BLR2

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2023-10-25

```
suppressPackageStartupMessages(library(mlbench))
suppressPackageStartupMessages(library(rstanarm))
suppressPackageStartupMessages(library(bayestestR))
suppressPackageStartupMessages(library(bayesplot))
suppressPackageStartupMessages(library(insight))
suppressPackageStartupMessages(library(broom))
data <- read.csv('mimic3d.csv')</pre>
data$logLOSdays <- log(data$LOSdays + 1)</pre>
data_subset <- subset(data, select=c(gender, age, admit_location, religion, marital_status, ethnicity, it</pre>
bayes_model <- stan_glm(logLOSdays ~ age * admit_type + gender + admit_location + religion + marital_st
## Warning: Dropped empty interaction levels: age:admit_typeNEWBORN
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 1).
## Chain 1:
## Chain 1: Gradient evaluation took 7.2e-05 seconds
## Chain 1: 1000 transitions using 10 leapfrog steps per transition would take 0.72 seconds.
## Chain 1: Adjust your expectations accordingly!
## Chain 1:
## Chain 1:
## Chain 1: Iteration:
                        1 / 2000 [ 0%]
                                            (Warmup)
                                            (Warmup)
## Chain 1: Iteration: 200 / 2000 [ 10%]
## Chain 1: Iteration: 400 / 2000 [ 20%]
                                            (Warmup)
## Chain 1: Iteration: 600 / 2000 [ 30%]
                                            (Warmup)
## Chain 1: Iteration: 800 / 2000 [ 40%]
                                            (Warmup)
## Chain 1: Iteration: 1000 / 2000 [ 50%]
                                            (Warmup)
## Chain 1: Iteration: 1001 / 2000 [ 50%]
                                            (Sampling)
## Chain 1: Iteration: 1200 / 2000 [ 60%]
                                            (Sampling)
## Chain 1: Iteration: 1400 / 2000 [ 70%]
                                            (Sampling)
## Chain 1: Iteration: 1600 / 2000 [ 80%]
                                            (Sampling)
## Chain 1: Iteration: 1800 / 2000 [ 90%]
                                            (Sampling)
## Chain 1: Iteration: 2000 / 2000 [100%]
                                            (Sampling)
## Chain 1:
## Chain 1: Elapsed Time: 0.983758 seconds (Warm-up)
                           5.38468 seconds (Sampling)
## Chain 1:
## Chain 1:
                           6.36843 seconds (Total)
## Chain 1:
```

```
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 2).
## Chain 2:
## Chain 2: Gradient evaluation took 3.2e-05 seconds
## Chain 2: 1000 transitions using 10 leapfrog steps per transition would take 0.32 seconds.
## Chain 2: Adjust your expectations accordingly!
## Chain 2:
## Chain 2:
## Chain 2: Iteration:
                        1 / 2000 [ 0%]
                                            (Warmup)
## Chain 2: Iteration: 200 / 2000 [ 10%]
                                            (Warmup)
## Chain 2: Iteration: 400 / 2000 [ 20%]
                                            (Warmup)
                        600 / 2000 [ 30%]
## Chain 2: Iteration:
                                            (Warmup)
## Chain 2: Iteration: 800 / 2000 [ 40%]
                                            (Warmup)
## Chain 2: Iteration: 1000 / 2000 [ 50%]
                                            (Warmup)
## Chain 2: Iteration: 1001 / 2000 [ 50%]
                                            (Sampling)
## Chain 2: Iteration: 1200 / 2000 [ 60%]
                                            (Sampling)
## Chain 2: Iteration: 1400 / 2000 [ 70%]
                                            (Sampling)
## Chain 2: Iteration: 1600 / 2000 [ 80%]
                                            (Sampling)
## Chain 2: Iteration: 1800 / 2000 [ 90%]
                                            (Sampling)
## Chain 2: Iteration: 2000 / 2000 [100%]
                                            (Sampling)
## Chain 2:
## Chain 2: Elapsed Time: 1.14531 seconds (Warm-up)
## Chain 2:
                           4.66893 seconds (Sampling)
## Chain 2:
                           5.81424 seconds (Total)
## Chain 2:
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 3).
## Chain 3:
## Chain 3: Gradient evaluation took 3.3e-05 seconds
## Chain 3: 1000 transitions using 10 leapfrog steps per transition would take 0.33 seconds.
## Chain 3: Adjust your expectations accordingly!
## Chain 3:
## Chain 3:
                        1 / 2000 [ 0%]
## Chain 3: Iteration:
                                            (Warmup)
## Chain 3: Iteration: 200 / 2000 [ 10%]
                                            (Warmup)
                                            (Warmup)
## Chain 3: Iteration: 400 / 2000 [ 20%]
## Chain 3: Iteration: 600 / 2000 [ 30%]
                                            (Warmup)
## Chain 3: Iteration: 800 / 2000 [ 40%]
                                            (Warmup)
## Chain 3: Iteration: 1000 / 2000 [ 50%]
                                            (Warmup)
## Chain 3: Iteration: 1001 / 2000 [ 50%]
                                            (Sampling)
## Chain 3: Iteration: 1200 / 2000 [ 60%]
                                            (Sampling)
## Chain 3: Iteration: 1400 / 2000 [ 70%]
                                            (Sampling)
## Chain 3: Iteration: 1600 / 2000 [ 80%]
                                            (Sampling)
## Chain 3: Iteration: 1800 / 2000 [ 90%]
                                            (Sampling)
## Chain 3: Iteration: 2000 / 2000 [100%]
                                            (Sampling)
## Chain 3:
## Chain 3: Elapsed Time: 1.12155 seconds (Warm-up)
## Chain 3:
                           6.0392 seconds (Sampling)
## Chain 3:
                           7.16075 seconds (Total)
## Chain 3:
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 4).
## Chain 4:
## Chain 4: Gradient evaluation took 3.1e-05 seconds
```

```
## Chain 4: 1000 transitions using 10 leapfrog steps per transition would take 0.31 seconds.
## Chain 4: Adjust your expectations accordingly!
## Chain 4:
## Chain 4:
## Chain 4: Iteration:
                       1 / 2000 [ 0%]
                                           (Warmup)
## Chain 4: Iteration: 200 / 2000 [ 10%]
                                           (Warmup)
## Chain 4: Iteration: 400 / 2000 [ 20%]
                                           (Warmup)
## Chain 4: Iteration: 600 / 2000 [ 30%]
                                           (Warmup)
## Chain 4: Iteration: 800 / 2000 [ 40%]
                                           (Warmup)
## Chain 4: Iteration: 1000 / 2000 [ 50%]
                                           (Warmup)
## Chain 4: Iteration: 1001 / 2000 [ 50%]
                                            (Sampling)
## Chain 4: Iteration: 1200 / 2000 [ 60%]
                                            (Sampling)
## Chain 4: Iteration: 1400 / 2000 [ 70%]
                                           (Sampling)
## Chain 4: Iteration: 1600 / 2000 [ 80%]
                                            (Sampling)
## Chain 4: Iteration: 1800 / 2000 [ 90%]
                                            (Sampling)
## Chain 4: Iteration: 2000 / 2000 [100%]
                                            (Sampling)
## Chain 4:
## Chain 4: Elapsed Time: 1.06322 seconds (Warm-up)
## Chain 4:
                          5.26277 seconds (Sampling)
## Chain 4:
                           6.32599 seconds (Total)
## Chain 4:
## Warning: Bulk Effective Samples Size (ESS) is too low, indicating posterior means and medians may be
## Running the chains for more iterations may help. See
## https://mc-stan.org/misc/warnings.html#bulk-ess
## Warning: Tail Effective Samples Size (ESS) is too low, indicating posterior variances and tail quant
## Running the chains for more iterations may help. See
## https://mc-stan.org/misc/warnings.html#tail-ess
describe_posterior(bayes_model)
## Summary of Posterior Distribution
```

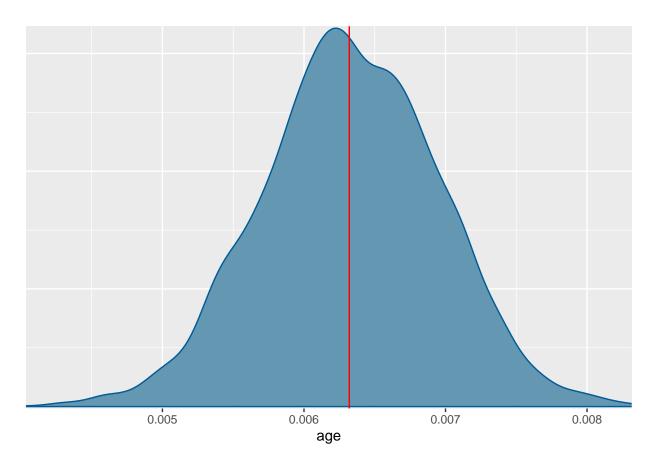
Parameter Median | 95% CI | _____ ## (Intercept) 1.58 | [1.08, 2.07] | 1 6.32e-03 | [0.01, 0.01] | 1 ## admit_typeEMERGENCY 0.43 | [0.34, 0.52] | 1 ## admit_typeNEWBORN 0.19 | [0.07, 0.31] | 99. ## admit_typeURGENT 0.45 | [0.27, 0.64] | 1 ## genderM 0.01 | [0.00, 0.03] | 94. 0.55] | 89. ## admit_locationCLINIC REFERRAL/PREMATURE $0.22 \mid [-0.12]$ ## admit_locationEMERGENCY ROOM ADMIT 0.31 | [-0.03, 0.63] | 96. ## admit_locationHMO REFERRAL/SICK -0.32 | [-0.95, 0.29] | 84. ## admit_locationPHYS REFERRAL/NORMAL DELI 0.47 | [0.14, 0.80] | 99. ## admit_locationTRANSFER FROM HOSP/EXTRAM 0.46 | [0.12, 0.79] | 99. ## admit_locationTRANSFER FROM OTHER HEALT 0.99 | [0.62, 1.36] | 1 ## admit_locationTRANSFER FROM SKILLED NUR 0.34 | [-0.01, 0.68] | 97. ## admit_locationTRSF WITHIN THIS FACILITY -0.48 | [-1.20, 0.28] | 89. ## religionBAPTIST -0.04 | [-0.37, 0.30] | 60. ## religionBUDDHIST -0.24 | [-0.44, -0.02] | 98. -0.14 | [-0.30, 0.05] | 92.

religionCATHOLIC

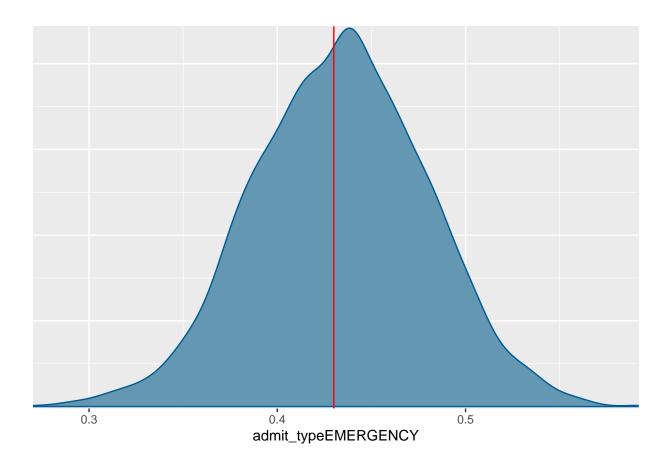
```
## religionCHRISTIAN SCIENTIST
                                                                           -0.13 | [-0.32, 0.07] | 89.
                                                                           -0.19 | [-0.36, 0.00] | 97.
## religionEPISCOPALIAN
## religionGREEK ORTHODOX
                                                                           -0.14 | [-0.32, 0.06] | 91.
## religionHEBREW
                                                                           -0.14 | [-0.55, 0.26] | 75.
## religionHINDU
                                                                           -0.35 | [-0.61, -0.08] | 99.
                                                                           -0.10 | [-0.30, 0.14] | 79.
## religionJEHOVAH'S WITNESS
                                                                           -0.19 | [-0.36, 0.00] | 97.
## religionJEWISH
                                                                           -0.26 | [-1.62, 1.16] | 63.
## religionLUTHERAN
## religionMETHODIST
                                                                            0.10 | [-0.51, 0.68] | 63.
## religionMUSLIM
                                                                           -0.09 | [-0.29, 0.13] | 81.
## religionNOT SPECIFIED
                                                                           -0.22 | [-0.39, -0.03] | 98.
                                                                           -0.14 | [-0.31, 0.04] | 92.
## religionOTHER
## religionPROTESTANT QUAKER
                                                                           -0.14 | [-0.31, 0.04] | 93.
## religionROMANIAN EAST. ORTH
                                                                            0.02 | [-0.23, 0.27] | 55.
                                                                           -0.13 | [-0.35, 0.10] | 86.
## religionUNITARIAN-UNIVERSALIST
                                                                           -0.29 | [-0.46, -0.10] | 99.
## religionUNOBTAINABLE
                                                                           -0.08 | [-0.46, 0.30] | 66.
## marital_statusLIFE PARTNER
## marital statusMARRIED
                                                                           -0.04 | [-0.07, -0.02] | 99.
                                                                            0.03 | [-0.04, 0.09] | 77.
## marital_statusSEPARATED
                                                                           -0.02 | [-0.05, 0.01] | 89.
## marital_statusSINGLE
## marital_statusUNKNOWN (DEFAULT)
                                                                        6.79e-03 | [-0.08, 0.09] | 55.
## marital_statusWIDOWED
                                                                           -0.07 | [-0.11, -0.04] | 1
## ethnicityAMERICAN INDIAN/ALASKA NATIVE FEDERALLY RECOGNIZED TRIBE
                                                                            0.65 | [-0.26, 1.59] | 91.
                                                                           -0.17 | [-0.48, 0.13] | 85.
## ethnicityASIAN
## ethnicityASIAN - ASIAN INDIAN
                                                                            0.03 | [-0.33, 0.37] | 55.
## ethnicityASIAN - CAMBODIAN
                                                                            0.19 | [-0.26, 0.67] | 78.
## ethnicityASIAN - CHINESE
                                                                           -0.15 | [-0.47, 0.15] | 82.
                                                                           -0.46 | [-0.89, -0.03] | 98.
## ethnicityASIAN - FILIPINO
## ethnicityASIAN - JAPANESE
                                                                           -0.69 | [-1.36, -0.05] | 98.
## ethnicityASIAN - KOREAN
                                                                           -0.41 | [-0.93, 0.10] | 93.
## ethnicityASIAN - OTHER
                                                                            0.39 | [-0.13, 0.92] | 92.
## ethnicityASIAN - THAI
                                                                           -0.29 | [-1.07, 0.50] | 76.
## ethnicityASIAN - VIETNAMESE
                                                                           -0.23 | [-0.61, 0.14] | 88.
## ethnicityBLACK/AFRICAN
                                                                           -0.31 | [-0.70,
                                                                                            0.07] | 94.
## ethnicityBLACK/AFRICAN AMERICAN
                                                                           -0.21 | [-0.52, 0.08] | 92.
## ethnicityBLACK/CAPE VERDEAN
                                                                           -0.26 | [-0.58, 0.05] | 94.
## ethnicityBLACK/HAITIAN
                                                                           -0.32 | [-0.67, 0.00] | 97.
## ethnicityCARIBBEAN ISLAND
                                                                           -0.61 | [-1.18, -0.02] | 97.
## ethnicityHISPANIC OR LATINO
                                                                           -0.22 | [-0.54, 0.07] | 92.
## ethnicityHISPANIC/LATINO - CENTRAL AMERICAN (OTHER)
                                                                           -0.65 | [-1.20, -0.13] | 99.
                                                                           -0.04 | [-0.62, 0.55] | 54.
## ethnicityHISPANIC/LATINO - COLOMBIAN
## ethnicityHISPANIC/LATINO - CUBAN
                                                                           -0.24 | [-0.67, 0.17] | 86.
## ethnicityHISPANIC/LATINO - DOMINICAN
                                                                           -0.15 | [-0.50, 0.18] | 80.
## ethnicityHISPANIC/LATINO - GUATEMALAN
                                                                           -0.32 | [-0.71, 0.05] | 95.
## ethnicityHISPANIC/LATINO - HONDURAN
                                                                           -0.08 | [-0.88,
                                                                                            0.70] | 57.
## ethnicityHISPANIC/LATINO - MEXICAN
                                                                           -0.34 | [-0.89,
                                                                                            0.18] | 90.
## ethnicityHISPANIC/LATINO - PUERTO RICAN
                                                                           -0.24 | [-0.56, 0.07] | 92.
## ethnicityHISPANIC/LATINO - SALVADORAN
                                                                           -0.34 | [-0.81,
                                                                                            0.12] | 92.
## ethnicityMIDDLE EASTERN
                                                                           -0.06 | [-0.45,
                                                                                            0.31] | 60.
## ethnicityMULTI RACE ETHNICITY
                                                                           -0.11 | [-0.44,
                                                                                            0.23] | 72.
## ethnicityNATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER
                                                                           -0.29 | [-0.81,
                                                                                            0.21] | 87.
## ethnicityOTHER
                                                                           -0.13 | [-0.44, 0.17] | 80.
## ethnicityPATIENT DECLINED TO ANSWER
                                                                           -0.15 | [-0.46, 0.15] | 82.
## ethnicityPORTUGUESE
                                                                     | -8.32e-03 | [-0.38, 0.33] | 51.
```

```
## ethnicitySOUTH AMERICAN
                                                                          -0.20 | [-0.83, 0.45] | 73.
## ethnicityUNABLE TO OBTAIN
                                                                          -0.22 | [-0.53, 0.08] | 91.
## ethnicityUNKNOWN/NOT SPECIFIED
                                                                          -0.22 | [-0.53, 0.08] | 92.
## ethnicityWHITE
                                                                          -0.20 | [-0.50, 0.10] | 90.
                                                                          0.06 | [-0.31, 0.42] | 62.
## ethnicityWHITE - BRAZILIAN
## ethnicityWHITE - EASTERN EUROPEAN
                                                                          -0.19 | [-0.62, 0.24] | 80.
## ethnicityWHITE - OTHER EUROPEAN
                                                                          -0.30 | [-0.64, 0.05] | 95.
## ethnicityWHITE - RUSSIAN
                                                                          -0.28 | [-0.62, 0.04] | 95.
                                                                          -0.21 | [-0.23, -0.19] | 1
## ExpiredHospital
                                                                    | -3.26e-03 | [ 0.00, 0.00] | 1
## age:admit_typeEMERGENCY
## age:admit_typeURGENT
                                                                    | -2.96e-03 | [-0.01, 0.00] | 97.
```

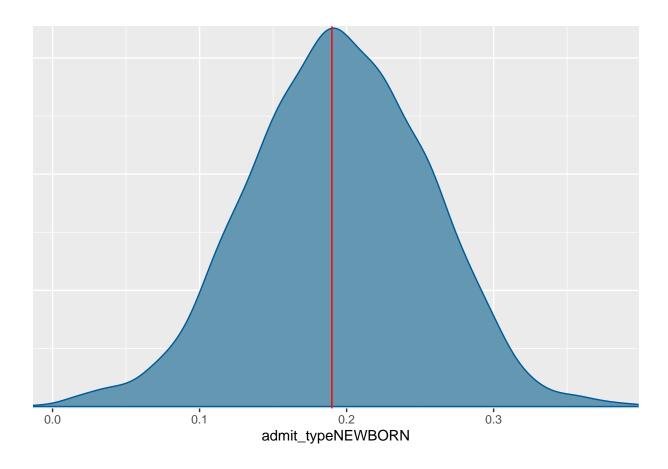
mcmc_dens(bayes_model, pars="age") + vline_at(6.32e-03, col="red")



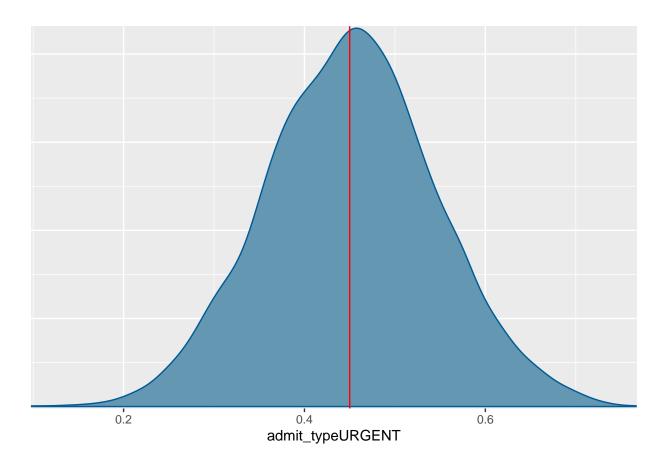
#The default for admit type is ELECTIVE
mcmc_dens(bayes_model, pars="admit_typeEMERGENCY") + vline_at(0.43, col="red")



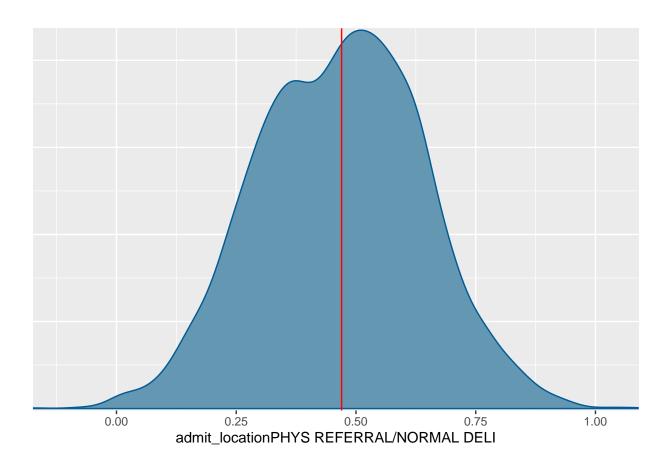
mcmc_dens(bayes_model, pars="admit_typeNEWBORN") + vline_at(0.19, col="red")



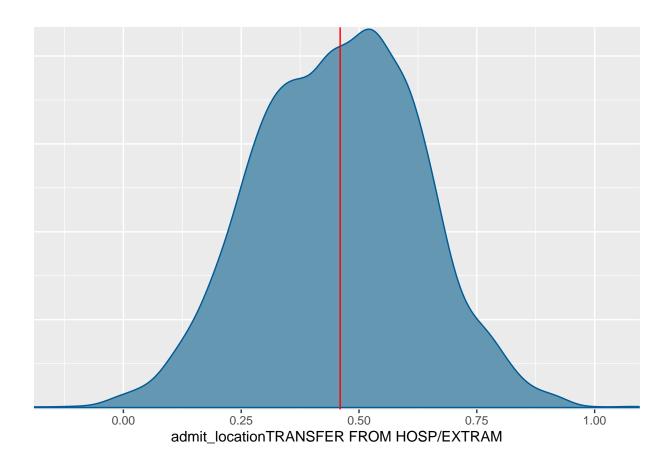
mcmc_dens(bayes_model, pars="admit_typeURGENT") + vline_at(0.45, col="red")



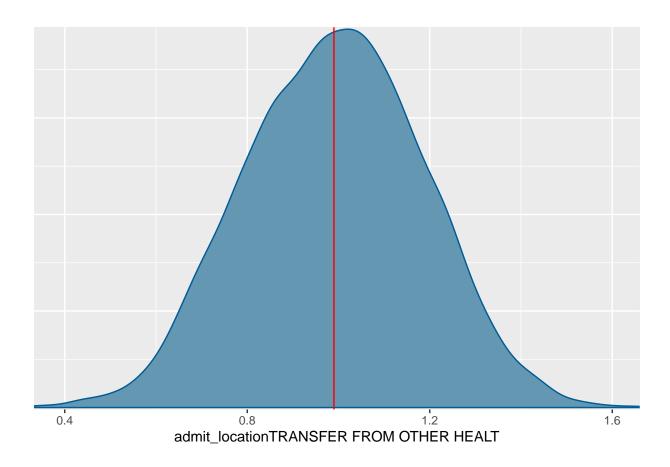
mcmc_dens(bayes_model, pars="admit_locationPHYS REFERRAL/NORMAL DELI") + vline_at(0.47, col="red")



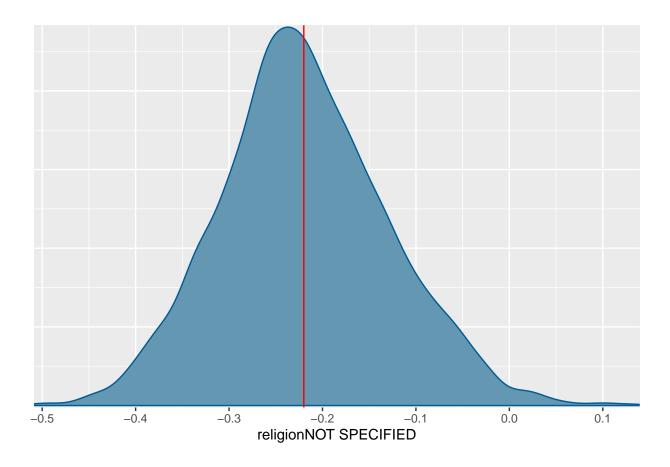
mcmc_dens(bayes_model, pars="admit_locationTRANSFER FROM HOSP/EXTRAM") + vline_at(0.46, col="red")



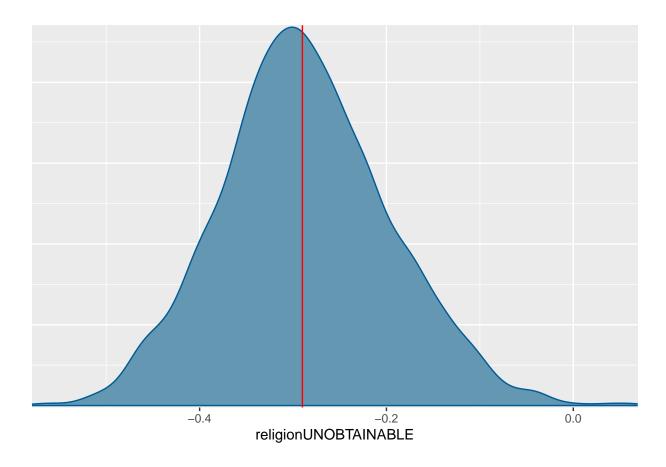
mcmc_dens(bayes_model, pars="admit_locationTRANSFER FROM OTHER HEALT") + vline_at(0.99, col="red")



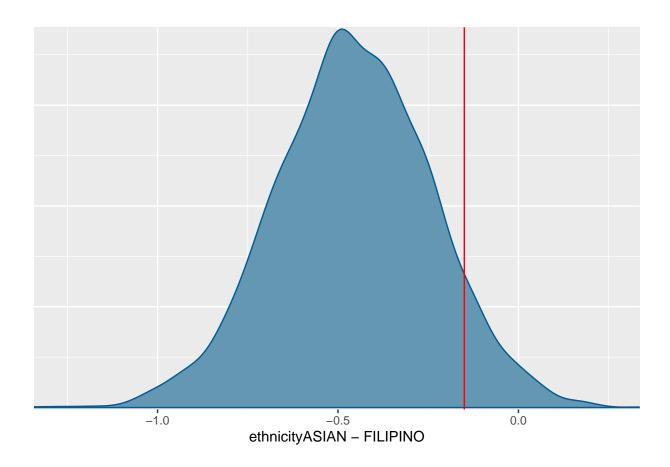
mcmc_dens(bayes_model, pars="religionNOT SPECIFIED") + vline_at(-0.22, col="red")



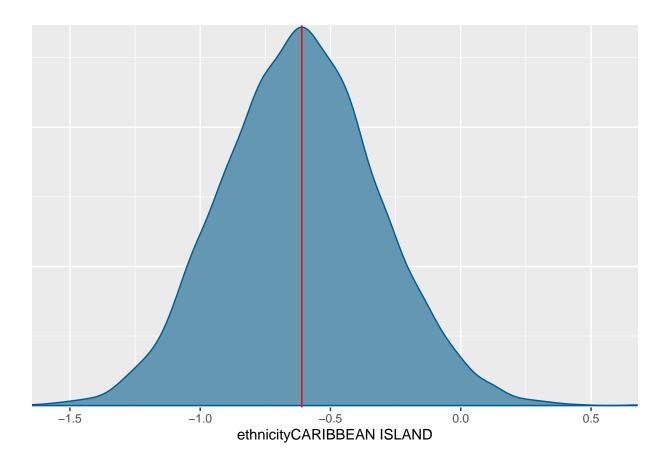
mcmc_dens(bayes_model, pars="religionUNOBTAINABLE") + vline_at(-0.29, col="red")



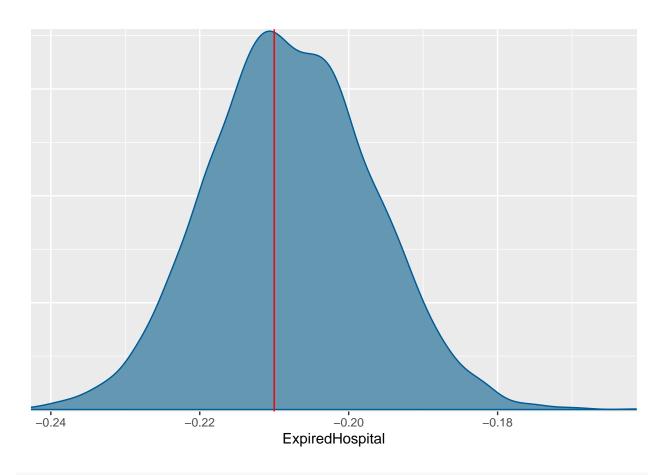
mcmc_dens(bayes_model, pars="ethnicityASIAN - FILIPINO") + vline_at(-0.15, col="red")



mcmc_dens(bayes_model, pars="ethnicityCARIBBEAN ISLAND") + vline_at(-0.61, col="red")



mcmc_dens(bayes_model, pars="ExpiredHospital") + vline_at(-0.21, col="red")



describe_posterior(bayes_model)

	Summary of Posterior Distribution						
## ## ##	Parameter	I	Median		95% CI	1	
	(Intercept)	I	1.58	[1.08	, 2.07]	ı	1
##	age		6.32e-03	[0.01	, 0.01]	-	1
##	admit_typeEMERGENCY		0.43	[0.34	, 0.52]		1
##	admit_typeNEWBORN		0.19	[0.07	, 0.31]		99.
##	admit_typeURGENT		0.45	[0.27	, 0.64]		1
##	genderM		0.01	[0.00	, 0.03]		94.
##	admit_locationCLINIC REFERRAL/PREMATURE		0.22	[-0.12	, 0.55]		89.
##	admit_locationEMERGENCY ROOM ADMIT		0.31	[-0.03	, 0.63]	-	96.
##	admit_locationHMO REFERRAL/SICK		-0.32	[-0.95	, 0.29]	-	84.
##	admit_locationPHYS REFERRAL/NORMAL DELI		0.47	[0.14	, 0.80]		99.
##	admit_locationTRANSFER FROM HOSP/EXTRAM		0.46	[0.12	, 0.79]		99.
##	admit_locationTRANSFER FROM OTHER HEALT		0.99	[0.62	, 1.36]		1
##	admit_locationTRANSFER FROM SKILLED NUR		0.34	[-0.01	, 0.68]		97.
##	admit_locationTRSF WITHIN THIS FACILITY		-0.48	[-1.20	, 0.28]		89.
##	religionBAPTIST		-0.04	[-0.37	, 0.30]	-	60.
##	religionBUDDHIST		-0.24	[-0.44	, -0.02]		98.
##	religionCATHOLIC		-0.14	[-0.30	, 0.05]		92.
##	religionCHRISTIAN SCIENTIST		-0.13	[-0.32	, 0.07]		89.
##	religionEPISCOPALIAN		-0.19	[-0.36	, 0.00]		97.

```
-0.14 | [-0.32, 0.06] | 91.
## religionGREEK ORTHODOX
                                                                           -0.14 | [-0.55, 0.26] | 75.
## religionHEBREW
## religionHINDU
                                                                           -0.35 | [-0.61, -0.08] | 99.
                                                                           -0.10 | [-0.30, 0.14] | 79.
## religionJEHOVAH'S WITNESS
                                                                           -0.19 | [-0.36, 0.00] | 97.
## religionJEWISH
## religionLUTHERAN
                                                                           -0.26 | [-1.62, 1.16] | 63.
## religionMETHODIST
                                                                            0.10 | [-0.51, 0.68] | 63.
                                                                           -0.09 | [-0.29, 0.13] | 81.
## religionMUSLIM
## religionNOT SPECIFIED
                                                                           -0.22 | [-0.39, -0.03] | 98.
## religionOTHER
                                                                           -0.14 | [-0.31, 0.04] | 92.
## religionPROTESTANT QUAKER
                                                                           -0.14 | [-0.31, 0.04] | 93.
## religionROMANIAN EAST. ORTH
                                                                            0.02 | [-0.23, 0.27] | 55.
## religionUNITARIAN-UNIVERSALIST
                                                                           -0.13 | [-0.35, 0.10] | 86.
                                                                           -0.29 | [-0.46, -0.10] | 99.
## religionUNOBTAINABLE
## marital_statusLIFE PARTNER
                                                                           -0.08 | [-0.46, 0.30] | 66.
                                                                           -0.04 | [-0.07, -0.02] | 99.
## marital_statusMARRIED
                                                                            0.03 | [-0.04, 0.09] | 77.
## marital_statusSEPARATED
## marital statusSINGLE
                                                                           -0.02 | [-0.05, 0.01] | 89.
## marital_statusUNKNOWN (DEFAULT)
                                                                        6.79e-03 | [-0.08, 0.09] | 55.
                                                                           -0.07 | [-0.11, -0.04] |
## marital statusWIDOWED
                                                                                                      1
## ethnicityAMERICAN INDIAN/ALASKA NATIVE FEDERALLY RECOGNIZED TRIBE
                                                                            0.65 | [-0.26, 1.59] | 91.
## ethnicityASIAN
                                                                           -0.17 | [-0.48, 0.13] | 85.
                                                                            0.03 | [-0.33, 0.37] | 55.
## ethnicityASIAN - ASIAN INDIAN
## ethnicityASIAN - CAMBODIAN
                                                                            0.19 | [-0.26, 0.67] | 78.
## ethnicityASIAN - CHINESE
                                                                           -0.15 | [-0.47, 0.15] | 82.
                                                                           -0.46 | [-0.89, -0.03] | 98.
## ethnicityASIAN - FILIPINO
## ethnicityASIAN - JAPANESE
                                                                           -0.69 | [-1.36, -0.05] | 98.
                                                                           -0.41 | [-0.93, 0.10] | 93.
## ethnicityASIAN - KOREAN
## ethnicityASIAN - OTHER
                                                                            0.39 | [-0.13, 0.92] | 92.
## ethnicityASIAN - THAI
                                                                           -0.29 | [-1.07, 0.50] | 76.
## ethnicityASIAN - VIETNAMESE
                                                                           -0.23 | [-0.61,
                                                                                            0.14] | 88.
## ethnicityBLACK/AFRICAN
                                                                           -0.31 | [-0.70, 0.07] | 94.
## ethnicityBLACK/AFRICAN AMERICAN
                                                                           -0.21 | [-0.52, 0.08] | 92.
## ethnicityBLACK/CAPE VERDEAN
                                                                           -0.26 | [-0.58, 0.05] | 94.
## ethnicityBLACK/HAITIAN
                                                                           -0.32 | [-0.67, 0.00] | 97.
                                                                           -0.61 | [-1.18, -0.02] | 97.
## ethnicityCARIBBEAN ISLAND
## ethnicityHISPANIC OR LATINO
                                                                           -0.22 | [-0.54, 0.07] | 92.
## ethnicityHISPANIC/LATINO - CENTRAL AMERICAN (OTHER)
                                                                           -0.65 | [-1.20, -0.13] | 99.
## ethnicityHISPANIC/LATINO - COLOMBIAN
                                                                           -0.04 | [-0.62, 0.55] | 54.
## ethnicityHISPANIC/LATINO - CUBAN
                                                                           -0.24 | [-0.67, 0.17] | 86.
## ethnicityHISPANIC/LATINO - DOMINICAN
                                                                           -0.15 | [-0.50, 0.18] | 80.
## ethnicityHISPANIC/LATINO - GUATEMALAN
                                                                           -0.32 \mid [-0.71,
                                                                                            0.05] | 95.
## ethnicityHISPANIC/LATINO - HONDURAN
                                                                           -0.08 | [-0.88, 0.70] | 57.
## ethnicityHISPANIC/LATINO - MEXICAN
                                                                           -0.34 | [-0.89,
                                                                                            0.18] | 90.
## ethnicityHISPANIC/LATINO - PUERTO RICAN
                                                                           -0.24 | [-0.56,
                                                                                            0.07] | 92.
## ethnicityHISPANIC/LATINO - SALVADORAN
                                                                           -0.34 | [-0.81,
                                                                                            0.12] | 92.
## ethnicityMIDDLE EASTERN
                                                                           -0.06 | [-0.45, 0.31] | 60.
## ethnicityMULTI RACE ETHNICITY
                                                                           -0.11 \mid [-0.44]
                                                                                            0.23] | 72.
## ethnicityNATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER
                                                                           -0.29 | [-0.81,
                                                                                            0.21] | 87.
## ethnicityOTHER
                                                                           -0.13 | [-0.44,
                                                                                            0.17] | 80.
## ethnicityPATIENT DECLINED TO ANSWER
                                                                           -0.15 | [-0.46,
                                                                                            0.15] | 82.
## ethnicityPORTUGUESE
                                                                     | -8.32e-03 | [-0.38, 0.33] | 51.
## ethnicitySOUTH AMERICAN
                                                                           -0.20 | [-0.83, 0.45] | 73.
## ethnicityUNABLE TO OBTAIN
                                                                           -0.22 | [-0.53, 0.08] | 91.
```

##	ethnicityUNKNOWN/NOT SPECIFIED	- 1	-0.22	1	[-0.53,	0.08]	1	92.
##	ethnicityWHITE	-	-0.20		[-0.50,	0.10]		90.
##	ethnicityWHITE - BRAZILIAN		0.06	1	[-0.31,	0.42]	-	62.3
##	ethnicityWHITE - EASTERN EUROPEAN		-0.19	-	[-0.62,	0.24]	-	80.8
##	ethnicityWHITE - OTHER EUROPEAN	-	-0.30	1	[-0.64,	0.05]	-	95.5
##	ethnicityWHITE - RUSSIAN		-0.28	1	[-0.62,	0.04]	-	95.
##	ExpiredHospital		-0.21	1	[-0.23,	-0.19]	-	10
##	age:admit_typeEMERGENCY		-3.26e-03	1	[0.00,	0.00]	-	10
##	age:admit_typeURGENT	-	-2.96e-03	1	[-0.01,	0.00]	1	97.8