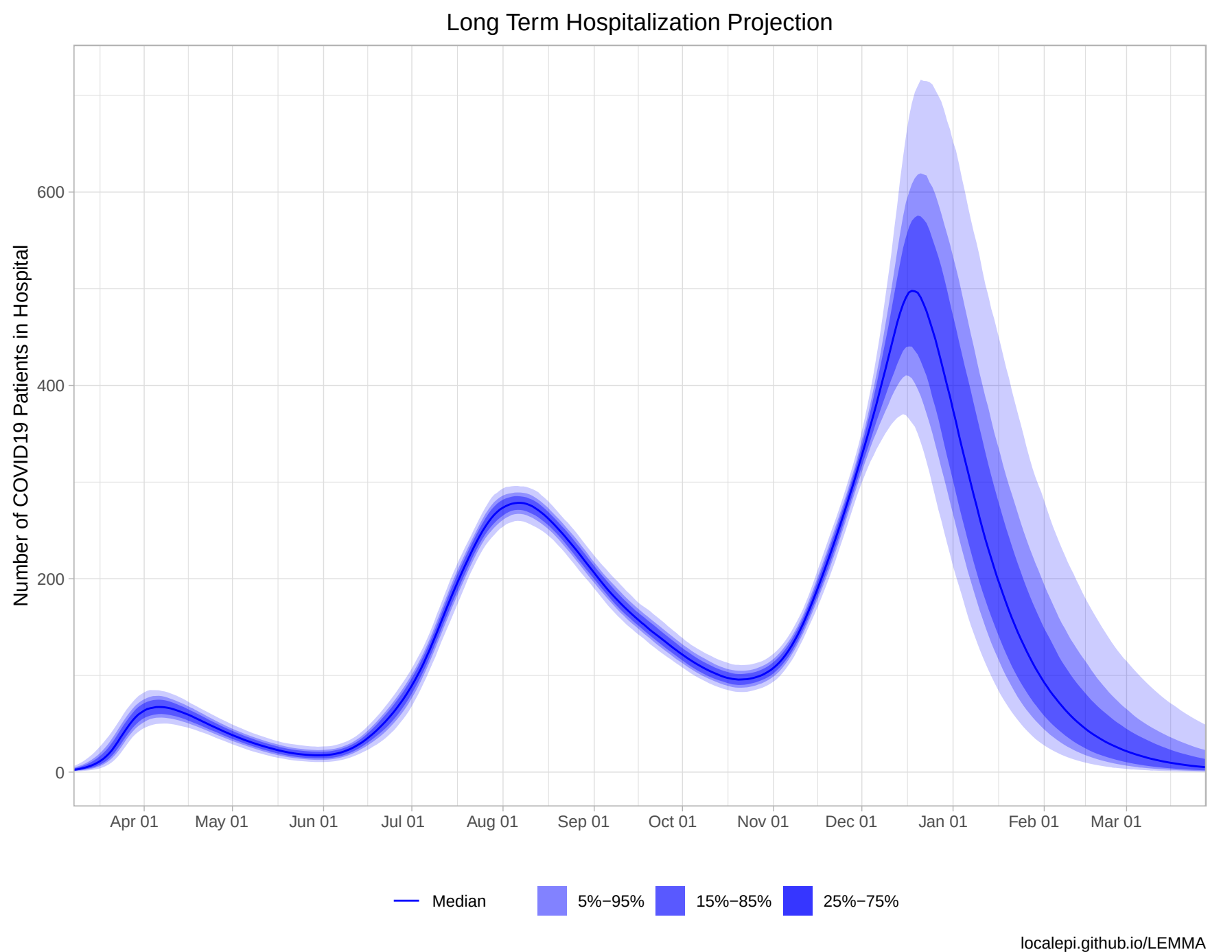
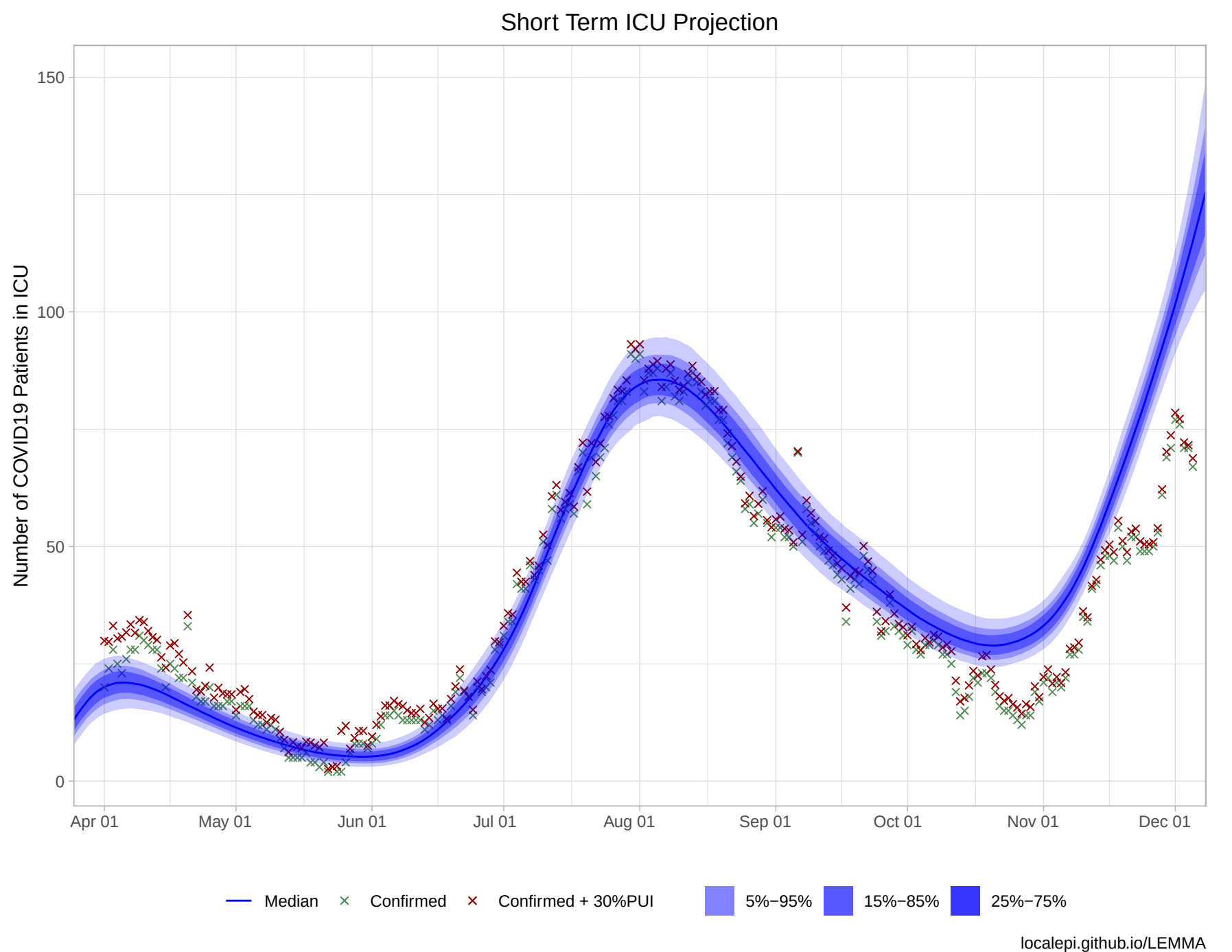
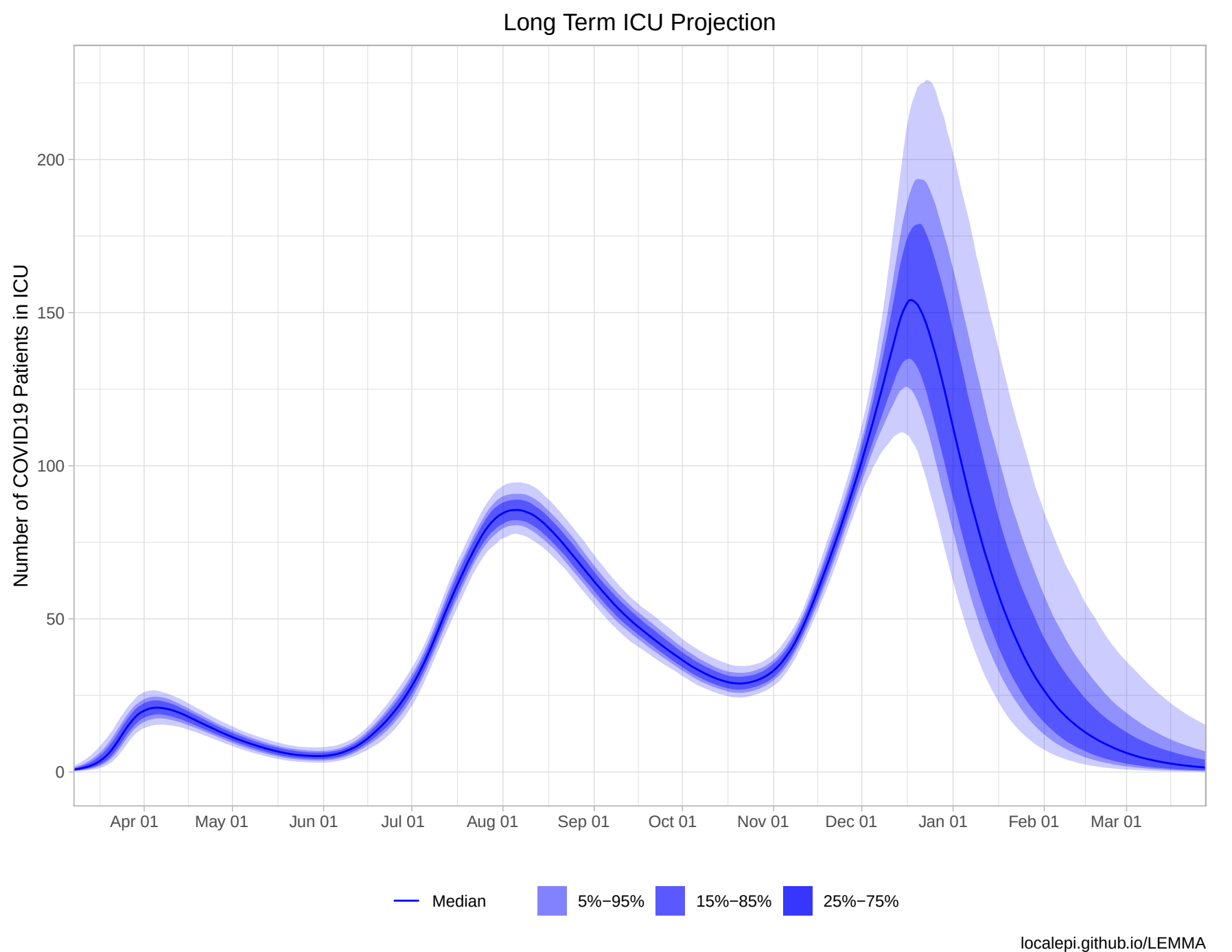
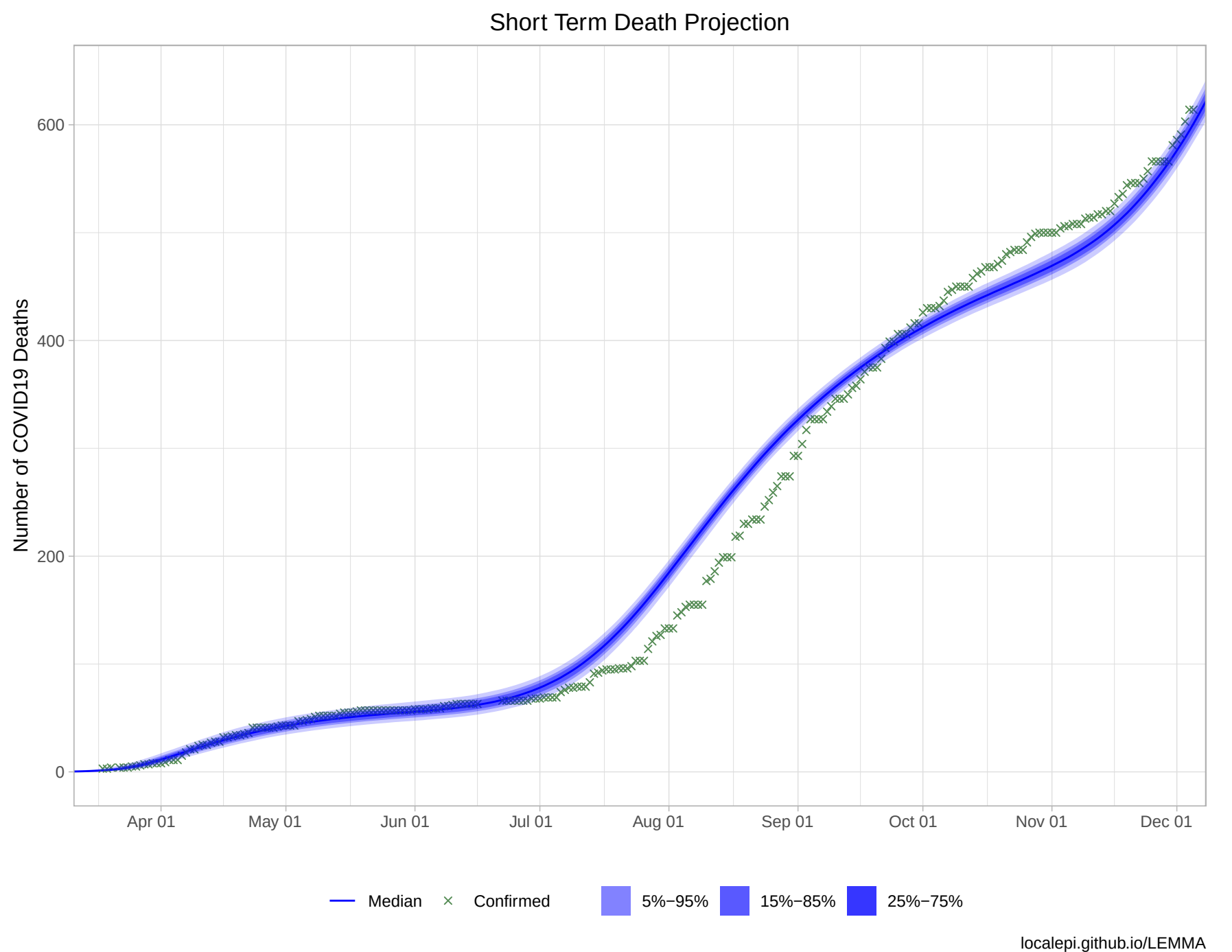
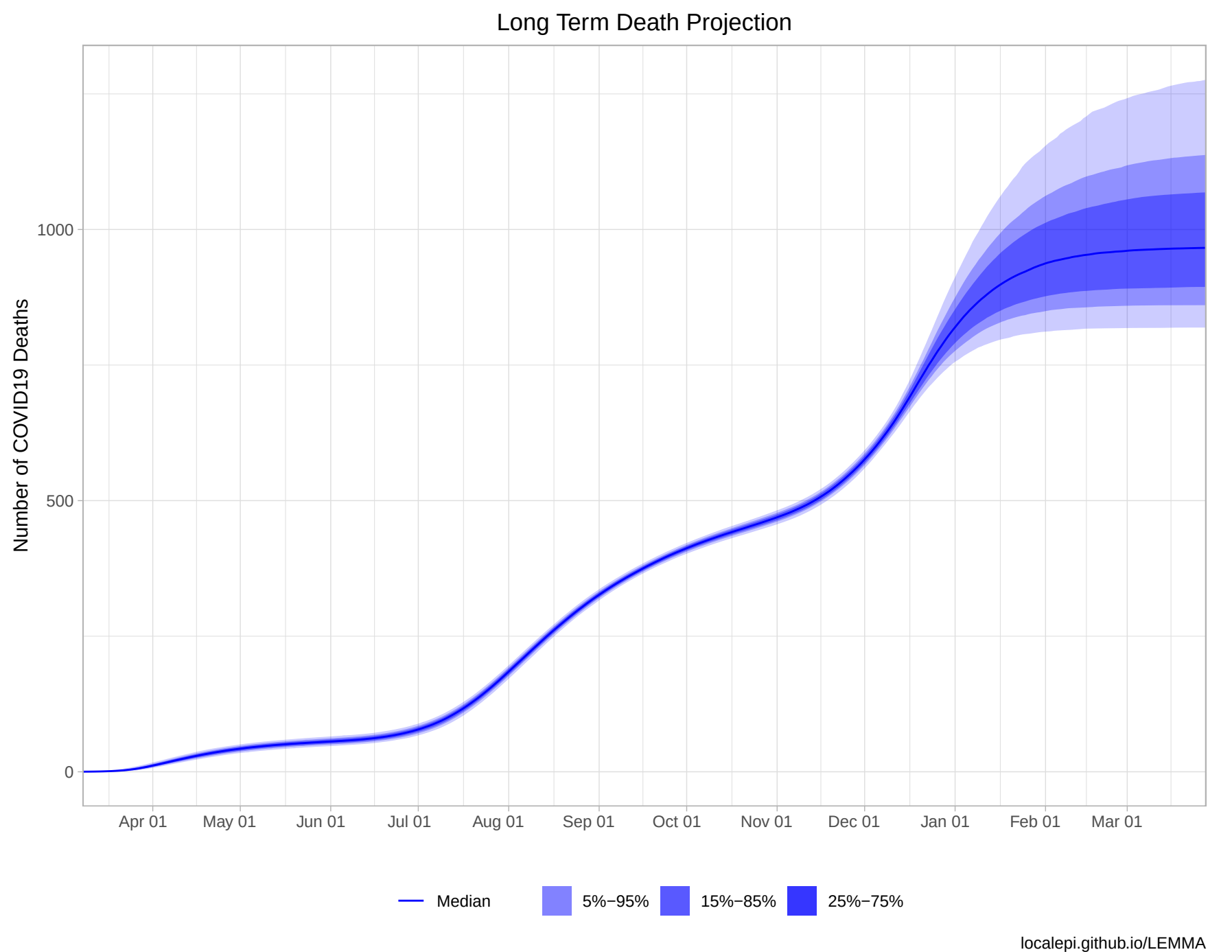

Short Term Hospitalization Projection
Number of COVID19 Patients in Hospital
0
100
200
300
400
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
Confirmed + 30%PUI
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

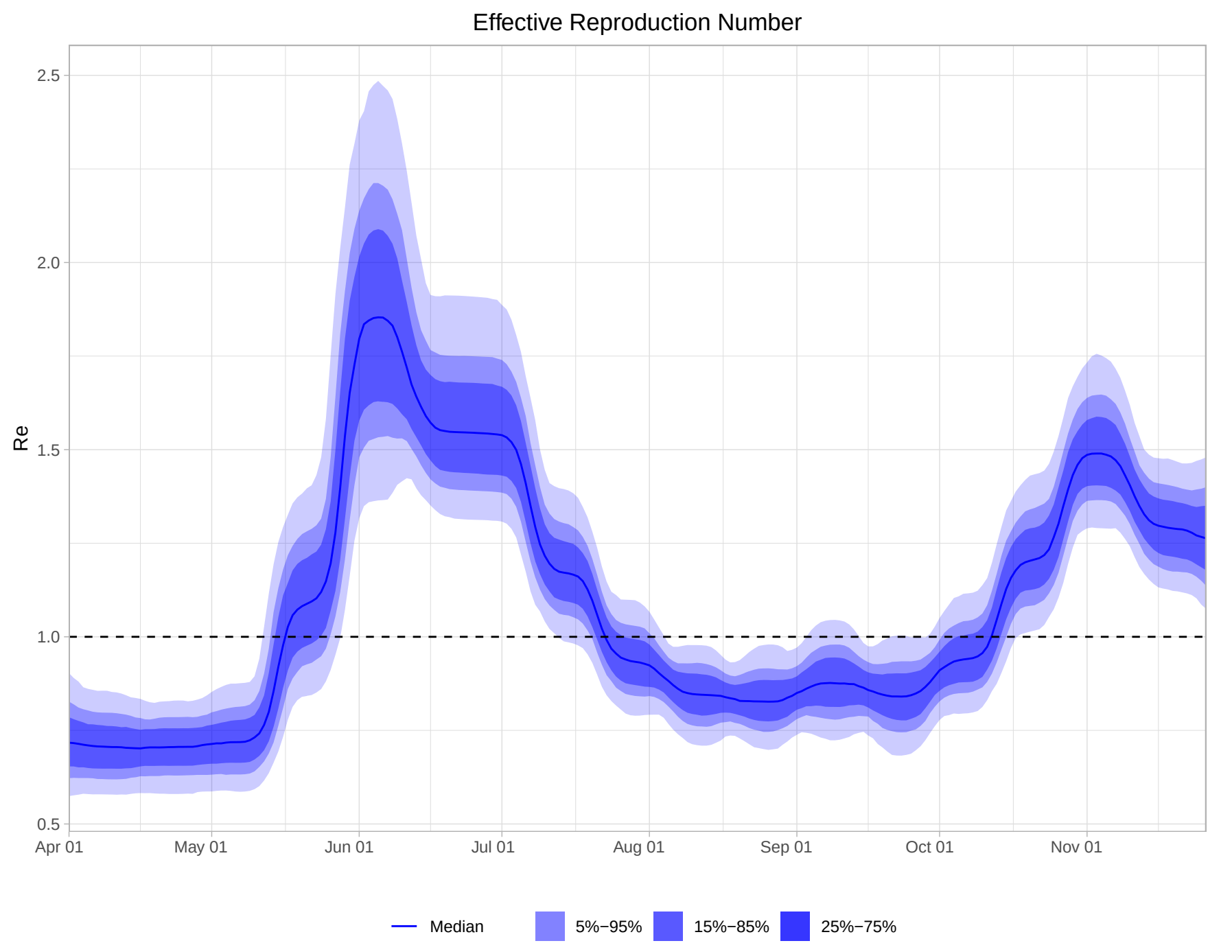

Long Term Hospitalization Projection
Number of COVID19 Patients in Hospital
600
400
200
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA


Short Term ICU Projection
Number of COVID19 Patients in ICU
150
100
50
0
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
200
150
100
50
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

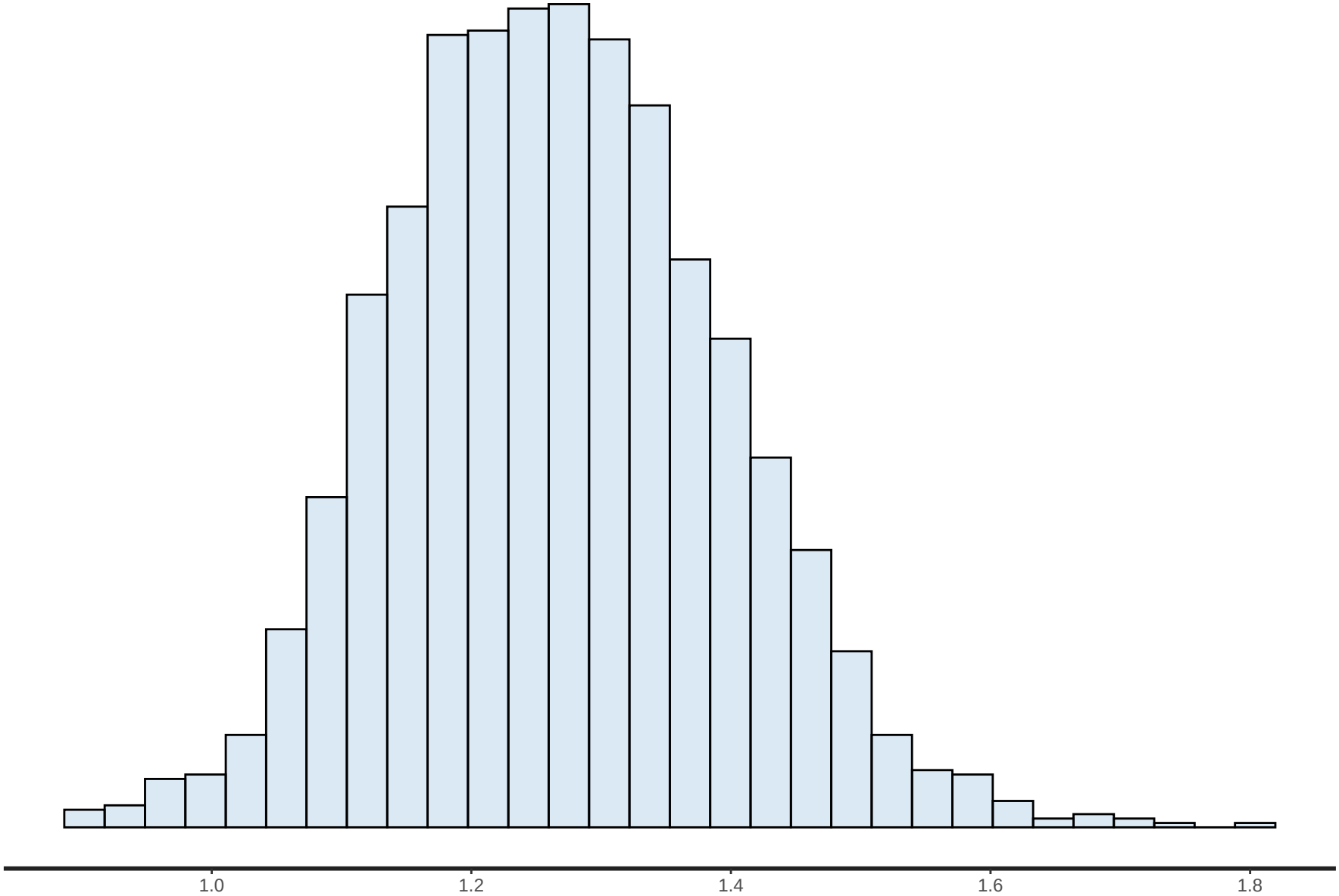

Short Term Death Projection
Number of COVID19 Deaths
600
400
200
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Median
Confirmed
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

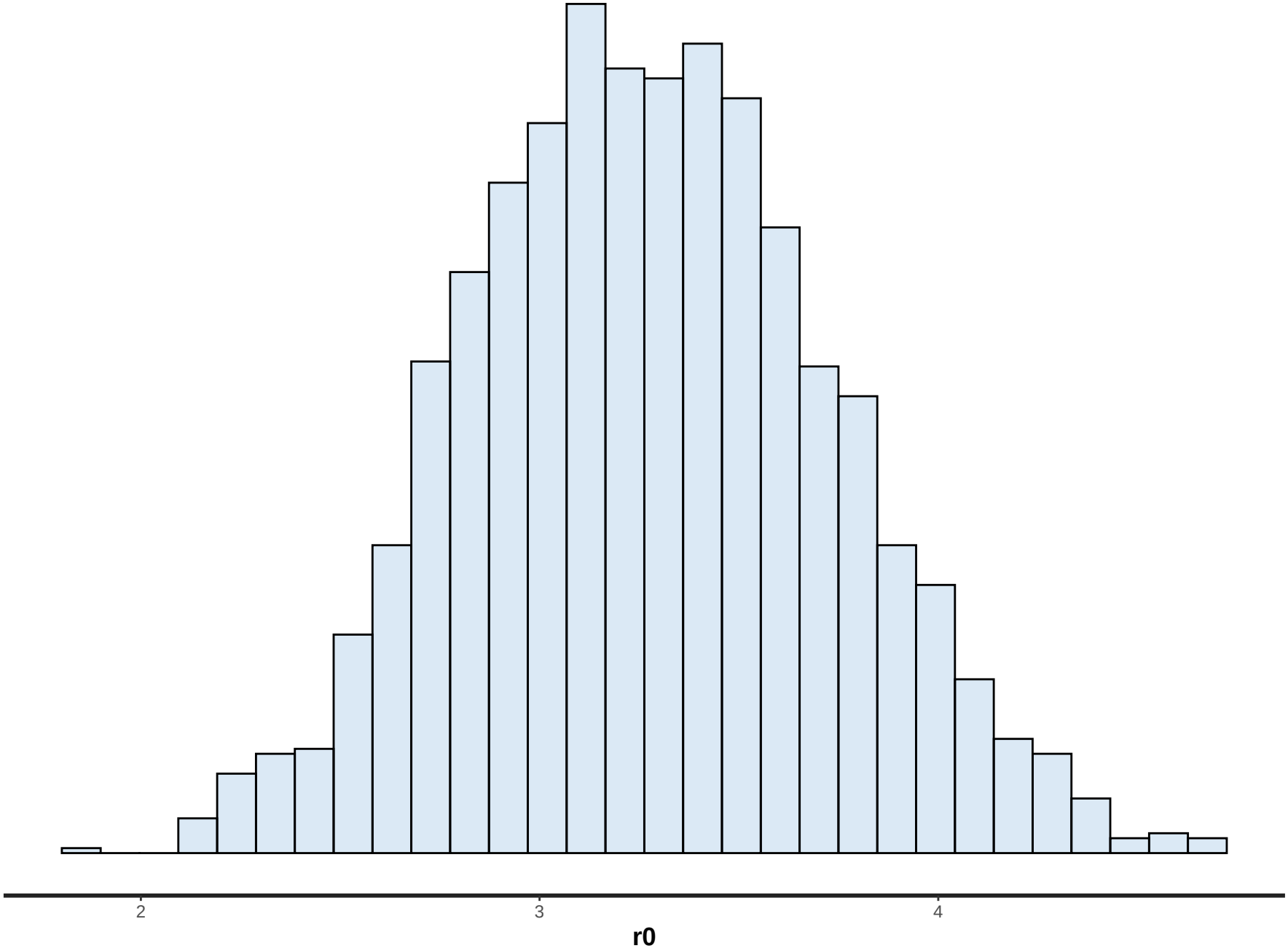

Long Term Death Projection
Number of COVID19 Deaths
1000
500
0
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Dec 01
Jan 01
Feb 01
Mar 01
Median
5%−95%
15%−85%
25%−75%
localepi.github.io/LEMMA

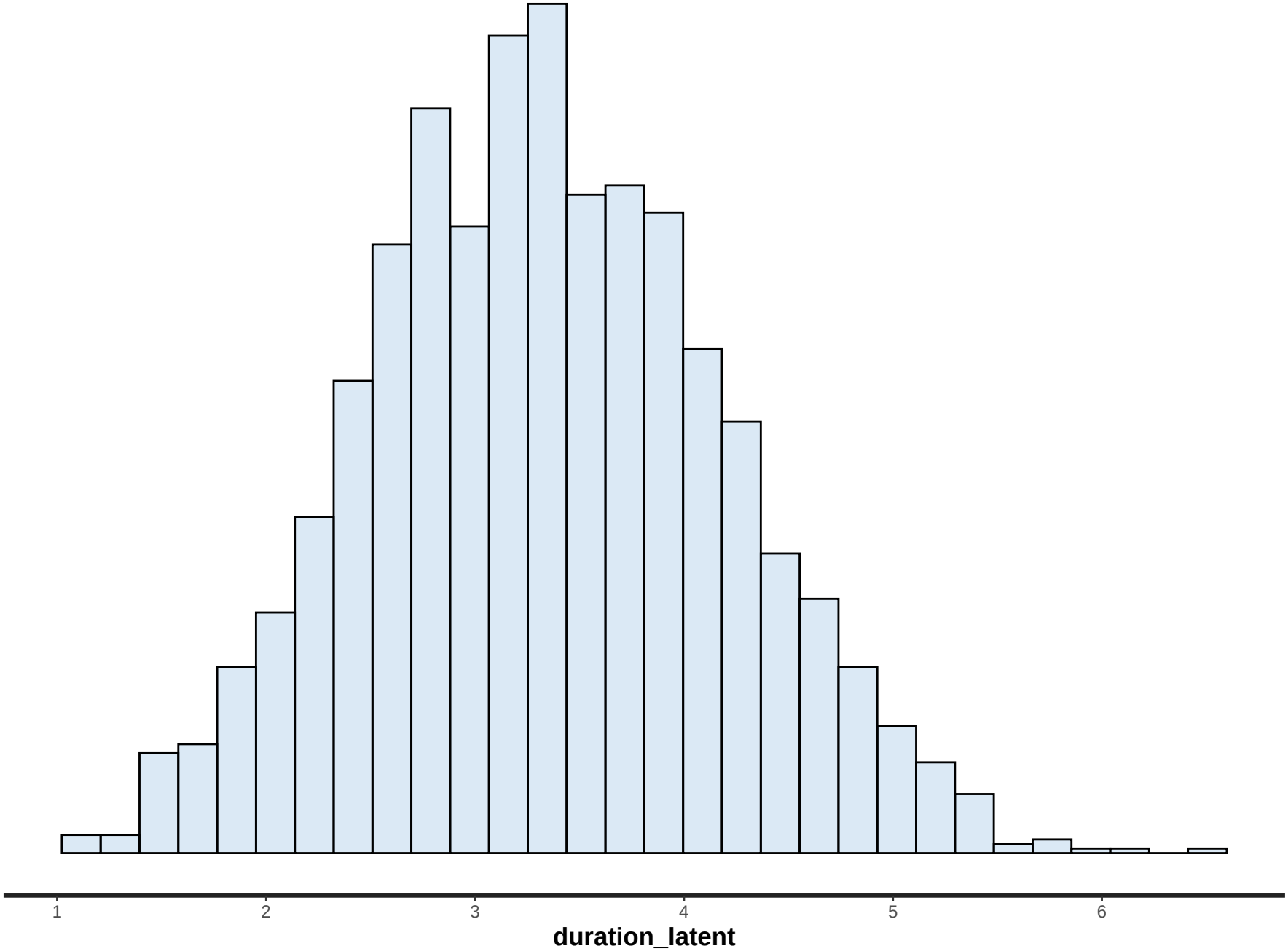

Effective Reproduction Number
Re
2.5
2.0
1.5
1.0
0.5
Apr 01
May 01
Jun 01
Jul 01
Aug 01
Sep 01
Oct 01
Nov 01
Median
5%−95%
15%−85%
25%−75%

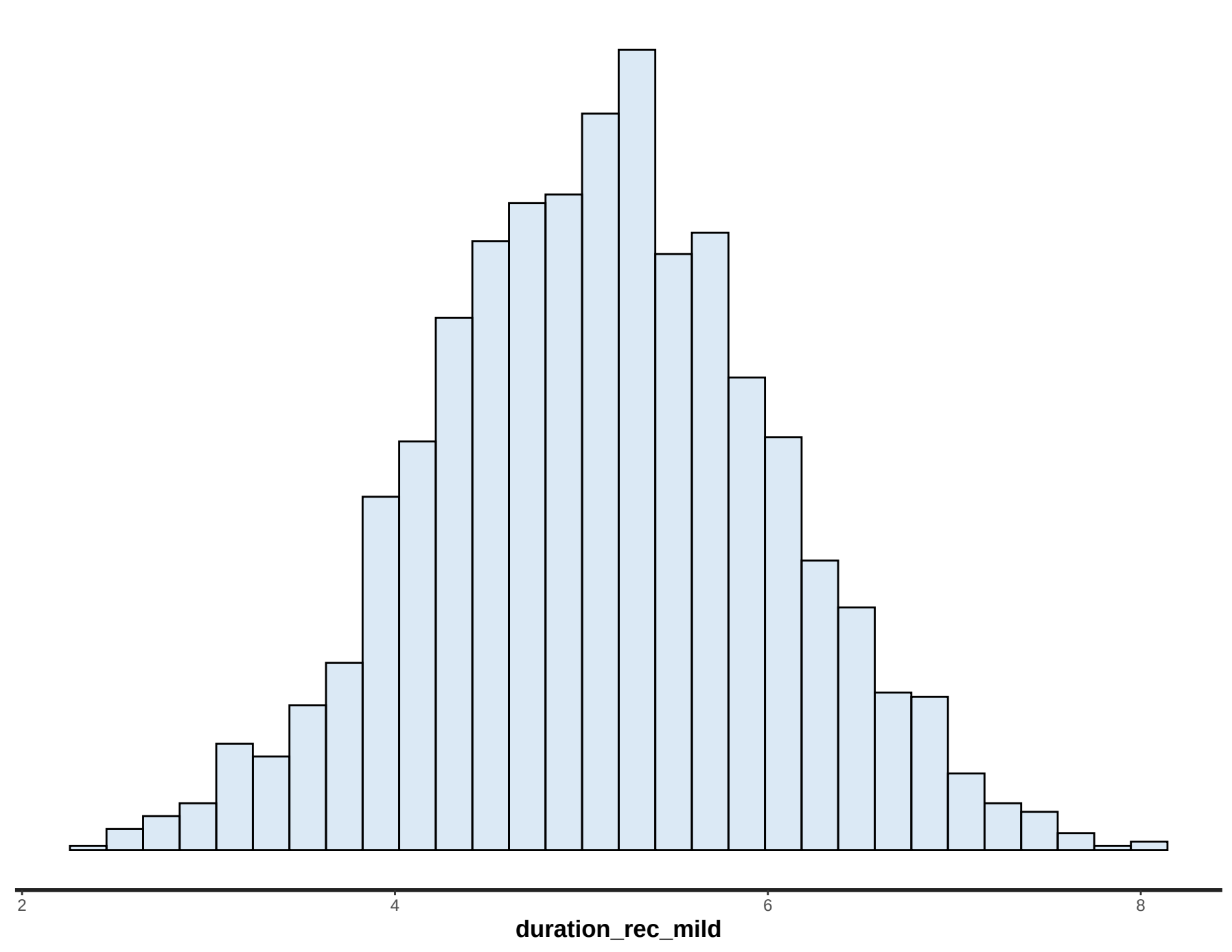
Rt as of 2020−11−26

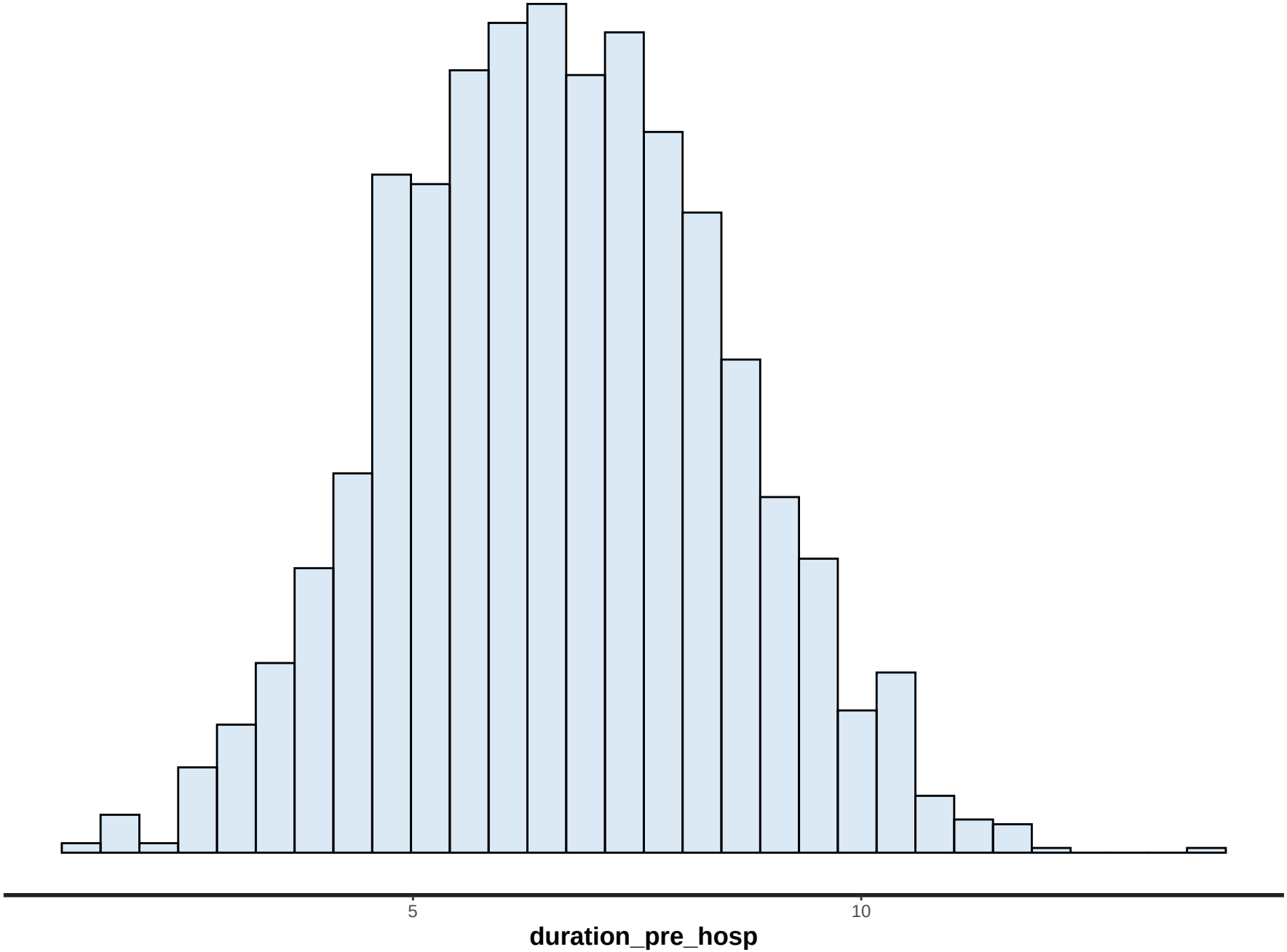
5%	10%	25%	50%	75%	90%	95%
1.08	1.11	1.18	1.26	1.35	1.43	1.48

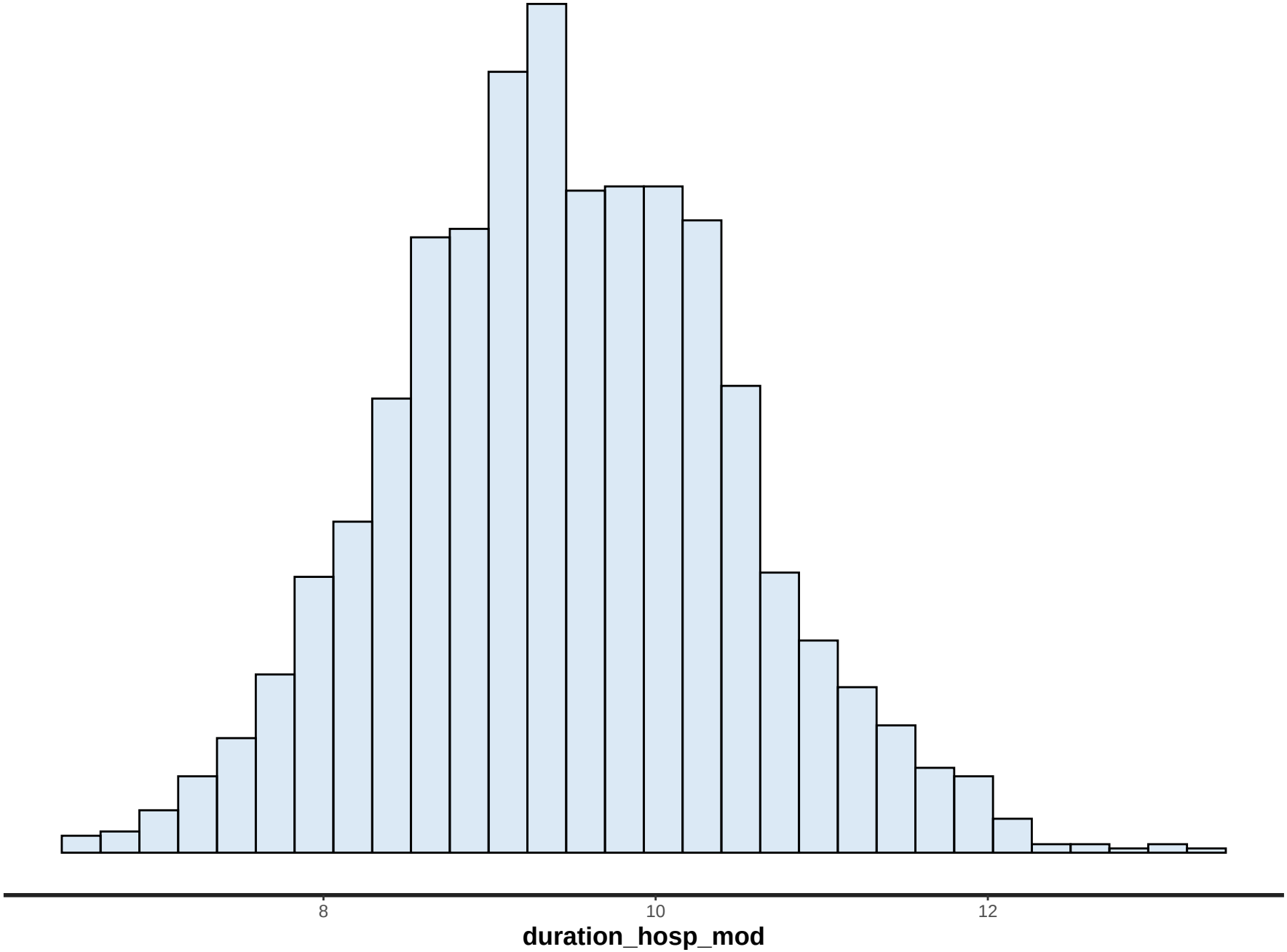


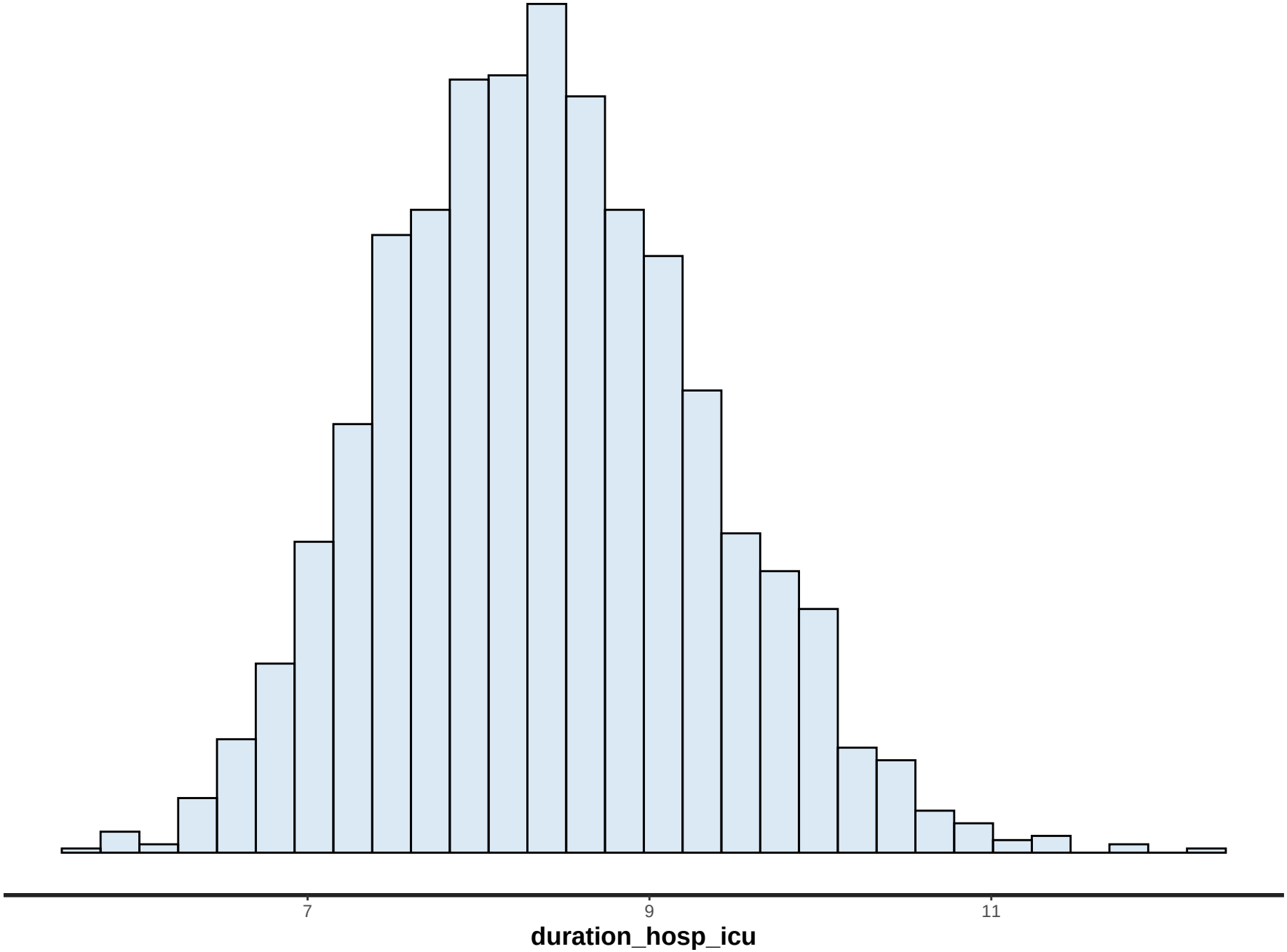

2
3
4
r0

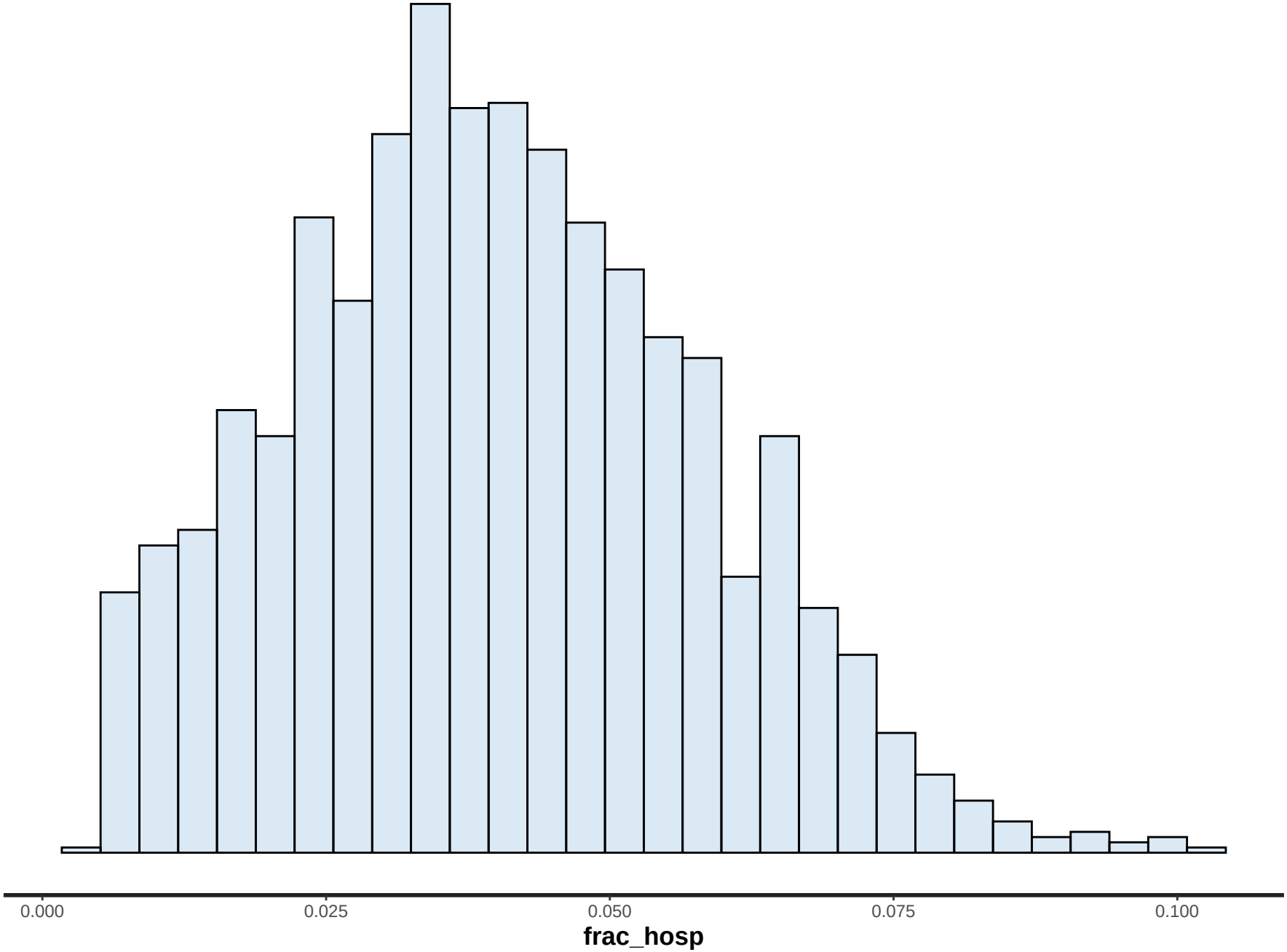

1
2
3
4
5
6
duration_latent


2
4
6
8
duration_rec_mild


5
10
duration_pre_hosp


8
10
12
duration_hosp_mod


7
9
11
duration_hosp_icu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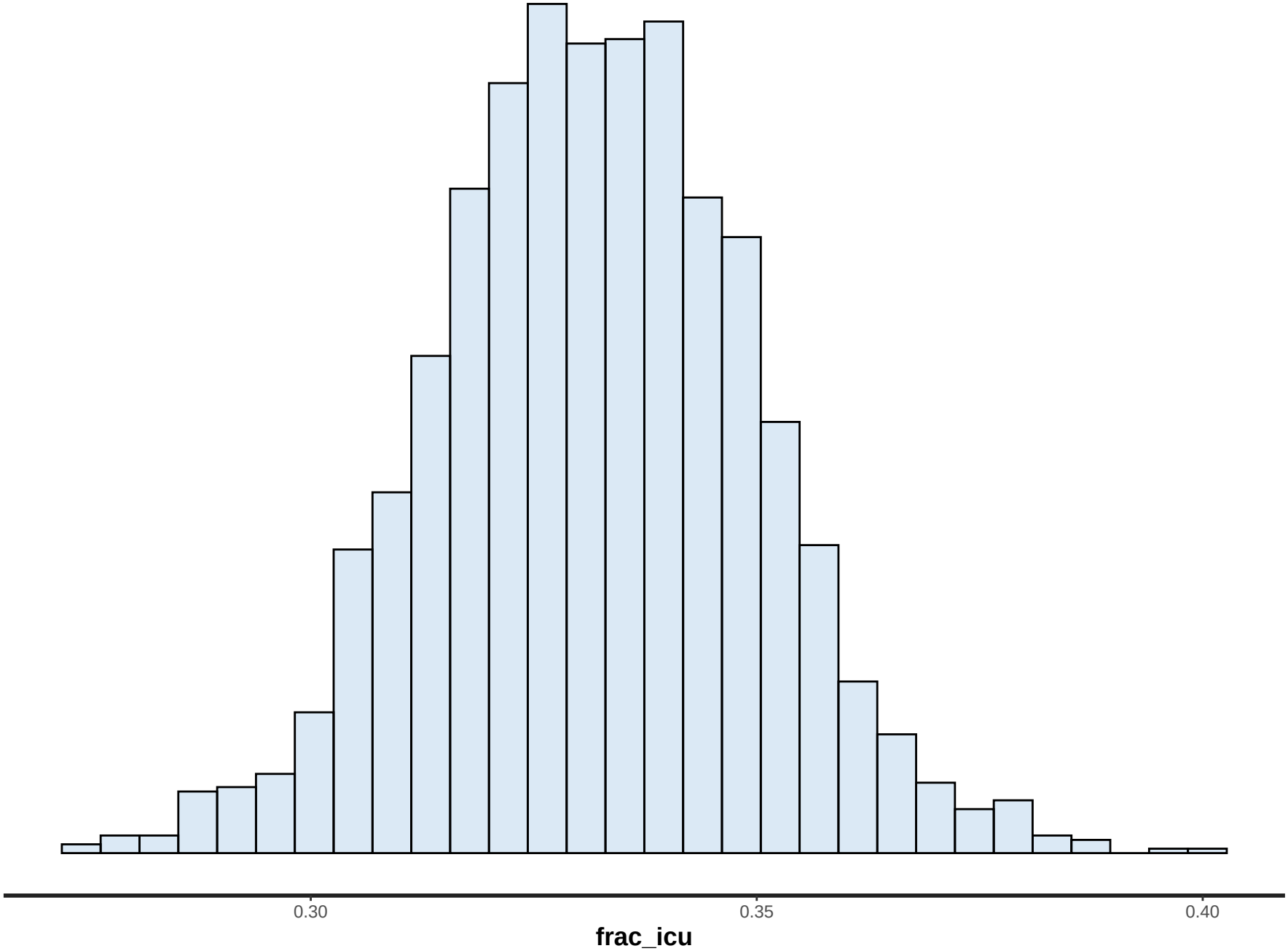
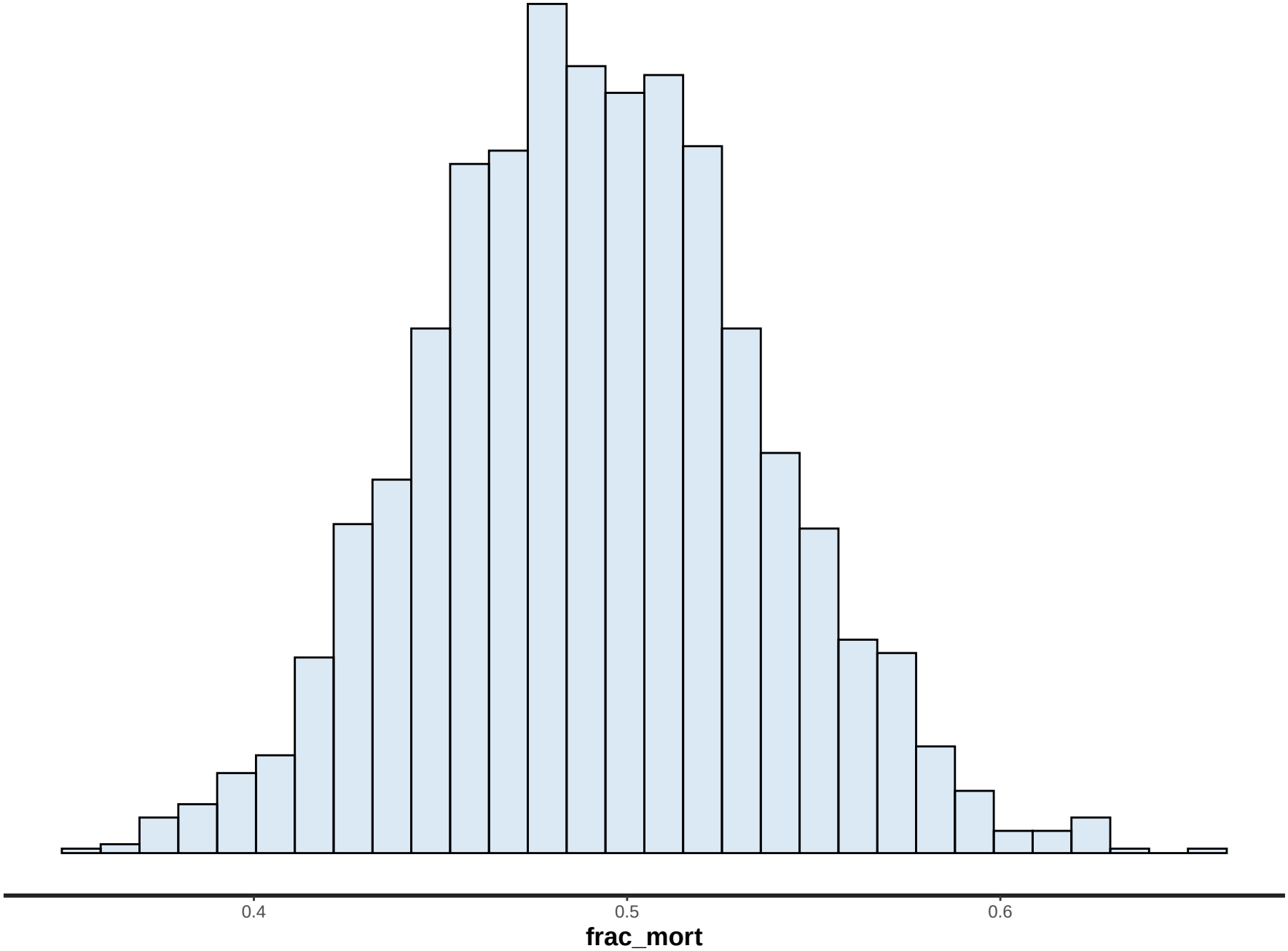
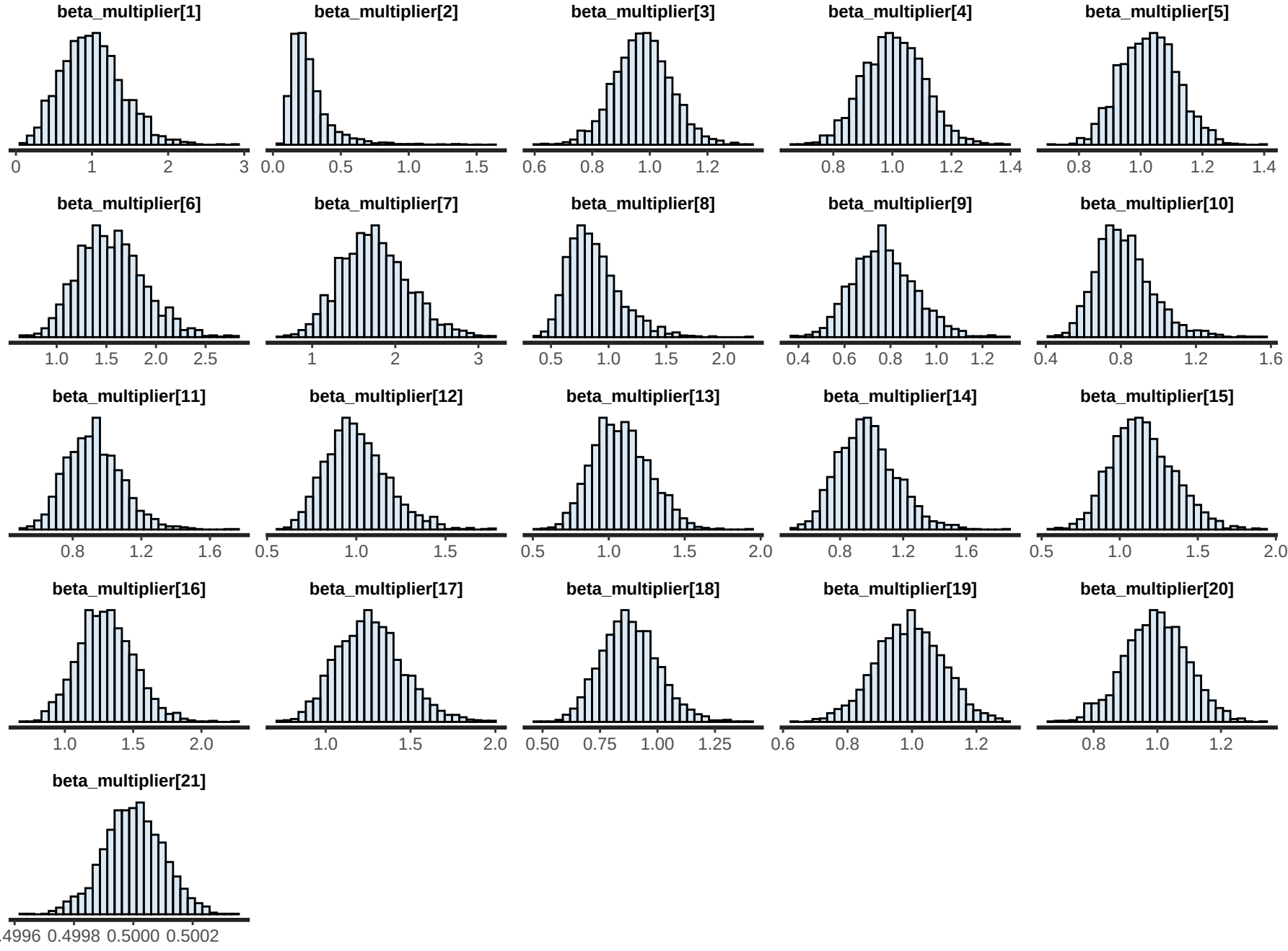
0.025
0.050
0.075
0.100
frac_hosp


0.30
0.35
0.40
frac_icu


0.4
0.5
0.6
frac_mort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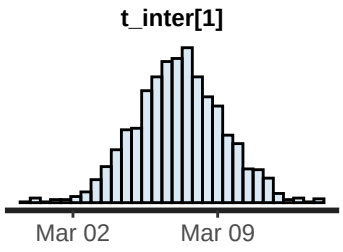
0 1 2 3
beta_multiplier[2]
0.0 0.5 1.0 1.5
beta_multiplier[3]
0.6 0.8 1.0 1.2
beta_multiplier[4]
0.8 1.0 1.2 1.4
beta_multiplier[5]
0.8 1.0 1.2 1.4
beta_multiplier[6]
1.0 1.5 2.0 2.5
beta_multiplier[7]
1 2 3
beta_multiplier[8]
0.5 1.0 1.5 2.0
beta_multiplier[9]
0.4 0.6 0.8 1.0 1.2
beta_multiplier[10]
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]
0.5 1.0 1.5 2.0
beta_multiplier[14]
0.8 1.2 1.6
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]
0.50 0.75 1.00 1.25
beta_multiplier[19]
0.6 0.8 1.0 1.2
beta_multiplier[20]
0.8 1.0 1.2
beta_multiplier[21]
0.4996 0.4998 0.5000 0.5002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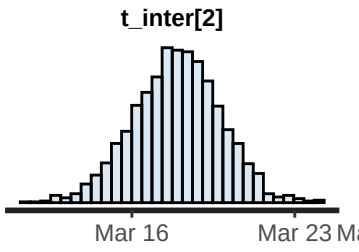
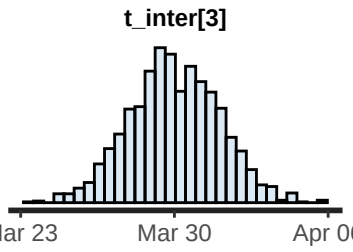
Mar 02
Mar 09


t_inter[2]
Mar 16
Mar 23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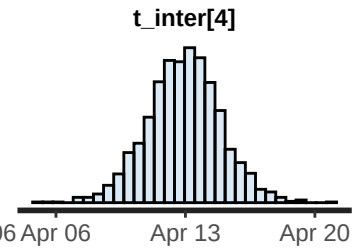
Mar 23
Mar 30
Apr 06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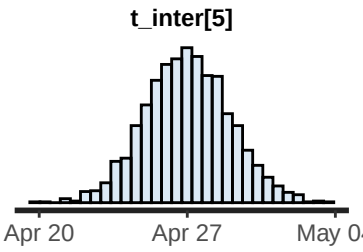
Apr 06
Apr 13
Apr 20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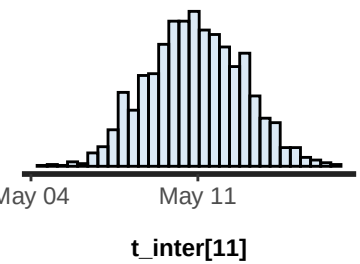
Apr 20
Apr 27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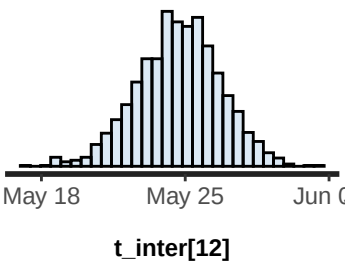
May 04
May 11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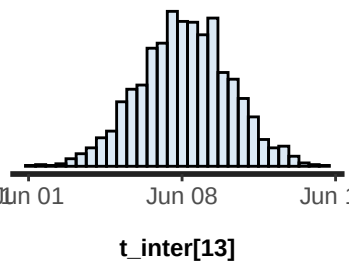
May 18
May 25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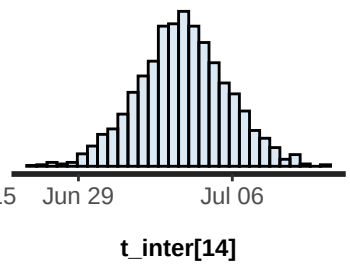
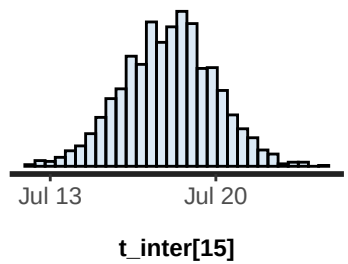
Jun 01
Jun 08
Jun 15


t_inter[9]
Jun 29
Jul 06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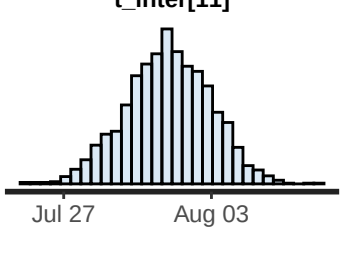
Jul 13
Jul 20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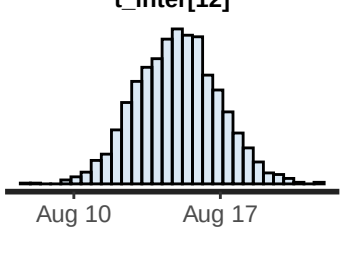
Jul 27
Aug 03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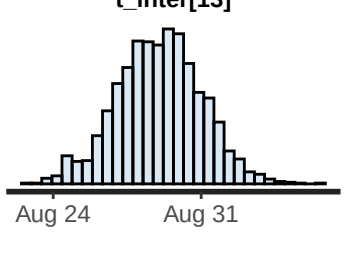
Aug 10
Aug 17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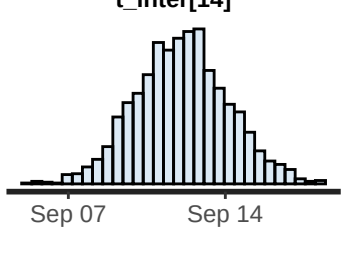
Aug 31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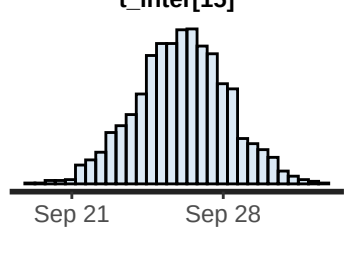
Sep 07
Sep 14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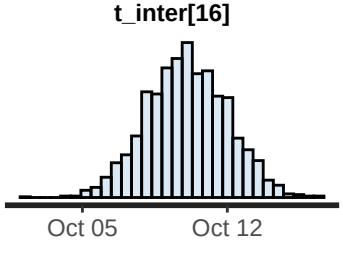
Sep 21
Sep 28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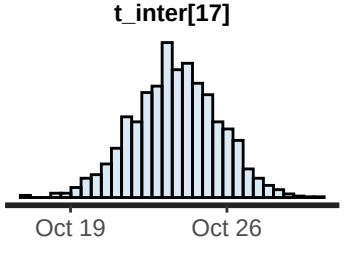
Oct 05
Oct 12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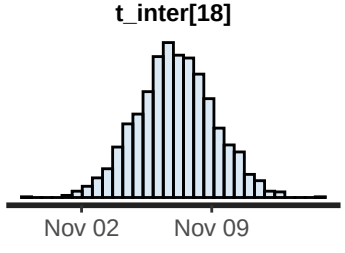
Oct 19
Oct 26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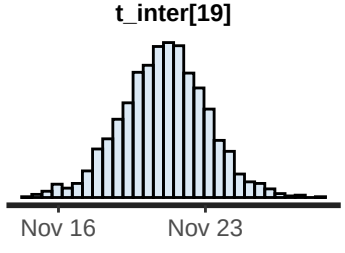
Nov 09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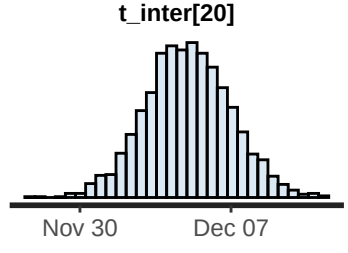
Nov 16
Nov 23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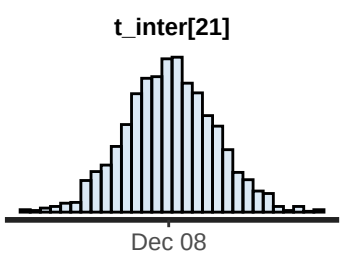
Nov 30
Dec 07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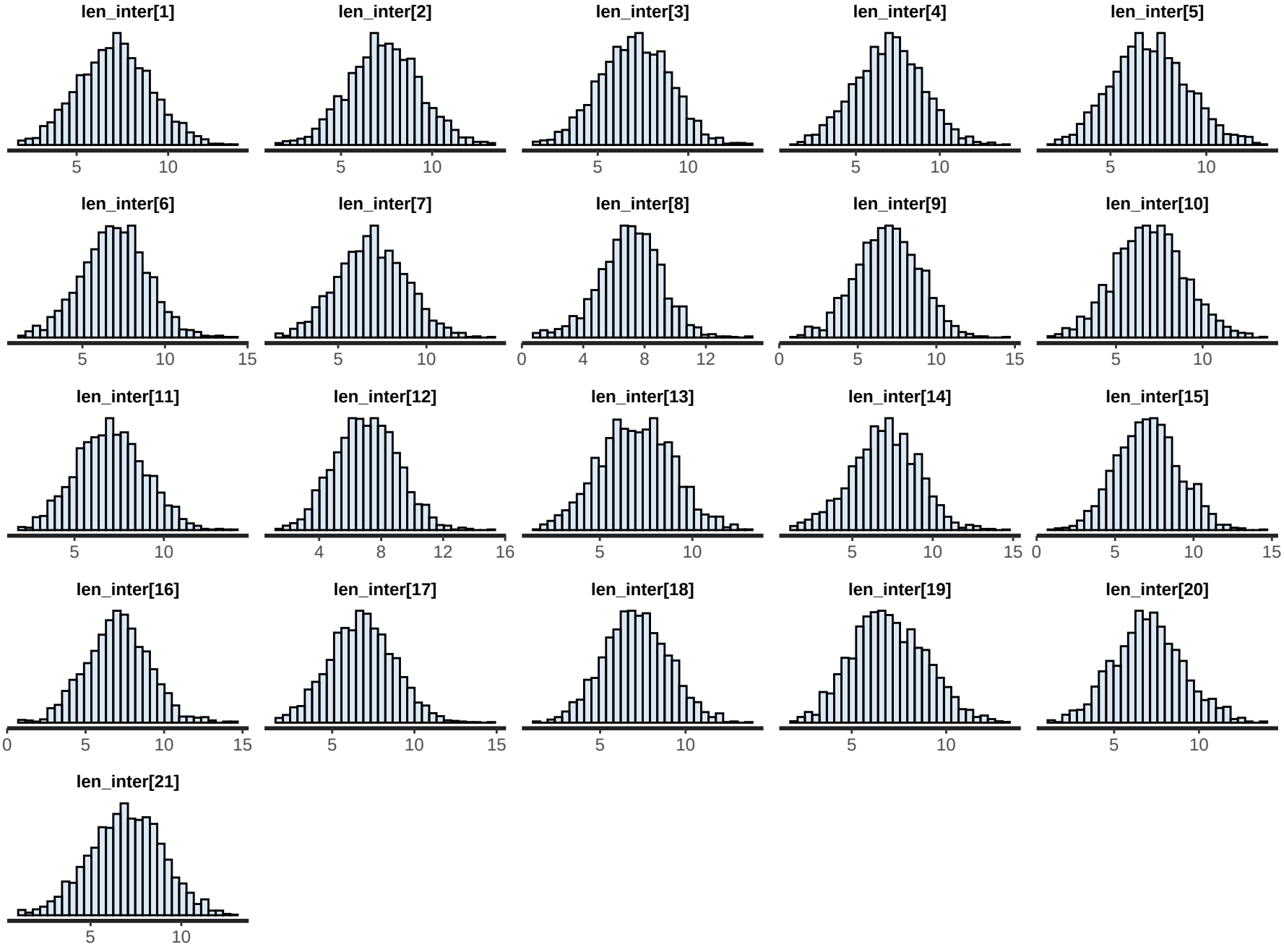
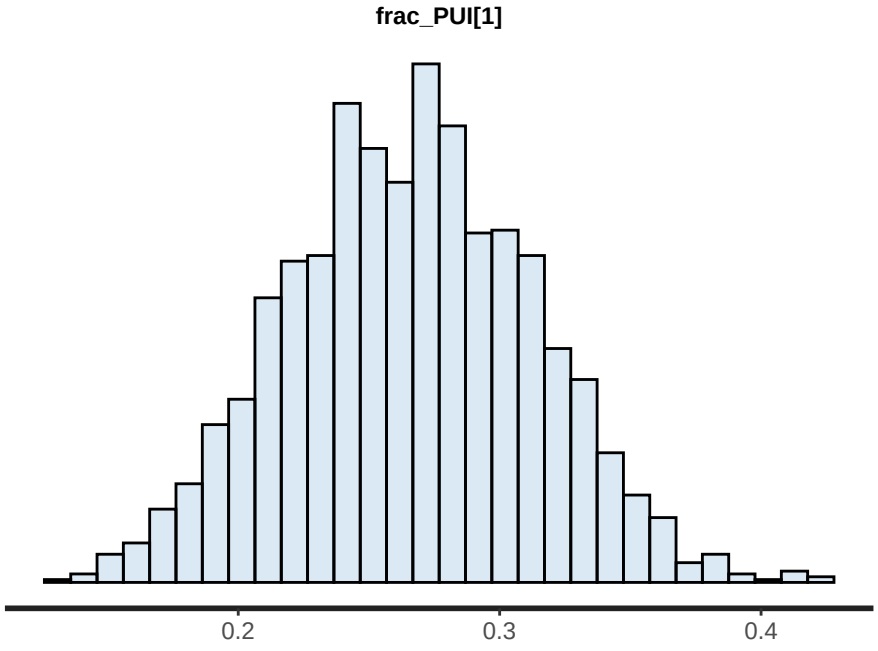
Dec 08


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]
len_inter[20]
len_inter[21]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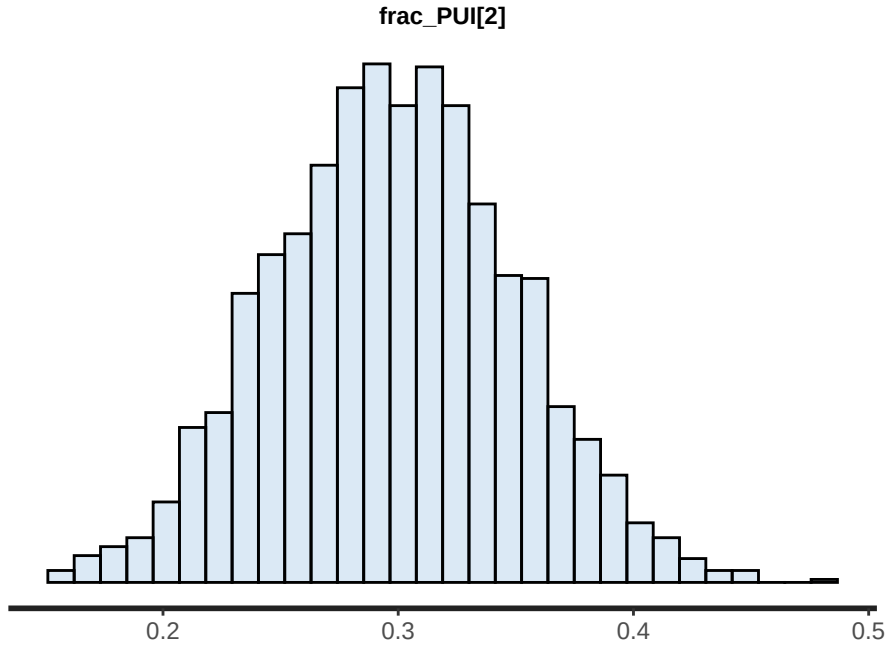
0.3
0.4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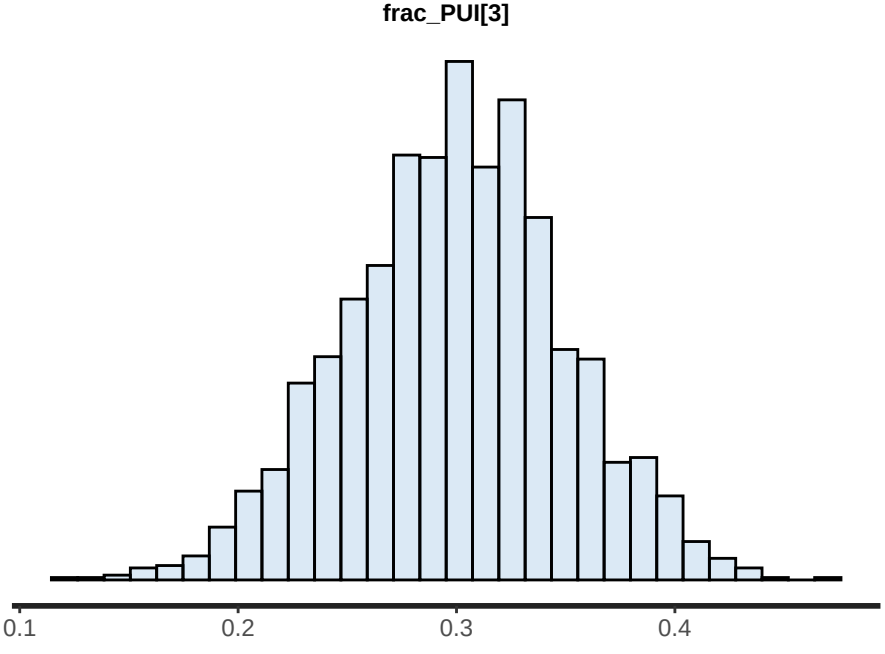
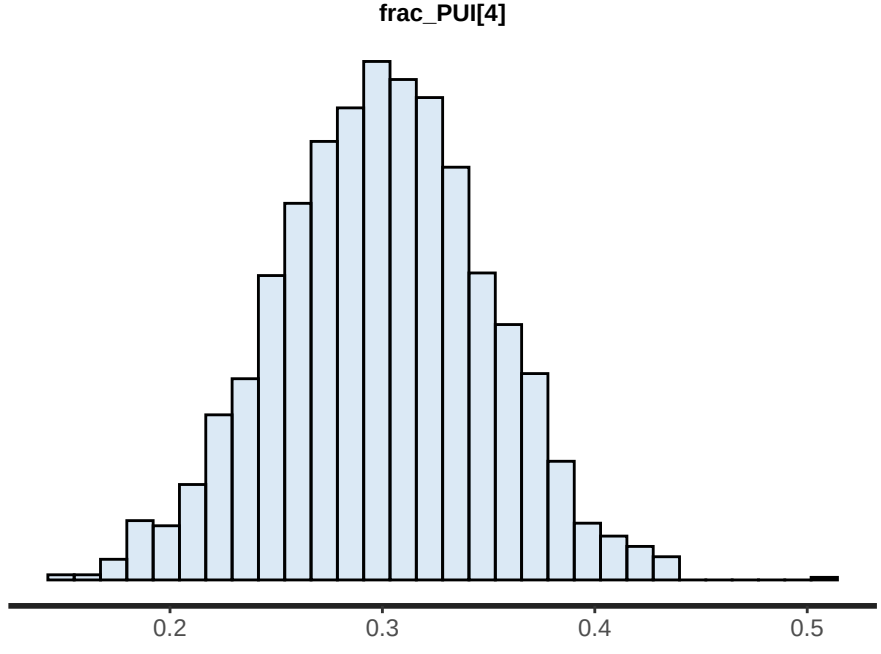
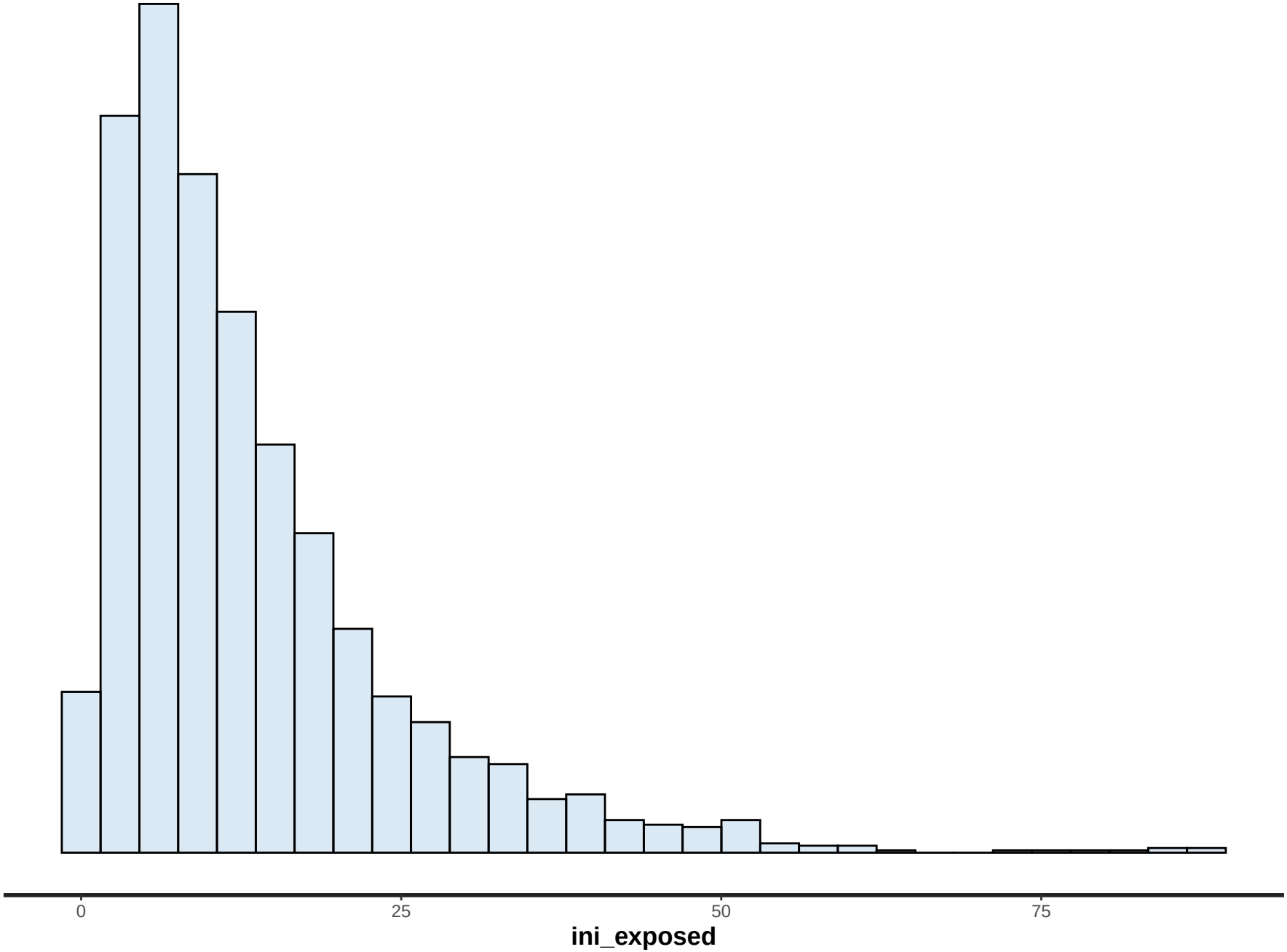
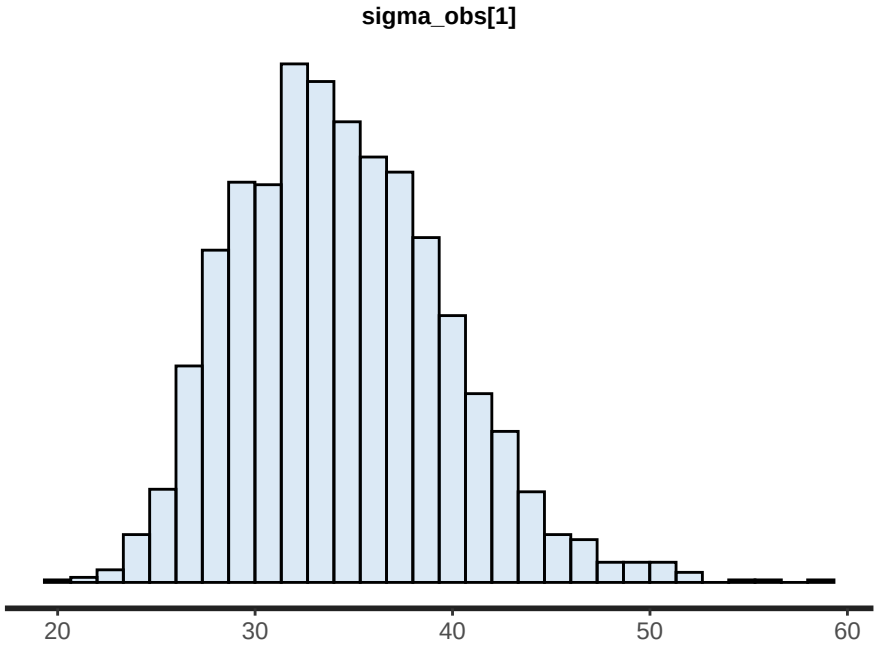
0.3
0.4
0.5


frac_PUI[3]
0.1
0.2
0.3
0.4


frac_PUI[4]
0.2
0.3
0.4
0.5


0
25
50
75
ini_exposed


sigma_obs[1]
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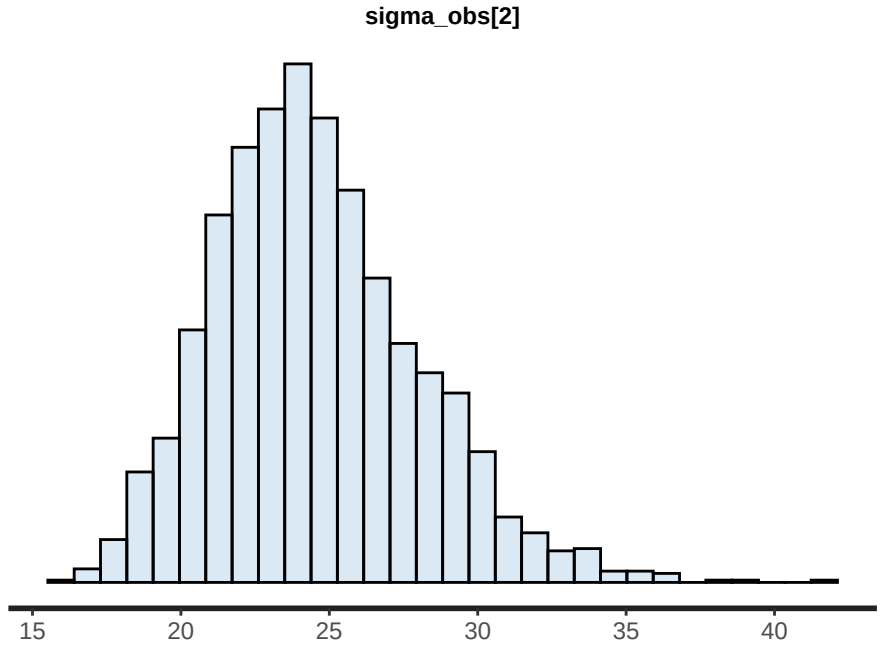
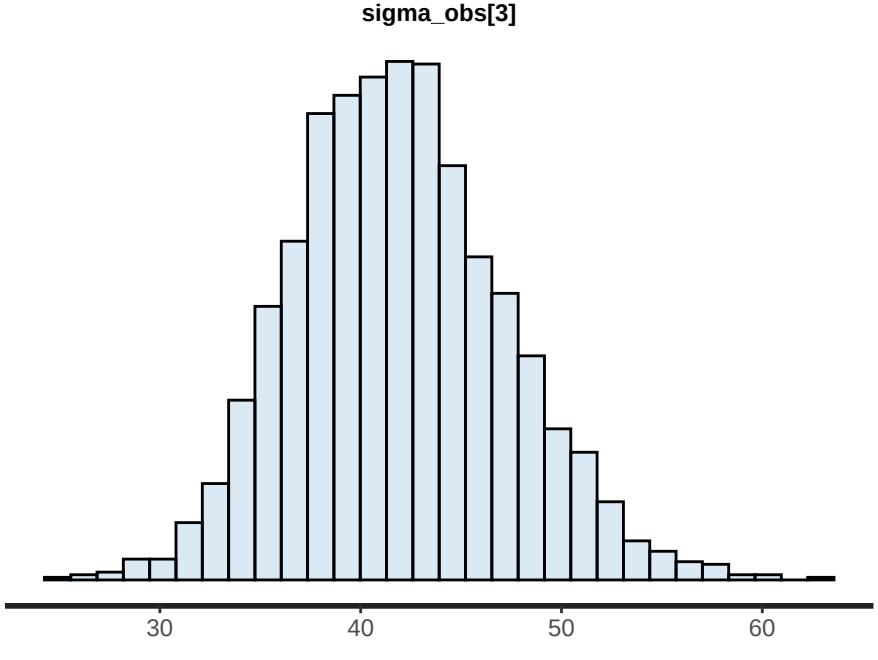
30
40
50
60


sigma_obs[2]
15
20
25
30
35
40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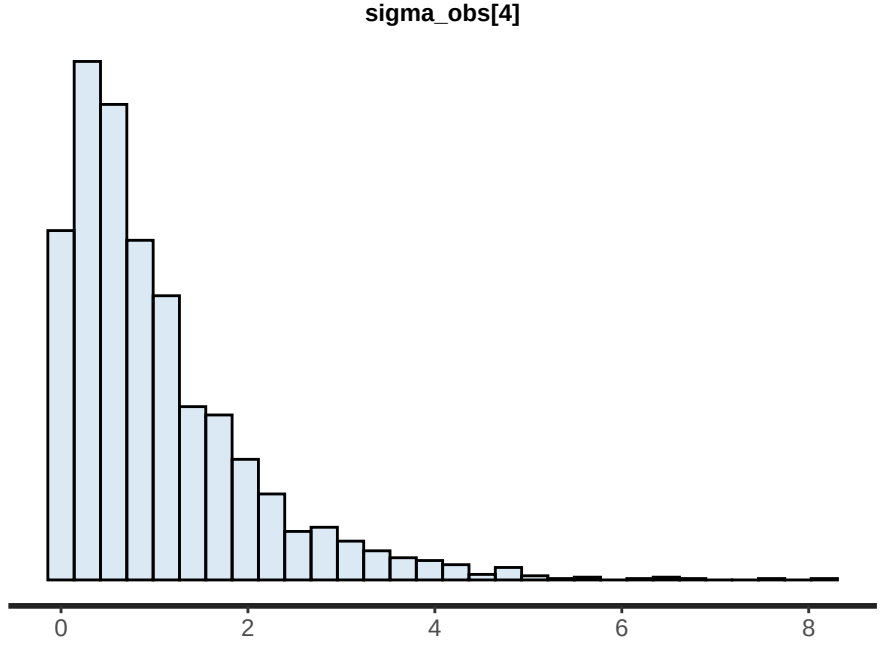
40
50
60


sigma_obs[4]
0
2
4
6
8