

```
library(readxl)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(generalhoslem)
```

```
## Loading required package: reshape

##
## Attaching package: 'reshape'

## The following object is masked from 'package:dplyr':
##
##   rename

## Loading required package: MASS

##
## Attaching package: 'MASS'

## The following object is masked from 'package:dplyr':
##
##   select
```

```
library(MatchIt)
library(plyr)
```

```
## -----

## You have loaded plyr after dplyr - this is likely to cause problems.
## If you need functions from both plyr and dplyr, please load plyr first, then dplyr:
## library(plyr); library(dplyr)

## -----

##
## Attaching package: 'plyr'
```

```
## The following objects are masked from 'package:reshape':  
##  
##   rename, round_any
```

```
## The following objects are masked from 'package:dplyr':  
##  
##   arrange, count, desc, failwith, id, mutate, rename, summarise,  
##   summarize
```

```
library(lubridate)
```

```
##  
## Attaching package: 'lubridate'
```

```
## The following object is masked from 'package:reshape':  
##  
##   stamp
```

```
## The following objects are masked from 'package:base':  
##  
##   date, intersect, setdiff, union
```

```
new.data = read_xlsx("~/Documents/Medical School/Research/Logistic Regression/COVID_DEIDENT_11-13.xlsx")
```

```
## New names:  
## * 'Please specify:' -> 'Please specify:...10'  
## * 'Complete?' -> 'Complete?...11'  
## * 'Complete?' -> 'Complete?...46'  
## * 'Please specify:' -> 'Please specify:...62'  
## * 'Please specify: (choice=Other)' -> 'Please specify: (choice=Other)...67'  
## * ...
```

```
# second.data$plasma
```

```
first.visit.data.new = new.data %>%  
  filter('Event Name' == "Admission 1 (Index)") %>% # select just patient's first admission  
  filter('Age at Admission' >= 18)
```

```
second.data = read_csv("~/Documents/Medical School/Research/Logistic Regression/CaseSeriesCOVID19_Update")
```

```
second.data = second.data %>%  
  filter('Event.Name' == "Admission 1 (Index)")
```

```
second.data$'REDCap Record ID' = second.data$REDCap.Record.ID  
second.data$REDCap.Record.ID = NULL  
second.data$'Event Name' = second.data$Event.Name  
second.data$Event.Name = NULL
```

```
# necessary variables from second data
```

```
second.data.subset = second.data %>%  
  dplyr::select('REDCap Record ID', 'Event Name', Date.of.plasma.administration)
```

```
second.data.subset$Date.of.plasma.administration = as.Date(second.data.subset$Date.of.plasma.administra

# merge two data sets
merged.data = merge(first.visit.data.new, second.data.subset, all = T)
```

Steroid and anticoagulation data were omitted because there was high variability in what each patient received. Many patients were on more than one medication and received different doses.

```
date.data = merged.data %>%
  dplyr::select('Date of Birth:', 'Admission Date:', 'Discharge Date:', 'Date of intubation:', 'Date of

date.data[] = lapply(date.data, as.Date)
date.data$'REDCap Record ID' = merged.data$'REDCap Record ID'
date.data$'Event Name' = merged.data$'Event Name'
date.data$time.until.plasma = date.data$Date.of.plasma.administration - date.data$'Admission Date:'

date.data.month = date.data
date.data.month$month = month(date.data.month$Date.of.plasma.administration) # plasma from april 9 to m

median(date.data$time.until.plasma, na.rm = T)
```

```
## Time difference of 5 days
```

```
median(date.data.month$time.until.plasma[date.data.month$month == 4], na.rm = T)
```

```
## Time difference of 6 days
```

```
median(date.data.month$time.until.plasma[date.data.month$month == 5], na.rm = T)
```

```
## Time difference of 2 days
```

```
numerical.data = merged.data %>%
  dplyr::select('Age at Admission', 'Median_Income', 'Per_Capita', 'Percent_Higher_Income', 'Length_of

numerical.data[] = lapply(numerical.data, as.numeric)
```

```
## Warning in lapply(numerical.data, as.numeric): NAs introduced by coercion
```

```
## Warning in lapply(numerical.data, as.numeric): NAs introduced by coercion
```

```
## Warning in lapply(numerical.data, as.numeric): NAs introduced by coercion
```

```
numerical.data$'REDCap Record ID' = merged.data$'REDCap Record ID'
numerical.data$'Event Name' = merged.data$'Event Name'
```

```
categorical.data = merged.data %>%
  dplyr::select('Patient Sex:', 'Insurance Class', 'Race:', 'Ethnicity:', 'Inpatient Arrival Information

categorical.data[categorical.data=="Checked"] = "1"
```

```

categorical.data[categorical.data=="Unchecked"] = "0"
categorical.data[categorical.data=="Yes"] = "1"
categorical.data[categorical.data=="No"] = "0"
categorical.data[categorical.data=="Y"] = "1"
categorical.data[categorical.data=="N"] = "0"

categorical.data[] = lapply(categorical.data, as.factor)
categorical.data$'REDCap Record ID' = merged.data$'REDCap Record ID'
categorical.data$'Event Name' = merged.data$'Event Name'

## set baseline for categorical factors
categorical.data$'Patient Sex:' = relevel(categorical.data$'Patient Sex:', ref= "Female")
categorical.data$'Insurance Class' = relevel(categorical.data$'Insurance Class', ref= "COMM")
categorical.data$'Race:' = relevel(categorical.data$'Race:', ref= "White")
categorical.data$'Ethnicity:' = relevel(categorical.data$'Ethnicity:', ref= "Not Hispanic")
categorical.data$'Inpatient Arrival Information:' = relevel(categorical.data$'Inpatient Arrival Informa
categorical.data$'ABO' = relevel(categorical.data$'ABO', ref= "O")
categorical.data$'Rh' = relevel(categorical.data$'Rh', ref= "NEGATIVE")
categorical.data$'Blood_Type' = relevel(categorical.data$'Blood_Type', ref= "O NEGATIVE")
categorical.data$'ED Oxygen Delivery Method:' = relevel(categorical.data$'ED Oxygen Delivery Method:',
categorical.data$'Admission- Most Invasive Method of Oxygen Delivery:' = relevel(categorical.data$'Admi

# repair NAs when omission means no
categorical.data$'Was the patient pregnant upon admission?'[is.na(categorical.data$'Was the patient preg
categorical.data$'Is patient currently receiving treatment for cancer?'[is.na(categorical.data$'Is patie
categorical.data$'Was the patient on hemodialysis when plasma was given?'[is.na(categorical.data$'Was th
categorical.data$'Was the patient intubated when plasma was given?'[is.na(categorical.data$'Was the pat

numerical.data$'REDCap Record ID' = as.factor(numerical.data$'REDCap Record ID')
categorical.data$'REDCap Record ID' = as.factor(categorical.data$'REDCap Record ID')
date.data$'REDCap Record ID' = as.factor(date.data$'REDCap Record ID')

working.data = merge(categorical.data, numerical.data)
working.data = merge(working.data, date.data)

merged.data = working.data

merged.data$death = ifelse(merged.data$Dispo_Categories == "Expired", 1, 0)

## which data has clinical relevance?
relevant.columns = merged.data %>%
  dplyr::select('REDCap Record ID', 'Event Name', 'Patient Sex:', 'Insurance Class', 'Race:', 'Ethnicity

## redundant - covered by another category
# covid symptoms tend to be very correlated and are not thought to be 100% accurate or predictive of se
#"COVID Symptoms upon Arrival (choice=Cough)"
#"COVID Symptoms upon Arrival (choice=Fever)"
#"COVID Symptoms upon Arrival (choice=Shortness of breath/difficulty breathing)"
#"COVID Symptoms upon Arrival (choice=Chills)"
#"COVID Symptoms upon Arrival (choice=Muscle pain/aches)"
#"COVID Symptoms upon Arrival (choice=Sore throat)"
#"COVID Symptoms upon Arrival (choice=New loss of smell)"

```

```

#"COVID Symptoms upon Arrival (choice=New loss of taste)"
#"COVID Symptoms upon Arrival (choice=Nausea, vomiting or diarrhea)"
#"COVID Symptoms upon Arrival (choice=Congestion/runny nose)"
# Dispo_Categories - defined by death
# Blood_Type - covered by ABO and Rh
# Does the patient have a history of cardiovascular disease? - covered by more specific i.e. hypertensi
# Does the patient have a history of Chronic Respiratory Disease? - covered by COPD, asthma, obstructiv
# 'Please specify: (choice=History of solid organ transplant)' - included in immunosuppression (52 entri
# 'Please specify: (choice=HIV)' - included in immunosuppression (52 entries) compared to HIV 3 pts were
# Does the patient have a history of kidney disease? - covered by chronic renal insufficiency and end s
# Does the patient have a history of liver disease? - covered by cirrhosis and hep B/C
# Please specify: (choice=Obesity (BMI >30)) - continuous BMI used instead
# Please specify: (choice=Morbid Obesity (BMI >35)) - continuous BMI used instead
# ED Oxygen Delivery Method: - admission o2 was favored instead
# Was NPPV (noninvasive positive pressure ventilation) used for this patient? - covered in most invasiv
# Was the patient intubated at any time during admission? - covered in most invasive method
# Was a tracheostomy performed during this admission? - covered in most invasive method
# Median_Income - covered in per capita
# Percent_Higher_Income - covered in per capita
# Patient Height - covered in BMI
# Patient Weight - covered in BMI
# ED Temperature:, - covered in SIRS temp
# ED Pulse: - covered in SIRS pulse
# ED Respiratory Rate: - covered in SIRS RR
# WBC - covered in sirs wbc
# Admission- Highest Temperature Recorded:, - covered in SIRS temp
# Admission- Highest Pulse Recorded: - covered in SIRS pulse
# Admission- Highest Respiratory Rate Recorded - covered in SIRS RR
# WBC - covered in sirs wbc
# Date of Birth: covered by age
# Discharge Date: - using admission date instead

## non specific - cannot be well classified
# Inpatient Arrival Information:,

## non reliable
# Has the patient ever smoked?
# ED Oxygen Saturation (O2 Sat): - patients on different methods of o2 delivery
# Admission- Lowest Oxygen Saturation (O2 Sat) Recorded: - patients on different methods of o2 delivery

## Biased
# Discharged on Vent? - only those alive can be discharged
# Discharged on O2 therapy? - only those alive can be discharged
# Date of intubation: - not all patients intubated
# Date of extubation: - not all patients intubated
# Date of last hemodialysis treatment during admission: not all patients on hemodialysis
# Date.of.plasma.administration - not all patients got plasma
# time.until.plasma - not all patients got plasma # added in but not used - needed for later

```

```

# fully saturated
time.until.plasma.no.time.until.plasma = subset(relevant.columns, select = -c(time.until.plasma, 'Event
time.until.plasma.no.time.until.plasma.na = na.omit(time.until.plasma.no.time.until.plasma)

```

```
fully.saturated.model = glm(death ~ ., family = binomial, data = time.until.plasma.no.time.until.plasma
```

```
## Warning: glm.fit: algorithm did not converge
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
car::vif(fully.saturated.model)
```

```
##
##                                     GVIF
## 'Patient Sex:'                      6.204038e+01
## 'Insurance Class'                   1.666306e+03
## 'Race:'                              3.734968e+06
## 'Ethnicity:'                        2.055213e+03
## ABO                                  1.097717e+04
## Rh                                    2.419124e+01
## 'Was the patient pregnant upon admission?' 6.043293e+00
## 'Does the patient have a history of cancer?' 3.510520e+01
## 'Is patient currently receiving treatment for cancer?' 2.988159e+01
## 'Please specify: (choice=Hypertension)' 1.712293e+02
## 'Please specify: (choice=Coronary Artery Disease)' 2.411096e+02
## 'Please specify: (choice=Congestive Heart Failure)' 6.080781e+01
## 'Please specify: (choice=Asthma)' 8.253494e+01
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 3.616245e+01
## 'Please specify: (choice=Obstructive Sleep Apnea)' 4.965129e+00
## 'Does the patient have a history of immunosuppression?' 3.520300e+01
## 'Please specify: (choice=Chronic Renal Insufficiency)' 6.102325e+01
## 'Please specify: (choice=End Stage Renal Failure)' 4.978539e+01
## 'Please specify: (choice=Chronic- Hepatitis B)' 2.401621e+00
## 'Please specify: (choice=Chronic- Hepatitis C)' 3.843962e+00
## 'Please specify: (choice=Cirrhosis)' 1.333371e+00
## 'Does the patient have a history of metabolic disease?' 2.671296e+02
## 'Please specify: (choice=Diabetes)' 6.517971e+01
## 'Admission- Most Invasive Method of Oxygen Delivery:' 8.699160e+07
## 'Did the patient receive hemodialysis during this admission?' 1.371557e+02
## 'Was plasma given to the patient during this admission?' 9.201037e+01
## 'Was the patient on hemodialysis when plasma was given?' 2.551141e+01
## 'Was the patient intubated when plasma was given?' 9.652517e+01
## 'Was the patient placed in a prone position during their admission?' 2.950574e+01
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 2.839150e+02
## 'COVID- Was Remdesivir given during the patient's admission?' 4.840955e+01
## 'Was Nitric Oxide given during this admission?' 1.000108e+00
## 'Age at Admission' 1.069324e+02
## Per_Capita 3.521509e+01
## Length_of_Stay 6.614087e+01
## 'Patient BMI' 5.118321e+01
## 'SIRS TEMP' 1.156347e+02
## 'SIRS Pulse' 1.893295e+02
## 'SIRS RR' 4.623874e+01
## SIRS_WBC 6.846116e+01
## SIRS...110 1.704204e+02
## 'Creatinine (if 0 = N/A)' 3.030289e+02
## Ferritin 1.759147e+01
```

## CRP	4.191883e+01
## 'D-Dimer'	1.895919e+02
## 'Admission Date:'	2.250582e+02
##	Df
## 'Patient Sex:'	1
## 'Insurance Class'	2
## 'Race:'	5
## 'Ethnicity:'	2
## ABO	4
## Rh	1
## 'Was the patient pregnant upon admission?'	1
## 'Does the patient have a history of cancer?'	1
## 'Is patient currently receiving treatment for cancer?'	1
## 'Please specify: (choice=Hypertension)'	1
## 'Please specify: (choice=Coronary Artery Disease)'	1
## 'Please specify: (choice=Congestive Heart Failure)'	1
## 'Please specify: (choice=Asthma)'	1
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## 'Please specify: (choice=Obstructive Sleep Apnea)'	1
## 'Does the patient have a history of immunosuppression?'	1
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## 'Please specify: (choice=End Stage Renal Failure)'	1
## 'Please specify: (choice=Chronic- Hepatitis B)'	1
## 'Please specify: (choice=Chronic- Hepatitis C)'	1
## 'Please specify: (choice=Cirrhosis)'	1
## 'Does the patient have a history of metabolic disease?'	1
## 'Please specify: (choice=Diabetes)'	1
## 'Admission- Most Invasive Method of Oxygen Delivery:'	6
## 'Did the patient receive hemodialysis during this admission?'	1
## 'Was plasma given to the patient during this admission?'	1
## 'Was the patient on hemodialysis when plasma was given?'	1
## 'Was the patient intubated when plasma was given?'	1
## 'Was the patient placed in a prone position during their admission?'	1
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## 'COVID- Was Remdesivir given during the patient's admission?'	1
## 'Was Nitric Oxide given during this admission?'	1
## 'Age at Admission'	1
## Per_Capita	1
## Length_of_Stay	1
## 'Patient BMI'	1
## 'SIRS TEMP'	1
## 'SIRS Pulse'	1
## 'SIRS RR'	1
## SIRS_WBC	1
## SIRS...110	1
## 'Creatinine (if 0 = N/A)'	1
## Ferritin	1
## CRP	1
## 'D-Dimer'	1
## 'Admission Date:'	1
##	GVIF^(1/(2*Df))
## 'Patient Sex:'	7.876572
## 'Insurance Class'	6.389085
## 'Race:'	4.541807

```

## 'Ethnicity:' 6.733087
## ABO 3.199347
## Rh 4.918459
## 'Was the patient pregnant upon admission?' 2.458311
## 'Does the patient have a history of cancer?' 5.924965
## 'Is patient currently receiving treatment for cancer?' 5.466406
## 'Please specify: (choice=Hypertension)' 13.085463
## 'Please specify: (choice=Coronary Artery Disease)' 15.527704
## 'Please specify: (choice=Congestive Heart Failure)' 7.797936
## 'Please specify: (choice=Asthma)' 9.084874
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 6.013523
## 'Please specify: (choice=Obstructive Sleep Apnea)' 2.228257
## 'Does the patient have a history of immunosuppression?' 5.933212
## 'Please specify: (choice=Chronic Renal Insufficiency)' 7.811738
## 'Please specify: (choice=End Stage Renal Failure)' 7.055876
## 'Please specify: (choice=Chronic- Hepatitis B)' 1.549716
## 'Please specify: (choice=Chronic- Hepatitis C)' 1.960602
## 'Please specify: (choice=Cirrhosis)' 1.154717
## 'Does the patient have a history of metabolic disease?' 16.344100
## 'Please specify: (choice=Diabetes)' 8.073395
## 'Admission- Most Invasive Method of Oxygen Delivery:' 4.587997
## 'Did the patient receive hemodialysis during this admission?' 11.711347
## 'Was plasma given to the patient during this admission?' 9.592204
## 'Was the patient on hemodialysis when plasma was given?' 5.050882
## 'Was the patient intubated when plasma was given?' 9.824722
## 'Was the patient placed in a prone position during their admission?' 5.431919
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 16.849778
## 'COVID- Was Remdesivir given during the patient's admission?' 6.957697
## 'Was Nitric Oxide given during this admission?' 1.000054
## 'Age at Admission' 10.340813
## Per_Capita 5.934230
## Length_of_Stay 8.132704
## 'Patient BMI' 7.154244
## 'SIRS TEMP' 10.753356
## 'SIRS Pulse' 13.759704
## 'SIRS RR' 6.799907
## SIRS_WBC 8.274126
## SIRS...110 13.054518
## 'Creatinine (if 0 = N/A)' 17.407727
## Ferritin 4.194219
## CRP 6.474475
## 'D-Domer' 13.769238
## 'Admission Date:' 15.001941

```

```

fully.saturated.summary = summary(fully.saturated.model)
fully.saturated.summary.p.values = fully.saturated.summary$coefficients[,4]
fully.saturated.conf.intervals = exp(cbind(coef(fully.saturated.model), confint(fully.saturated.model)))

```

```
## Waiting for profiling to be done...
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```



```
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
fully.saturated.conf.intervals.df = data.frame(fully.saturated.conf.intervals)
fully.saturated.conf.intervals.df$p.values = fully.saturated.summary.p.values
```

```
fully.saturated.death = time.until.plasma.no.time.until.plasma.na$death
logitgof(fully.saturated.death, fitted(fully.saturated.model), g = 10)
```

```
## Warning in logitgof(fully.saturated.death, fitted(fully.saturated.model), :
## At least one cell in the expected frequencies table is < 1. Chi-square
## approximation may be incorrect.
```

```
## Warning in logitgof(fully.saturated.death, fitted(fully.saturated.model), : Not
## possible to compute 10 rows. There might be too few observations.
```

```
##
## Hosmer and Lemeshow test (binary model)
##
## data: fully.saturated.death, fitted(fully.saturated.model)
## X-squared = 2.9939e-09, df = 3, p-value = 1
```

We need to select fewer variables

```
exit.df = data.frame()

for ( i in 3:ncol(relevant.columns)){ # first column is just redcap number and second is always first v
  middle = relevant.columns
  variable.selected = middle[[i]]
  middle.glm = glm(middle$death~ variable.selected, family = binomial)
  middle.glm.summary = summary(middle.glm)
  middle.glm.summary.df = data.frame(middle.glm.summary$coefficients)
  middle.glm.summary.df = middle.glm.summary.df[-1,] # delete intercept row

  column.name.selected = colnames(middle)[i]
  if (nrow(middle.glm.summary.df) == 1){
    row.names(middle.glm.summary.df) = paste(column.name.selected)
  }

  exit.df = rbind(exit.df, middle.glm.summary.df)
  # print(colnames(middle)[i])
  # print(summary(middle.glm))
}
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
## Warning: glm.fit: algorithm did not converge
```

```
p.values.under.0.25 = exit.df[exit.df$Pr...z.. < 0.25, ]
row.names.0.25 = row.names(p.values.under.0.25)
# we do not want nitric oxide because of small sample size and lack of clinical interest
# we do not want lenght of stay due to it being inherently biased, dead patients cannot stay longer, an

under.0.25.variables = relevant.columns %>%
  dplyr::select('REDCap Record ID', 'Insurance Class', 'Race:', 'Does the patient have a history of can

complete.df = na.omit(under.0.25.variables) # 328 with complete data frames for relevant variables
```

```
# saturated glm
## MODEL 1a
under.0.25.variables.no.redcap = subset(complete.df, select = -c('REDCap Record ID', 'Was the patient i

saturated.log.reg = glm(death ~ . , data = under.0.25.variables.no.redcap, family = binomial)
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
saturated.log.reg.summary = summary(saturated.log.reg) # AIC = 297
car::vif(saturated.log.reg)
```

```
##
## 'Insurance Class' 2.797984
## 'Race:' 4.757903
## 'Does the patient have a history of cancer?' 1.134076
```

## 'Please specify: (choice=Hypertension)'	1.417598
## 'Please specify: (choice=Coronary Artery Disease)'	1.361416
## 'Please specify: (choice=Congestive Heart Failure)'	1.432517
## 'Please specify: (choice=Asthma)'	1.136721
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1.223437
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1.186312
## 'Please specify: (choice=Cirrhosis)'	2.000000
## 'Did the patient receive hemodialysis during this admission?'	1.488230
## 'Was plasma given to the patient during this admission?'	1.298881
## 'Was the patient placed in a prone position during their admission?'	1.246841
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1.621518
## 'Age at Admission'	2.975064
## Per_Capita	1.317379
## 'SIRS RR'	1.924746
## SIRS_WBC	1.602017
## SIRS...110	3.403843
## 'Creatinine (if 0 = N/A)'	1.546424
## Ferritin	1.263702
## CRP	1.265780
## 'D-Domer'	1.235909
## 'Admission Date:'	1.599484
## 'Please specify: (choice=Diabetes)'	1.221311
## 'SIRS TEMP'	1.806426
## 'Please specify: (choice=Chronic- Hepatitis C)'	3.000000
##	Df
## 'Insurance Class'	3
## 'Race:'	5
## 'Does the patient have a history of cancer?'	1
## 'Please specify: (choice=Hypertension)'	1
## 'Please specify: (choice=Coronary Artery Disease)'	1
## 'Please specify: (choice=Congestive Heart Failure)'	1
## 'Please specify: (choice=Asthma)'	1
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## 'Please specify: (choice=Cirrhosis)'	1
## 'Did the patient receive hemodialysis during this admission?'	1
## 'Was plasma given to the patient during this admission?'	1
## 'Was the patient placed in a prone position during their admission?'	1
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## 'Age at Admission'	1
## Per_Capita	1
## 'SIRS RR'	1
## SIRS_WBC	1
## SIRS...110	1
## 'Creatinine (if 0 = N/A)'	1
## Ferritin	1
## CRP	1
## 'D-Domer'	1
## 'Admission Date:'	1
## 'Please specify: (choice=Diabetes)'	1
## 'SIRS TEMP'	1
## 'Please specify: (choice=Chronic- Hepatitis C)'	1
##	GVIF^(1/(2*Df))
## 'Insurance Class'	1.187064

```

## 'Race:' 1.168804
## 'Does the patient have a history of cancer?' 1.064930
## 'Please specify: (choice=Hypertension)' 1.190629
## 'Please specify: (choice=Coronary Artery Disease)' 1.166797
## 'Please specify: (choice=Congestive Heart Failure)' 1.196878
## 'Please specify: (choice=Asthma)' 1.066171
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1.106091
## 'Please specify: (choice=Chronic Renal Insufficiency)' 1.089179
## 'Please specify: (choice=Cirrhosis)' 1.414214
## 'Did the patient receive hemodialysis during this admission?' 1.219930
## 'Was plasma given to the patient during this admission?' 1.139685
## 'Was the patient placed in a prone position during their admission?' 1.116620
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1.273388
## 'Age at Admission' 1.724837
## Per_Capita 1.147771
## 'SIRS RR' 1.387352
## SIRS_WBC 1.265708
## SIRS...110 1.844951
## 'Creatinine (if 0 = N/A)' 1.243553
## Ferritin 1.124145
## CRP 1.125069
## 'D-Domer' 1.111715
## 'Admission Date:' 1.264707
## 'Please specify: (choice=Diabetes)' 1.105129
## 'SIRS TEMP' 1.344033
## 'Please specify: (choice=Chronic- Hepatitis C)' 1.732051

```

```

saturated.log.reg.summary.p.values = saturated.log.reg.summary$coefficients[,4]
saturated.log.reg.conf.intervals = exp(cbind(coef(saturated.log.reg), confint(saturated.log.reg)))

```

```
## Waiting for profiling to be done...
```

```

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning in regularize.values(x, y, ties, missing(ties), na.rm = na.rm):
## collapsing to unique 'x' values
## Warning in regularize.values(x, y, ties, missing(ties), na.rm = na.rm):
## collapsing to unique 'x' values
```

```
saturated.log.reg.conf.intervals.df = data.frame(saturated.log.reg.conf.intervals)
saturated.log.reg.conf.intervals.df$p.values = saturated.log.reg.summary.p.values
```

```
under.0.25.variables.no.redcap.death = under.0.25.variables.no.redcap$death
logitgof(under.0.25.variables.no.redcap.death, fitted(saturated.log.reg), g = 10) # Hosmer Lemeshow goo
```

```
## Warning in logitgof(under.0.25.variables.no.redcap.death,
## fitted(saturated.log.reg), : At least one cell in the expected frequencies table
## is < 1. Chi-square approximation may be incorrect.
```

```
##
## Hosmer and Lemeshow test (binary model)
##
## data: under.0.25.variables.no.redcap.death, fitted(saturated.log.reg)
## X-squared = 5.9613, df = 8, p-value = 0.6516
```

```
## can we improve the saturated model with backwards selection?
```

```
step(saturated.log.reg) # function actually run - just slows down computer
```

```
## Start: AIC=296.89
```

```
## death ~ 'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +  
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +  
## 'Please specify: (choice=Congestive Heart Failure)' + 'Please specify: (choice=Asthma)' +  
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +  
## 'Please specify: (choice=Chronic Renal Insufficiency)' +  
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +  
## 'Was plasma given to the patient during this admission?' +  
## 'Was the patient placed in a prone position during their admission?' +  
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +  
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +  
## SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +  
## 'D-Domer' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +  
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

```

```

##
## - 'Race:' Df
## - 'Please specify: (choice=Diabetes)‘ 5
## - 'Please specify: (choice=Coronary Artery Disease)‘ 1
## - 'Please specify: (choice=Asthma)‘ 1
## - Per_Capita 1
## - 'Please specify: (choice=Cirrhosis)‘ 1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)‘ 1
## - 'SIRS TEMP‘ 1
## - 'Admission Date:' 1
## - 'Creatinine (if 0 = N/A)‘ 1
## - 'D-Domer‘ 1
## - 'Does the patient have a history of cancer?‘ 1
## - 'Please specify: (choice=Congestive Heart Failure)‘ 1
## <none>
## - 'Please specify: (choice=Hypertension)‘ 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)‘ 1
## - SIRS_WBC 1
## - SIRS...110 1
## - 'Insurance Class‘ 3
## - 'SIRS RR‘ 1
## - 'Please specify: (choice=Chronic- Hepatitis C)‘ 1
## - 'Was the patient placed in a prone position during their admission?‘ 1
## - Ferritin 1
## - 'Age at Admission‘ 1
## - CRP 1
## - 'Was plasma given to the patient during this admission?‘ 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?‘ 1
## - 'Did the patient receive hemodialysis during this admission?‘ 1
## Deviance
## - 'Race:' 231.63
## - 'Please specify: (choice=Diabetes)‘ 228.89
## - 'Please specify: (choice=Coronary Artery Disease)‘ 228.91
## - 'Please specify: (choice=Asthma)‘ 228.93

```


## - Per_Capita	228.99
## - 'Please specify: (choice=Cirrhosis)'	229.06
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	229.10
## - 'SIRS TEMP'	229.23
## - 'Admission Date:'	229.34
## - 'Creatinine (if 0 = N/A)'	229.39
## - 'D-Domer'	229.66
## - 'Does the patient have a history of cancer?'	230.56
## - 'Please specify: (choice=Congestive Heart Failure)'	230.82
## <none>	228.89
## - 'Please specify: (choice=Hypertension)'	231.25
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	231.25
## - SIRS_WBC	231.43
## - SIRS...110	231.96
## - 'Insurance Class'	236.15
## - 'SIRS RR'	232.23
## - 'Please specify: (choice=Chronic- Hepatitis C)'	232.49
## - 'Was the patient placed in a prone position during their admission?'	235.11
## - Ferritin	235.29
## - 'Age at Admission'	235.56
## - CRP	235.70
## - 'Was plasma given to the patient during this admission?'	236.22
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	236.49
## - 'Did the patient receive hemodialysis during this admission?'	240.38
##	AIC
## - 'Race:'	289.63
## - 'Please specify: (choice=Diabetes)'	294.89
## - 'Please specify: (choice=Coronary Artery Disease)'	294.90
## - 'Please specify: (choice=Asthma)'	294.93
## - Per_Capita	294.99
## - 'Please specify: (choice=Cirrhosis)'	295.06
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	295.10
## - 'SIRS TEMP'	295.23
## - 'Admission Date:'	295.34
## - 'Creatinine (if 0 = N/A)'	295.39
## - 'D-Domer'	295.66
## - 'Does the patient have a history of cancer?'	296.56
## - 'Please specify: (choice=Congestive Heart Failure)'	296.82
## <none>	296.89
## - 'Please specify: (choice=Hypertension)'	297.25
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	297.25
## - SIRS_WBC	297.43
## - SIRS...110	297.95
## - 'Insurance Class'	298.15
## - 'SIRS RR'	298.23
## - 'Please specify: (choice=Chronic- Hepatitis C)'	298.49
## - 'Was the patient placed in a prone position during their admission?'	301.11
## - Ferritin	301.29
## - 'Age at Admission'	301.56
## - CRP	301.70
## - 'Was plasma given to the patient during this admission?'	302.22
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	302.49
## - 'Did the patient receive hemodialysis during this admission?'	306.38

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
##
## Step: AIC=289.63
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
## 'Please specify: (choice=Congestive Heart Failure)' + 'Please specify: (choice=Asthma)' +
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +
## 'D-Domer' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

```

	Df
## - 'Please specify: (choice=Coronary Artery Disease)'	1
## - 'Please specify: (choice=Diabetes)'	1
## - 'Please specify: (choice=Asthma)'	1
## - Per_Capita	1
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## - 'SIRS TEMP'	1
## - 'Admission Date:'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'D-Domer'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - 'Please specify: (choice=Hypertension)'	1
## <none>	
## - SIRS_WBC	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'Age at Admission'	1
## - Ferritin	1
## - CRP	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - 'Please specify: (choice=Coronary Artery Disease)'	231.63
## - 'Please specify: (choice=Diabetes)'	231.64
## - 'Please specify: (choice=Asthma)'	231.65
## - Per_Capita	231.68
## - 'Please specify: (choice=Cirrhosis)'	231.80
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	231.90
## - 'SIRS TEMP'	231.98
## - 'Admission Date:'	232.01
## - 'Creatinine (if 0 = N/A)'	232.14
## - 'D-Domer'	232.49
## - 'Does the patient have a history of cancer?'	233.06

```

## - 'Please specify: (choice=Congestive Heart Failure)' 233.32
## - 'Please specify: (choice=Hypertension)' 233.44
## <none> 231.63
## - SIRS_WBC 233.94
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 234.14
## - SIRS...110 234.51
## - 'SIRS RR' 234.73
## - 'Insurance Class' 239.03
## - 'Please specify: (choice=Chronic- Hepatitis C)' 235.52
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 238.31
## - 'Was the patient placed in a prone position during their admission?' 238.31
## - 'Age at Admission' 238.54
## - Ferritin 238.60
## - CRP 239.30
## - 'Was plasma given to the patient during this admission?' 239.32
## - 'Did the patient receive hemodialysis during this admission?' 244.29
## AIC
## - 'Please specify: (choice=Coronary Artery Disease)' 287.63
## - 'Please specify: (choice=Diabetes)' 287.64
## - 'Please specify: (choice=Asthma)' 287.65
## - Per_Capita 287.68
## - 'Please specify: (choice=Cirrhosis)' 287.80
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 287.90
## - 'SIRS TEMP' 287.98
## - 'Admission Date:' 288.01
## - 'Creatinine (if 0 = N/A)' 288.14
## - 'D-Domer' 288.49
## - 'Does the patient have a history of cancer?' 289.06
## - 'Please specify: (choice=Congestive Heart Failure)' 289.32
## - 'Please specify: (choice=Hypertension)' 289.44
## <none> 289.63
## - SIRS_WBC 289.94
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 290.14
## - SIRS...110 290.51
## - 'SIRS RR' 290.73
## - 'Insurance Class' 291.03
## - 'Please specify: (choice=Chronic- Hepatitis C)' 291.52
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 294.31
## - 'Was the patient placed in a prone position during their admission?' 294.31
## - 'Age at Admission' 294.54
## - Ferritin 294.60
## - CRP 295.30
## - 'Was plasma given to the patient during this admission?' 295.32
## - 'Did the patient receive hemodialysis during this admission?' 300.29

```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
##
```

```
## Step: AIC=287.63
```

```
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
```

```
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
```

```
## 'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
```

```
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
```

```
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?'
```

```
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +
## 'D-Domer' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
```

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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

	Df
## - 'Please specify: (choice=Diabetes)'	1
## - 'Please specify: (choice=Asthma)'	1
## - Per_Capita	1
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## - 'SIRS TEMP'	1
## - 'Admission Date:'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'D-Domer'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Hypertension)'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## <none>	
## - SIRS_WBC	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - Ferritin	1
## - 'Age at Admission'	1
## - CRP	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - 'Please specify: (choice=Diabetes)'	231.64
## - 'Please specify: (choice=Asthma)'	231.65
## - Per_Capita	231.68
## - 'Please specify: (choice=Cirrhosis)'	231.80
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	231.91
## - 'SIRS TEMP'	232.00
## - 'Admission Date:'	232.01
## - 'Creatinine (if 0 = N/A)'	232.15
## - 'D-Domer'	232.50
## - 'Does the patient have a history of cancer?'	233.08
## - 'Please specify: (choice=Hypertension)'	233.45
## - 'Please specify: (choice=Congestive Heart Failure)'	233.45
## <none>	231.63
## - SIRS_WBC	234.02
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	234.17
## - SIRS...110	234.64
## - 'SIRS RR'	234.83
## - 'Insurance Class'	239.05
## - 'Please specify: (choice=Chronic- Hepatitis C)'	235.63
## - 'Was the patient placed in a prone position during their admission?'	238.32
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	238.32
## - Ferritin	238.63
## - 'Age at Admission'	238.73
## - CRP	239.34

```

## - 'Was plasma given to the patient during this admission?' 239.42
## - 'Did the patient receive hemodialysis during this admission?' 244.32
## AIC
## - 'Please specify: (choice=Diabetes)' 285.64
## - 'Please specify: (choice=Asthma)' 285.65
## - Per_Capita 285.68
## - 'Please specify: (choice=Cirrhosis)' 285.80
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 285.90
## - 'SIRS TEMP' 286.00
## - 'Admission Date:' 286.01
## - 'Creatinine (if 0 = N/A)' 286.15
## - 'D-Domer' 286.50
## - 'Does the patient have a history of cancer?' 287.08
## - 'Please specify: (choice=Hypertension)' 287.45
## - 'Please specify: (choice=Congestive Heart Failure)' 287.45
## <none> 287.63
## - SIRS_WBC 288.02
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 288.17
## - SIRS...110 288.64
## - 'SIRS RR' 288.83
## - 'Insurance Class' 289.05
## - 'Please specify: (choice=Chronic- Hepatitis C)' 289.63
## - 'Was the patient placed in a prone position during their admission?' 292.32
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 292.32
## - Ferritin 292.63
## - 'Age at Admission' 292.73
## - CRP 293.34
## - 'Was plasma given to the patient during this admission?' 293.42
## - 'Did the patient receive hemodialysis during this admission?' 298.32

```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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```
##
```

```
## Step: AIC=285.64
```

```

## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##   SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +
##   'D-Domer' + 'Admission Date:' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'

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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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	Df
## - 'Please specify: (choice=Asthma)'	1
## - Per_Capita	1
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## - 'SIRS TEMP'	1
## - 'Admission Date:'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'D-Domer'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - 'Please specify: (choice=Hypertension)'	1
## <none>	
## - SIRS_WBC	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1

## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - Ferritin	1
## - 'Age at Admission'	1
## - CRP	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - 'Please specify: (choice=Asthma)'	231.66
## - Per_Capita	231.69
## - 'Please specify: (choice=Cirrhosis)'	231.81
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	231.91
## - 'SIRS TEMP'	232.00
## - 'Admission Date:'	232.02
## - 'Creatinine (if 0 = N/A)'	232.17
## - 'D-Domer'	232.51
## - 'Does the patient have a history of cancer?'	233.08
## - 'Please specify: (choice=Congestive Heart Failure)'	233.53
## - 'Please specify: (choice=Hypertension)'	233.61
## <none>	231.64
## - SIRS_WBC	234.04
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	234.21
## - SIRS...110	234.64
## - 'SIRS RR'	234.85
## - 'Insurance Class'	239.06
## - 'Please specify: (choice=Chronic- Hepatitis C)'	235.67
## - 'Was the patient placed in a prone position during their admission?'	238.32
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	238.47
## - Ferritin	238.66
## - 'Age at Admission'	238.75
## - CRP	239.40
## - 'Was plasma given to the patient during this admission?'	239.43
## - 'Did the patient receive hemodialysis during this admission?'	244.32
##	AIC
## - 'Please specify: (choice=Asthma)'	283.66
## - Per_Capita	283.69
## - 'Please specify: (choice=Cirrhosis)'	283.81
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	283.91
## - 'SIRS TEMP'	284.00
## - 'Admission Date:'	284.02
## - 'Creatinine (if 0 = N/A)'	284.17
## - 'D-Domer'	284.51
## - 'Does the patient have a history of cancer?'	285.08
## - 'Please specify: (choice=Congestive Heart Failure)'	285.53
## - 'Please specify: (choice=Hypertension)'	285.61
## <none>	285.64
## - SIRS_WBC	286.04
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	286.21
## - SIRS...110	286.64
## - 'SIRS RR'	286.85

```

## - 'Insurance Class' 287.06
## - 'Please specify: (choice=Chronic- Hepatitis C)' 287.67
## - 'Was the patient placed in a prone position during their admission?' 290.32
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 290.47
## - Ferritin 290.66
## - 'Age at Admission' 290.75
## - CRP 291.40
## - 'Was plasma given to the patient during this admission?' 291.43
## - 'Did the patient receive hemodialysis during this admission?' 296.32

```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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```
##
```

```
## Step: AIC=283.66
```

```

## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##   SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +
##   'D-Domer' + 'Admission Date:' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'

```

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```

	Df
##	
## - Per_Capita	1
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## - 'SIRS TEMP'	1
## - 'Admission Date:'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'D-Domer'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Hypertension)'	1
## <none>	
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - SIRS_WBC	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - Ferritin	1
## - 'Age at Admission'	1
## - CRP	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - Per_Capita	231.71
## - 'Please specify: (choice=Cirrhosis)'	231.83
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	231.93
## - 'SIRS TEMP'	232.03
## - 'Admission Date:'	232.04
## - 'Creatinine (if 0 = N/A)'	232.20
## - 'D-Domer'	232.53
## - 'Does the patient have a history of cancer?'	233.12
## - 'Please specify: (choice=Hypertension)'	233.65
## <none>	231.66
## - 'Please specify: (choice=Congestive Heart Failure)'	233.77

```

## - SIRS_WBC 234.06
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 234.24
## - SIRS...110 234.66
## - 'SIRS RR' 234.89
## - 'Insurance Class' 239.07
## - 'Please specify: (choice=Chronic- Hepatitis C)' 235.69
## - 'Was the patient placed in a prone position during their admission?' 238.35
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 238.47
## - Ferritin 238.66
## - 'Age at Admission' 238.81
## - CRP 239.40
## - 'Was plasma given to the patient during this admission?' 239.43
## - 'Did the patient receive hemodialysis during this admission?' 244.34
## AIC
## - Per_Capita 281.71
## - 'Please specify: (choice=Cirrhosis)' 281.83
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 281.93
## - 'SIRS TEMP' 282.03
## - 'Admission Date:' 282.04
## - 'Creatinine (if 0 = N/A)' 282.20
## - 'D-Domer' 282.53
## - 'Does the patient have a history of cancer?' 283.12
## - 'Please specify: (choice=Hypertension)' 283.65
## <none> 283.66
## - 'Please specify: (choice=Congestive Heart Failure)' 283.77
## - SIRS_WBC 284.06
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 284.24
## - SIRS...110 284.66
## - 'SIRS RR' 284.89
## - 'Insurance Class' 285.07
## - 'Please specify: (choice=Chronic- Hepatitis C)' 285.69
## - 'Was the patient placed in a prone position during their admission?' 288.35
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 288.48
## - Ferritin 288.66
## - 'Age at Admission' 288.81
## - CRP 289.40
## - 'Was plasma given to the patient during this admission?' 289.43
## - 'Did the patient receive hemodialysis during this admission?' 294.34

```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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```
##
```

```
## Step: AIC=281.71
```

```

## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## 'Creatinine (if 0 = N/A)' + Ferritin + CRP + 'D-Domer' +
## 'Admission Date:' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'

```

```

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

##                                     Df
## - 'Please specify: (choice=Cirrhosis)‘   1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)‘   1
## - 'SIRS TEMP‘                             1
## - 'Admission Date:'                       1
## - 'Creatinine (if 0 = N/A)‘               1
## - 'D-Domer‘                               1
## - 'Does the patient have a history of cancer?‘   1
## <none>
## - 'Please specify: (choice=Hypertension)‘   1
## - 'Please specify: (choice=Congestive Heart Failure)‘   1
## - SIRS_WBC                                 1

```

## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - Ferritin	1
## - 'Age at Admission'	1
## - 'Was plasma given to the patient during this admission?'	1
## - CRP	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - 'Please specify: (choice=Cirrhosis)'	231.88
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	231.97
## - 'SIRS TEMP'	232.07
## - 'Admission Date:'	232.10
## - 'Creatinine (if 0 = N/A)'	232.25
## - 'D-Domer'	232.54
## - 'Does the patient have a history of cancer?'	233.17
## <none>	231.71
## - 'Please specify: (choice=Hypertension)'	233.71
## - 'Please specify: (choice=Congestive Heart Failure)'	233.78
## - SIRS_WBC	234.09
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	234.35
## - SIRS...110	234.66
## - 'SIRS RR'	234.94
## - 'Insurance Class'	239.07
## - 'Please specify: (choice=Chronic- Hepatitis C)'	235.69
## - 'Was the patient placed in a prone position during their admission?'	238.40
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	238.48
## - Ferritin	238.67
## - 'Age at Admission'	239.24
## - 'Was plasma given to the patient during this admission?'	239.44
## - CRP	239.46
## - 'Did the patient receive hemodialysis during this admission?'	244.59
##	AIC
## - 'Please specify: (choice=Cirrhosis)'	279.88
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	279.97
## - 'SIRS TEMP'	280.07
## - 'Admission Date:'	280.10
## - 'Creatinine (if 0 = N/A)'	280.25
## - 'D-Domer'	280.54
## - 'Does the patient have a history of cancer?'	281.17
## <none>	281.71
## - 'Please specify: (choice=Hypertension)'	281.71
## - 'Please specify: (choice=Congestive Heart Failure)'	281.78
## - SIRS_WBC	282.09
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	282.35
## - SIRS...110	282.66
## - 'SIRS RR'	282.94
## - 'Insurance Class'	283.07
## - 'Please specify: (choice=Chronic- Hepatitis C)'	283.69
## - 'Was the patient placed in a prone position during their admission?'	286.40

```

## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 286.48
## - Ferritin 286.67
## - 'Age at Admission' 287.24
## - 'Was plasma given to the patient during this admission?' 287.44
## - CRP 287.46
## - 'Did the patient receive hemodialysis during this admission?' 292.59

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

##
## Step: AIC=279.88
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## 'Creatinine (if 0 = N/A)' + Ferritin + CRP + 'D-Domer' +
## 'Admission Date:' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

	Df
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## - 'SIRS TEMP'	1
## - 'Admission Date:'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'D-Domer'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Hypertension)'	1
## <none>	
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - SIRS_WBC	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - Ferritin	1
## - 'Age at Admission'	1
## - 'Was plasma given to the patient during this admission?'	1
## - CRP	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	232.13
## - 'SIRS TEMP'	232.25
## - 'Admission Date:'	232.29
## - 'Creatinine (if 0 = N/A)'	232.45
## - 'D-Domer'	232.73
## - 'Does the patient have a history of cancer?'	233.38
## - 'Please specify: (choice=Hypertension)'	233.87
## <none>	231.88
## - 'Please specify: (choice=Congestive Heart Failure)'	233.99
## - SIRS_WBC	234.21
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	234.55
## - SIRS...110	234.84
## - 'SIRS RR'	235.08
## - 'Insurance Class'	239.25
## - 'Please specify: (choice=Chronic- Hepatitis C)'	236.66
## - 'Was the patient placed in a prone position during their admission?'	238.57
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	238.65
## - Ferritin	238.94
## - 'Age at Admission'	239.37
## - 'Was plasma given to the patient during this admission?'	239.68


```

## - CRP 239.70
## - 'Did the patient receive hemodialysis during this admission?' 244.76
## AIC
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 278.13
## - 'SIRS TEMP' 278.25
## - 'Admission Date:' 278.29
## - 'Creatinine (if 0 = N/A)' 278.45
## - 'D-Domer' 278.73
## - 'Does the patient have a history of cancer?' 279.38
## - 'Please specify: (choice=Hypertension)' 279.87
## <none> 279.88
## - 'Please specify: (choice=Congestive Heart Failure)' 279.99
## - SIRS_WBC 280.21
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 280.55
## - SIRS...110 280.84
## - 'SIRS RR' 281.08
## - 'Insurance Class' 281.25
## - 'Please specify: (choice=Chronic- Hepatitis C)' 282.66
## - 'Was the patient placed in a prone position during their admission?' 284.57
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 284.65
## - Ferritin 284.94
## - 'Age at Admission' 285.37
## - 'Was plasma given to the patient during this admission?' 285.68
## - CRP 285.70
## - 'Did the patient receive hemodialysis during this admission?' 290.76

```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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```

##
## Step: AIC=278.13
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## 'Creatinine (if 0 = N/A)' + Ferritin + CRP + 'D-Domer' +
## 'Admission Date:' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'

```

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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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	Df
## - 'SIRS TEMP'	1
## - 'Admission Date:'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'D-Domer'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Hypertension)'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## <none>	
## - SIRS_WBC	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - Ferritin	1
## - 'Age at Admission'	1
## - 'Was plasma given to the patient during this admission?'	1
## - CRP	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - 'SIRS TEMP'	232.45
## - 'Admission Date:'	232.54
## - 'Creatinine (if 0 = N/A)'	232.75
## - 'D-Domer'	233.08
## - 'Does the patient have a history of cancer?'	233.72

```

## - 'Please specify: (choice=Hypertension)' 234.12
## - 'Please specify: (choice=Congestive Heart Failure)' 234.12
## <none> 232.13
## - SIRS_WBC 234.25
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 234.63
## - SIRS...110 234.90
## - 'SIRS RR' 235.13
## - 'Insurance Class' 239.45
## - 'Please specify: (choice=Chronic- Hepatitis C)' 236.85
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 238.80
## - 'Was the patient placed in a prone position during their admission?' 238.83
## - Ferritin 239.33
## - 'Age at Admission' 239.45
## - 'Was plasma given to the patient during this admission?' 239.82
## - CRP 240.22
## - 'Did the patient receive hemodialysis during this admission?' 245.27
## AIC
## - 'SIRS TEMP' 276.45
## - 'Admission Date:' 276.55
## - 'Creatinine (if 0 = N/A)' 276.75
## - 'D-Domer' 277.08
## - 'Does the patient have a history of cancer?' 277.72
## - 'Please specify: (choice=Hypertension)' 278.12
## - 'Please specify: (choice=Congestive Heart Failure)' 278.12
## <none> 278.13
## - SIRS_WBC 278.25
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 278.63
## - SIRS...110 278.90
## - 'SIRS RR' 279.13
## - 'Insurance Class' 279.45
## - 'Please specify: (choice=Chronic- Hepatitis C)' 280.85
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 282.80
## - 'Was the patient placed in a prone position during their admission?' 282.83
## - Ferritin 283.33
## - 'Age at Admission' 283.45
## - 'Was plasma given to the patient during this admission?' 283.82
## - CRP 284.22
## - 'Did the patient receive hemodialysis during this admission?' 289.27

```

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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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```

##
## Step: AIC=276.45
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## 'Creatinine (if 0 = N/A)' + Ferritin + CRP + 'D-Domer' +
## 'Admission Date:' + 'Please specify: (choice=Chronic- Hepatitis C)'

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##
## - 'Admission Date:' 1
## - 'Creatinine (if 0 = N/A)' 1
## - 'D-Domer' 1
## - 'Does the patient have a history of cancer?' 1
## - SIRS_WBC 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## <none>
## - 'Please specify: (choice=Hypertension)' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'SIRS RR' 1
## - SIRS...110 1
## - 'Insurance Class' 3
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - Ferritin 1
## - 'Age at Admission' 1

```

```

## - 'Was plasma given to the patient during this admission?' 1
## - CRP 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## Deviance
## - 'Admission Date:' 232.91
## - 'Creatinine (if 0 = N/A)' 233.00
## - 'D-Domer' 233.25
## - 'Does the patient have a history of cancer?' 234.06
## - SIRS_WBC 234.28
## - 'Please specify: (choice=Congestive Heart Failure)' 234.32
## <none> 232.45
## - 'Please specify: (choice=Hypertension)' 234.51
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 234.98
## - 'SIRS RR' 235.13
## - SIRS...110 235.19
## - 'Insurance Class' 239.53
## - 'Please specify: (choice=Chronic- Hepatitis C)' 237.07
## - 'Was the patient placed in a prone position during their admission?' 239.02
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 239.27
## - Ferritin 239.64
## - 'Age at Admission' 239.99
## - 'Was plasma given to the patient during this admission?' 240.12
## - CRP 240.68
## - 'Did the patient receive hemodialysis during this admission?' 245.37
## AIC
## - 'Admission Date:' 274.92
## - 'Creatinine (if 0 = N/A)' 275.00
## - 'D-Domer' 275.25
## - 'Does the patient have a history of cancer?' 276.06
## - SIRS_WBC 276.27
## - 'Please specify: (choice=Congestive Heart Failure)' 276.32
## <none> 276.45
## - 'Please specify: (choice=Hypertension)' 276.51
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 276.98
## - 'SIRS RR' 277.13
## - SIRS...110 277.19
## - 'Insurance Class' 277.54
## - 'Please specify: (choice=Chronic- Hepatitis C)' 279.07
## - 'Was the patient placed in a prone position during their admission?' 281.02
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 281.27
## - Ferritin 281.64
## - 'Age at Admission' 281.99
## - 'Was plasma given to the patient during this admission?' 282.12
## - CRP 282.68
## - 'Did the patient receive hemodialysis during this admission?' 287.37

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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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##
## Step: AIC=274.91
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +

```

```

## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## 'Creatinine (if 0 = N/A)' + Ferritin + CRP + 'D-Domer' +
## 'Please specify: (choice=Chronic- Hepatitis C)'

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```

##
## - 'Creatinine (if 0 = N/A)' 1
## - 'D-Domer' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## <none>
## - SIRS_WBC 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'SIRS RR' 1
## - SIRS...110 1
## - 'Insurance Class' 3
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1

```

```

## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'Age at Admission' 1
## - Ferritin 1
## - CRP 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## Deviance
## - 'Creatinine (if 0 = N/A)' 233.50
## - 'D-Domer' 233.73
## - 'Does the patient have a history of cancer?' 234.51
## - 'Please specify: (choice=Congestive Heart Failure)' 234.63
## <none> 232.91
## - SIRS_WBC 234.98
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 235.26
## - 'Please specify: (choice=Hypertension)' 235.48
## - 'SIRS RR' 235.87
## - SIRS...110 235.88
## - 'Insurance Class' 240.16
## - 'Please specify: (choice=Chronic- Hepatitis C)' 237.38
## - 'Was the patient placed in a prone position during their admission?' 239.44
## - 'Was plasma given to the patient during this admission?' 240.12
## - 'Age at Admission' 240.28
## - Ferritin 240.60
## - CRP 241.31
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 243.30
## - 'Did the patient receive hemodialysis during this admission?' 247.27
## AIC
## - 'Creatinine (if 0 = N/A)' 273.50
## - 'D-Domer' 273.73
## - 'Does the patient have a history of cancer?' 274.51
## - 'Please specify: (choice=Congestive Heart Failure)' 274.63
## <none> 274.92
## - SIRS_WBC 274.98
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 275.26
## - 'Please specify: (choice=Hypertension)' 275.48
## - 'SIRS RR' 275.87
## - SIRS...110 275.88
## - 'Insurance Class' 276.16
## - 'Please specify: (choice=Chronic- Hepatitis C)' 277.38
## - 'Was the patient placed in a prone position during their admission?' 279.44
## - 'Was plasma given to the patient during this admission?' 280.12
## - 'Age at Admission' 280.28
## - Ferritin 280.60
## - CRP 281.31
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 283.30
## - 'Did the patient receive hemodialysis during this admission?' 287.27

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##
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```
## Step: AIC=273.5
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```
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
```

```
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
```

```
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## Ferritin + CRP + 'D-Domer' + 'Please specify: (choice=Chronic- Hepatitis C)'
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```
##
## - 'D-Domer' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Does the patient have a history of cancer?' 1
## - SIRS_WBC 1
## <none>
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'SIRS RR' 1
## - SIRS...110 1
## - 'Insurance Class' 3
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - Ferritin 1
## - 'Was the patient placed in a prone position during their admission?' 1
```



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## - 'Age at Admission' 1
## - CRP 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## Deviance
## - 'D-Domer' 234.17
## - 'Please specify: (choice=Congestive Heart Failure)' 234.92
## - 'Does the patient have a history of cancer?' 235.13
## - SIRS_WBC 235.45
## <none> 233.50
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 235.51
## - 'Please specify: (choice=Hypertension)' 235.75
## - 'SIRS RR' 236.50
## - SIRS...110 236.72
## - 'Insurance Class' 240.80
## - 'Please specify: (choice=Chronic- Hepatitis C)' 237.97
## - Ferritin 240.69
## - 'Was the patient placed in a prone position during their admission?' 240.81
## - 'Age at Admission' 240.90
## - CRP 241.72
## - 'Was plasma given to the patient during this admission?' 241.82
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 243.93
## - 'Did the patient receive hemodialysis during this admission?' 247.86
## AIC
## - 'D-Domer' 272.17
## - 'Please specify: (choice=Congestive Heart Failure)' 272.92
## - 'Does the patient have a history of cancer?' 273.13
## - SIRS_WBC 273.45
## <none> 273.50
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 273.51
## - 'Please specify: (choice=Hypertension)' 273.75
## - 'SIRS RR' 274.50
## - SIRS...110 274.72
## - 'Insurance Class' 274.80
## - 'Please specify: (choice=Chronic- Hepatitis C)' 275.98
## - Ferritin 278.69
## - 'Was the patient placed in a prone position during their admission?' 278.81
## - 'Age at Admission' 278.90
## - CRP 279.72
## - 'Was plasma given to the patient during this admission?' 279.82
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 281.93
## - 'Did the patient receive hemodialysis during this admission?' 285.86

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##
## Step: AIC=272.17
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +

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##      'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##      'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
##      Ferritin + CRP + 'Please specify: (choice=Chronic- Hepatitis C)'

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##                                                                 Df
## - 'Please specify: (choice=Congestive Heart Failure)'           1
## - 'Does the patient have a history of cancer?'                 1
## <none>
## - 'Please specify: (choice=Chronic Renal Insufficiency)'       1
## - SIRS_WBC                                                       1
## - 'Please specify: (choice=Hypertension)'                       1
## - 'Insurance Class'                                             3
## - 'SIRS RR'                                                      1
## - SIRS...110                                                     1
## - 'Please specify: (choice=Chronic- Hepatitis C)'              1
## - 'Age at Admission'                                             1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Was plasma given to the patient during this admission?'     1
## - Ferritin                                                       1
## - CRP                                                             1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
##                                                                 Deviance
## - 'Please specify: (choice=Congestive Heart Failure)'           235.56

```

```

## - 'Does the patient have a history of cancer?' 235.78
## <none> 234.17
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 236.21
## - SIRS_WBC 236.34
## - 'Please specify: (choice=Hypertension)' 236.95
## - 'Insurance Class' 241.20
## - 'SIRS RR' 237.58
## - SIRS...110 237.65
## - 'Please specify: (choice=Chronic- Hepatitis C)' 240.68
## - 'Age at Admission' 241.64
## - 'Was the patient placed in a prone position during their admission?' 241.78
## - 'Was plasma given to the patient during this admission?' 242.49
## - Ferritin 242.55
## - CRP 243.01
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 244.76
## - 'Did the patient receive hemodialysis during this admission?' 248.60
## AIC
## - 'Please specify: (choice=Congestive Heart Failure)' 271.56
## - 'Does the patient have a history of cancer?' 271.78
## <none> 272.17
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 272.21
## - SIRS_WBC 272.34
## - 'Please specify: (choice=Hypertension)' 272.95
## - 'Insurance Class' 273.20
## - 'SIRS RR' 273.58
## - SIRS...110 273.65
## - 'Please specify: (choice=Chronic- Hepatitis C)' 276.68
## - 'Age at Admission' 277.64
## - 'Was the patient placed in a prone position during their admission?' 277.77
## - 'Was plasma given to the patient during this admission?' 278.49
## - Ferritin 278.55
## - CRP 279.01
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 280.76
## - 'Did the patient receive hemodialysis during this admission?' 284.60

```

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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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##
## Step: AIC=271.55
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Chronic Renal Insufficiency)'
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## Ferritin + CRP + 'Please specify: (choice=Chronic- Hepatitis C)'

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```

	Df
## - 'Does the patient have a history of cancer?'	1
## <none>	
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - SIRS_WBC	1
## - 'Insurance Class'	3
## - 'Please specify: (choice=Hypertension)'	1
## - SIRS...110	1
## - 'SIRS RR'	1
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Age at Admission'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - Ferritin	1
## - 'Was plasma given to the patient during this admission?'	1
## - CRP	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## - 'Does the patient have a history of cancer?'	237.17
## <none>	235.56
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	237.69
## - SIRS_WBC	237.85
## - 'Insurance Class'	242.34
## - 'Please specify: (choice=Hypertension)'	238.50
## - SIRS...110	239.12
## - 'SIRS RR'	239.18
## - 'Please specify: (choice=Chronic- Hepatitis C)'	241.86
## - 'Age at Admission'	242.67
## - 'Was the patient placed in a prone position during their admission?'	243.16
## - Ferritin	243.37
## - 'Was plasma given to the patient during this admission?'	243.63

```

## - CRP 244.00
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 246.21
## - 'Did the patient receive hemodialysis during this admission?' 250.45
## AIC
## - 'Does the patient have a history of cancer?' 271.17
## <none> 271.56
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 271.69
## - SIRS_WBC 271.85
## - 'Insurance Class' 272.34
## - 'Please specify: (choice=Hypertension)' 272.50
## - SIRS...110 273.12
## - 'SIRS RR' 273.18
## - 'Please specify: (choice=Chronic- Hepatitis C)' 275.86
## - 'Age at Admission' 276.67
## - 'Was the patient placed in a prone position during their admission?' 277.16
## - Ferritin 277.37
## - 'Was plasma given to the patient during this admission?' 277.63
## - CRP 278.00
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 280.21
## - 'Did the patient receive hemodialysis during this admission?' 284.45

```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```

##
## Step: AIC=271.17
## death ~ 'Insurance Class' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## Ferritin + CRP + 'Please specify: (choice=Chronic- Hepatitis C)'

```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

##	Df
## <none>	
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - 'Insurance Class'	3
## - SIRS_WBC	1
## - 'Please specify: (choice=Hypertension)'	1
## - 'SIRS RR'	1
## - SIRS...110	1
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'Was plasma given to the patient during this admission?'	1
## - Ferritin	1
## - 'Age at Admission'	1
## - CRP	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Did the patient receive hemodialysis during this admission?'	1
##	Deviance
## <none>	237.17
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	239.19
## - 'Insurance Class'	243.68
## - SIRS_WBC	239.70
## - 'Please specify: (choice=Hypertension)'	239.90
## - 'SIRS RR'	240.41
## - SIRS...110	240.48
## - 'Please specify: (choice=Chronic- Hepatitis C)'	243.77
## - 'Was the patient placed in a prone position during their admission?'	244.62
## - 'Was plasma given to the patient during this admission?'	244.79
## - Ferritin	244.88
## - 'Age at Admission'	245.01
## - CRP	245.27
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	247.55
## - 'Did the patient receive hemodialysis during this admission?'	251.61
##	AIC
## <none>	271.17
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	271.19
## - 'Insurance Class'	271.68
## - SIRS_WBC	271.70
## - 'Please specify: (choice=Hypertension)'	271.89
## - 'SIRS RR'	272.41
## - SIRS...110	272.48
## - 'Please specify: (choice=Chronic- Hepatitis C)'	275.77
## - 'Was the patient placed in a prone position during their admission?'	276.62
## - 'Was plasma given to the patient during this admission?'	276.79
## - Ferritin	276.88
## - 'Age at Admission'	277.01
## - CRP	277.27
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	279.55

- 'Did the patient receive hemodialysis during this admission?' 283.61

```
##
## Call: glm(formula = death ~ 'Insurance Class' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
## Ferritin + CRP + 'Please specify: (choice=Chronic- Hepatitis C)',
## family = binomial, data = under.0.25.variables.no.redcap)
##
```

Coefficients:

```
## (Intercept)
## -8.037e+00
## 'Insurance Class'MEDICAID
## 1.251e+00
## 'Insurance Class'MEDICARE
## 4.850e-01
## 'Insurance Class'SP
## -1.385e+01
## 'Please specify: (choice=Hypertension)'1
## 6.015e-01
## 'Please specify: (choice=Chronic Renal Insufficiency)'1
## 8.638e-01
## 'Did the patient receive hemodialysis during this admission?'1
## 2.201e+00
## 'Was plasma given to the patient during this admission?'1
## 1.108e+00
## 'Was the patient placed in a prone position during their admission?'1
## 1.066e+00
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1
## 1.144e+00
## 'Age at Admission'
## 4.697e-02
## 'SIRS RR'
## 8.447e-01
## SIRS_WBC
## 6.768e-01
## SIRS...110
## -4.391e-01
## Ferritin
## 6.688e-04
## CRP
## 5.499e-03
## 'Please specify: (choice=Chronic- Hepatitis C)'1
## 1.824e+01
##
```

Degrees of Freedom: 327 Total (i.e. Null); 311 Residual

Null Deviance: 359.8

Residual Deviance: 237.2 AIC: 271.2

```
best.step.model = glm(formula = death ~ 'Insurance Class' + 'Please specify: (choice=Hypertension)' +
  'Please specify: (choice=Chronic Renal Insufficiency)' +
  'Did the patient receive hemodialysis during this admission?' +
  'Was plasma given to the patient during this admission?' +
  'Was the patient placed in a prone position during their admission?' +
  'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
  'Age at Admission' + 'SIRS RR' + SIRS_WBC + SIRS...110 +
  Ferritin + CRP + 'Please specify: (choice=Chronic- Hepatitis C)',
  family = binomial, data = under.0.25.variables.no.redcap) # AIC = 271
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
best.step.summary = summary(best.step.model)
car::vif(best.step.model)
```

	GVIF
## 'Insurance Class'	2.259835
## 'Please specify: (choice=Hypertension)'	1.142467
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1.043035
## 'Did the patient receive hemodialysis during this admission?'	1.112689
## 'Was plasma given to the patient during this admission?'	1.119553
## 'Was the patient placed in a prone position during their admission?'	1.203011
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1.214864
## 'Age at Admission'	2.557943
## 'SIRS RR'	1.524893
## SIRS_WBC	1.292729
## SIRS...110	1.908686
## Ferritin	1.087930
## CRP	1.158682
## 'Please specify: (choice=Chronic- Hepatitis C)'	1.000000
##	Df
## 'Insurance Class'	3
## 'Please specify: (choice=Hypertension)'	1
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## 'Did the patient receive hemodialysis during this admission?'	1
## 'Was plasma given to the patient during this admission?'	1
## 'Was the patient placed in a prone position during their admission?'	1
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## 'Age at Admission'	1
## 'SIRS RR'	1
## SIRS_WBC	1
## SIRS...110	1
## Ferritin	1
## CRP	1
## 'Please specify: (choice=Chronic- Hepatitis C)'	1
##	GVIF^(1/(2*Df))
## 'Insurance Class'	1.145547
## 'Please specify: (choice=Hypertension)'	1.068863
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1.021291
## 'Did the patient receive hemodialysis during this admission?'	1.054841
## 'Was plasma given to the patient during this admission?'	1.058090
## 'Was the patient placed in a prone position during their admission?'	1.096818


```

## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1.102209
## 'Age at Admission' 1.599357
## 'SIRS RR' 1.234866
## SIRS_WBC 1.136983
## SIRS...110 1.381552
## Ferritin 1.043039
## CRP 1.076421
## 'Please specify: (choice=Chronic- Hepatitis C)' 1.000000

```

```

best.step.summary.p.values = best.step.summary$coefficients[,4]
best.step.conf.intervals = exp(cbind(coef(best.step.model), confint(best.step.model)))

```

```
## Waiting for profiling to be done...
```

```

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

```



```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
best.step.conf.intervals.df = data.frame(best.step.conf.intervals)
```

```
best.step.conf.intervals.df$p.values = best.step.summary.p.values
```

```
logitgof(under.0.25.variables.no.redcap.death, fitted(best.step.model), g = 10) # hosmer and lemeshow p
```

```
## Warning in logitgof(under.0.25.variables.no.redcap.death,
```

```
## fitted(best.step.model), : At least one cell in the expected frequencies table
```

```
## is < 1. Chi-square approximation may be incorrect.
```

```
##
```

```
## Hosmer and Lemeshow test (binary model)
```

```
##
```

```
## data: under.0.25.variables.no.redcap.death, fitted(best.step.model)
```

```
## X-squared = 7.6233, df = 8, p-value = 0.4711
```

```
# what is in [under.0.25.variables] that has a ton of NAs to potentially increase sample size
```

```
nas.in.complete.set = colSums(is.na(under.0.25.variables)) # Ferritin: 565, CRP: 451, D-Dimer: 479
```

```
# While Ferritin, CRP, and D-Dimer may have been predictive (p = 0.04, 0.007, 0.363), they severely limit
```

```
# Could other variables be predictive of mortality with an increase in power?
```

```
under.0.25.remove.low.yield.labs = subset(under.0.25.variables, select = -c('REDCap Record ID', Ferritin))
```

```
# make dataframe to get demographics
```

```
no.labs.dems = subset(under.0.25.variables, select = -c(Ferritin, CRP, 'D-Dimer', 'Was the patient intubated'))
```

```
no.labs.dems.na = na.omit(no.labs.dems)
```

```
complete.df.minus.labs = na.omit(under.0.25.remove.low.yield.labs) # now up to 992 pts
```

```
# MODEL 1B
```

```
saturated.log.reg.no.labs = glm(death ~ ., family = binomial, data = complete.df.minus.labs) # AIC is 8.0
```

```
car::vif(saturated.log.reg.no.labs)
```

```
##                                                                 GVIF
## 'Insurance Class'                                                                 2.279801
## 'Race:'                                                                 1.714471
## 'Does the patient have a history of cancer?'                                                                 1.093149
## 'Please specify: (choice=Hypertension)'                                                                 1.205547
## 'Please specify: (choice=Coronary Artery Disease)'                                                                 1.238042
## 'Please specify: (choice=Congestive Heart Failure)'                                                                 1.238159
## 'Please specify: (choice=Asthma)'                                                                 1.040367
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'                                                                 1.107184
## 'Please specify: (choice=Chronic Renal Insufficiency)'                                                                 1.138820
## 'Please specify: (choice=Cirrhosis)'                                                                 1.223888
## 'Did the patient receive hemodialysis during this admission?'                                                                 1.363067
## 'Was plasma given to the patient during this admission?'                                                                 1.233912
## 'Was the patient placed in a prone position during their admission?'                                                                 1.253563
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'                                                                 1.362509
## 'Age at Admission'                                                                 2.382702
## Per_Capita                                                                 1.171861
## 'SIRS RR'                                                                 1.766470
```


## SIRS_WBC	1.315242
## SIRS...110	2.814315
## 'Creatinine (if 0 = N/A)'	1.382943
## 'Admission Date:'	1.352925
## 'Please specify: (choice=Diabetes)'	1.208306
## 'SIRS TEMP'	1.886204
## 'Please specify: (choice=Chronic- Hepatitis C)'	1.270471
##	Df
## 'Insurance Class'	4
## 'Race:'	6
## 'Does the patient have a history of cancer?'	1
## 'Please specify: (choice=Hypertension)'	1
## 'Please specify: (choice=Coronary Artery Disease)'	1
## 'Please specify: (choice=Congestive Heart Failure)'	1
## 'Please specify: (choice=Asthma)'	1
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## 'Please specify: (choice=Cirrhosis)'	1
## 'Did the patient receive hemodialysis during this admission?'	1
## 'Was plasma given to the patient during this admission?'	1
## 'Was the patient placed in a prone position during their admission?'	1
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## 'Age at Admission'	1
## Per_Capita	1
## 'SIRS RR'	1
## SIRS_WBC	1
## SIRS...110	1
## 'Creatinine (if 0 = N/A)'	1
## 'Admission Date:'	1
## 'Please specify: (choice=Diabetes)'	1
## 'SIRS TEMP'	1
## 'Please specify: (choice=Chronic- Hepatitis C)'	1
##	GVIF^(1/(2*Df))
## 'Insurance Class'	1.108504
## 'Race:'	1.045950
## 'Does the patient have a history of cancer?'	1.045538
## 'Please specify: (choice=Hypertension)'	1.097974
## 'Please specify: (choice=Coronary Artery Disease)'	1.112673
## 'Please specify: (choice=Congestive Heart Failure)'	1.112726
## 'Please specify: (choice=Asthma)'	1.019984
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1.052228
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1.067155
## 'Please specify: (choice=Cirrhosis)'	1.106295
## 'Did the patient receive hemodialysis during this admission?'	1.167505
## 'Was plasma given to the patient during this admission?'	1.110816
## 'Was the patient placed in a prone position during their admission?'	1.119626
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1.167266
## 'Age at Admission'	1.543600
## Per_Capita	1.082525
## 'SIRS RR'	1.329086
## SIRS_WBC	1.146840
## SIRS...110	1.677592
## 'Creatinine (if 0 = N/A)'	1.175986
## 'Admission Date:'	1.163153

```
## 'Please specify: (choice=Diabetes)'1.099230  
## 'SIRS TEMP'1.373391  
## 'Please specify: (choice=Chronic- Hepatitis C)'1.127152
```

```
saturated.log.reg.no.labs.summary = summary(saturated.log.reg.no.labs)
```

```
saturated.log.reg.no.labs.summary.p.values = saturated.log.reg.no.labs.summary$coefficients[,4]
```

```
saturated.log.reg.no.labs.conf.intervals = exp(cbind(coef(saturated.log.reg.no.labs), confint(saturated
```

```
## Waiting for profiling to be done...
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

saturated.log.reg.no.labs.conf.intervals.df = data.frame(saturated.log.reg.no.labs.conf.intervals)
saturated.log.reg.no.labs.conf.intervals.df$p.values = saturated.log.reg.no.labs.summary.p.values

under.0.25.variables.no.redcap.no.labs.death = complete.df.minus.labs$death
logitgof(under.0.25.variables.no.redcap.no.labs.death, fitted(saturated.log.reg.no.labs), g = 10) # Hosmer and Lemeshow test

## Warning in logitgof(under.0.25.variables.no.redcap.no.labs.death,
## fitted(saturated.log.reg.no.labs), : At least one cell in the expected
## frequencies table is < 1. Chi-square approximation may be incorrect.

##
## Hosmer and Lemeshow test (binary model)
##
## data: under.0.25.variables.no.redcap.no.labs.death, fitted(saturated.log.reg.no.labs)
## X-squared = 13.824, df = 8, p-value = 0.08648

## can we improve the model with larger sample size through backwards selection?
step(saturated.log.reg.no.labs) # function actually run just slows down computer

## Start: AIC=832.89
## death ~ 'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
## 'Please specify: (choice=Congestive Heart Failure)' + 'Please specify: (choice=Asthma)' +
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## SIRS...110 + 'Creatinine (if 0 = N/A)' + 'Admission Date:' +
## 'Please specify: (choice=Diabetes)' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis'

```

```

##
##
## - 'Race:' 6
## - 'Insurance Class' 4
## - SIRS...110 1
## - 'Please specify: (choice=Asthma)' 1
## - 'SIRS TEMP' 1
## - Per_Capita 1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - 'Please specify: (choice=Diabetes)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'Creatinine (if 0 = N/A)' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Does the patient have a history of cancer?' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'Admission Date:' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
## Deviance
## - 'Race:' 768.75
## - 'Insurance Class' 770.20
## - SIRS...110 766.94
## - 'Please specify: (choice=Asthma)' 767.22
## - 'SIRS TEMP' 767.28
## - Per_Capita 767.37
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 767.55
## - 'Please specify: (choice=Chronic- Hepatitis C)' 767.71
## - 'Please specify: (choice=Diabetes)' 767.73
## - 'Please specify: (choice=Hypertension)' 767.91
## - 'Creatinine (if 0 = N/A)' 768.06
## - 'Please specify: (choice=Coronary Artery Disease)' 768.38
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 768.58
## - 'Does the patient have a history of cancer?' 768.59
## <none> 766.89
## - 'Please specify: (choice=Cirrhosis)' 771.44
## - 'Please specify: (choice=Congestive Heart Failure)' 773.25
## - 'SIRS RR' 775.91
## - SIRS_WBC 780.41
## - 'Was plasma given to the patient during this admission?' 781.13
## - 'Admission Date:' 781.37
## - 'Did the patient receive hemodialysis during this admission?' 786.21
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 790.15
## - 'Was the patient placed in a prone position during their admission?' 796.66
## - 'Age at Admission' 823.07
##
## AIC

```

```

## - 'Race:' 822.75
## - 'Insurance Class' 828.20
## - SIRS...110 830.94
## - 'Please specify: (choice=Asthma)' 831.22
## - 'SIRS TEMP' 831.28
## - Per_Capita 831.37
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 831.55
## - 'Please specify: (choice=Chronic- Hepatitis C)' 831.71
## - 'Please specify: (choice=Diabetes)' 831.73
## - 'Please specify: (choice=Hypertension)' 831.91
## - 'Creatinine (if 0 = N/A)' 832.06
## - 'Please specify: (choice=Coronary Artery Disease)' 832.38
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 832.58
## - 'Does the patient have a history of cancer?' 832.59
## <none> 832.89
## - 'Please specify: (choice=Cirrhosis)' 835.44
## - 'Please specify: (choice=Congestive Heart Failure)' 837.25
## - 'SIRS RR' 839.91
## - SIRS_WBC 844.41
## - 'Was plasma given to the patient during this admission?' 845.13
## - 'Admission Date:' 845.37
## - 'Did the patient receive hemodialysis during this admission?' 850.21
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 854.15
## - 'Was the patient placed in a prone position during their admission?' 860.66
## - 'Age at Admission' 887.07
##
## Step: AIC=822.75
## death ~ 'Insurance Class' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
## 'Please specify: (choice=Congestive Heart Failure)' + 'Please specify: (choice=Asthma)' +
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## SIRS...110 + 'Creatinine (if 0 = N/A)' + 'Admission Date:' +
## 'Please specify: (choice=Diabetes)' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
##
##
## - 'Insurance Class' Df
## - SIRS...110 4
## - 'Please specify: (choice=Asthma)' 1
## - 'SIRS TEMP' 1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1
## - Per_Capita 1
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - 'Please specify: (choice=Diabetes)' 1
## - 'Creatinine (if 0 = N/A)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1

```

## <none>	
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - 'SIRS RR'	1
## - SIRS_WBC	1
## - 'Admission Date:'	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'Did the patient receive hemodialysis during this admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'Age at Admission'	1
##	Deviance
## - 'Insurance Class'	772.54
## - SIRS...110	768.79
## - 'Please specify: (choice=Asthma)'	769.11
## - 'SIRS TEMP'	769.12
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	769.27
## - Per_Capita	769.32
## - 'Please specify: (choice=Chronic- Hepatitis C)'	769.53
## - 'Please specify: (choice=Diabetes)'	769.66
## - 'Creatinine (if 0 = N/A)'	769.69
## - 'Please specify: (choice=Hypertension)'	769.80
## - 'Does the patient have a history of cancer?'	770.26
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	770.30
## - 'Please specify: (choice=Coronary Artery Disease)'	770.42
## <none>	768.75
## - 'Please specify: (choice=Cirrhosis)'	773.34
## - 'Please specify: (choice=Congestive Heart Failure)'	775.04
## - 'SIRS RR'	778.12
## - SIRS_WBC	782.33
## - 'Admission Date:'	783.04
## - 'Was plasma given to the patient during this admission?'	783.33
## - 'Did the patient receive hemodialysis during this admission?'	789.38
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	791.80
## - 'Was the patient placed in a prone position during their admission?'	799.11
## - 'Age at Admission'	825.47
##	AIC
## - 'Insurance Class'	818.54
## - SIRS...110	820.79
## - 'Please specify: (choice=Asthma)'	821.11
## - 'SIRS TEMP'	821.12
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	821.27
## - Per_Capita	821.32
## - 'Please specify: (choice=Chronic- Hepatitis C)'	821.53
## - 'Please specify: (choice=Diabetes)'	821.66
## - 'Creatinine (if 0 = N/A)'	821.69
## - 'Please specify: (choice=Hypertension)'	821.80
## - 'Does the patient have a history of cancer?'	822.26
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	822.30
## - 'Please specify: (choice=Coronary Artery Disease)'	822.42
## <none>	822.75
## - 'Please specify: (choice=Cirrhosis)'	825.34
## - 'Please specify: (choice=Congestive Heart Failure)'	827.04
## - 'SIRS RR'	830.12

```

## - SIRS_WBC 834.33
## - 'Admission Date:' 835.04
## - 'Was plasma given to the patient during this admission?' 835.33
## - 'Did the patient receive hemodialysis during this admission?' 841.38
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 843.80
## - 'Was the patient placed in a prone position during their admission?' 851.11
## - 'Age at Admission' 877.47
##
## Step: AIC=818.54
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## SIRS...110 + 'Creatinine (if 0 = N/A)' + 'Admission Date:' +
## 'Please specify: (choice=Diabetes)' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
##
##
## Df
## - SIRS...110 1
## - 'SIRS TEMP' 1
## - 'Please specify: (choice=Asthma)' 1
## - Per_Capita 1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - 'Creatinine (if 0 = N/A)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'Please specify: (choice=Diabetes)' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'SIRS RR' 1
## - 'Admission Date:' 1
## - SIRS_WBC 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
## Deviance
## - SIRS...110 772.61
## - 'SIRS TEMP' 772.79
## - 'Please specify: (choice=Asthma)' 772.95
## - Per_Capita 772.96
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 773.01
## - 'Please specify: (choice=Chronic- Hepatitis C)' 773.37
## - 'Creatinine (if 0 = N/A)' 773.38
## - 'Please specify: (choice=Hypertension)' 773.54

```



```

## - 'Please specify: (choice=Diabetes)' 773.72
## - 'Does the patient have a history of cancer?' 773.80
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 773.94
## - 'Please specify: (choice=Coronary Artery Disease)' 774.03
## <none> 772.54
## - 'Please specify: (choice=Cirrhosis)' 777.29
## - 'Please specify: (choice=Congestive Heart Failure)' 778.71
## - 'SIRS RR' 781.61
## - 'Admission Date:' 786.26
## - SIRS_WBC 786.49
## - 'Was plasma given to the patient during this admission?' 787.60
## - 'Did the patient receive hemodialysis during this admission?' 792.91
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 796.15
## - 'Was the patient placed in a prone position during their admission?' 802.84
## - 'Age at Admission' 846.15
## AIC
## - SIRS...110 816.61
## - 'SIRS TEMP' 816.79
## - 'Please specify: (choice=Asthma)' 816.95
## - Per_Capita 816.96
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 817.01
## - 'Please specify: (choice=Chronic- Hepatitis C)' 817.37
## - 'Creatinine (if 0 = N/A)' 817.38
## - 'Please specify: (choice=Hypertension)' 817.54
## - 'Please specify: (choice=Diabetes)' 817.72
## - 'Does the patient have a history of cancer?' 817.80
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 817.94
## - 'Please specify: (choice=Coronary Artery Disease)' 818.03
## <none> 818.54
## - 'Please specify: (choice=Cirrhosis)' 821.29
## - 'Please specify: (choice=Congestive Heart Failure)' 822.71
## - 'SIRS RR' 825.61
## - 'Admission Date:' 830.26
## - SIRS_WBC 830.49
## - 'Was plasma given to the patient during this admission?' 831.60
## - 'Did the patient receive hemodialysis during this admission?' 836.91
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 840.15
## - 'Was the patient placed in a prone position during their admission?' 846.84
## - 'Age at Admission' 890.15
##
## Step: AIC=816.61
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart Failure)'
## 'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?'
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## 'Creatinine (if 0 = N/A)' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
##
## Df

```

## - 'Please specify: (choice=Asthma)'	1
## - Per_Capita	1
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'SIRS TEMP'	1
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Please specify: (choice=Hypertension)'	1
## - 'Please specify: (choice=Diabetes)'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - 'Please specify: (choice=Coronary Artery Disease)'	1
## <none>	
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - 'Admission Date:'	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'SIRS RR'	1
## - SIRS_WBC	1
## - 'Did the patient receive hemodialysis during this admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'Age at Admission'	1
##	Deviance
## - 'Please specify: (choice=Asthma)'	773.02
## - Per_Capita	773.05
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	773.08
## - 'Creatinine (if 0 = N/A)'	773.44
## - 'SIRS TEMP'	773.44
## - 'Please specify: (choice=Chronic- Hepatitis C)'	773.47
## - 'Please specify: (choice=Hypertension)'	773.61
## - 'Please specify: (choice=Diabetes)'	773.76
## - 'Does the patient have a history of cancer?'	773.88
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	773.98
## - 'Please specify: (choice=Coronary Artery Disease)'	774.06
## <none>	772.61
## - 'Please specify: (choice=Cirrhosis)'	777.31
## - 'Please specify: (choice=Congestive Heart Failure)'	778.86
## - 'Admission Date:'	786.27
## - 'Was plasma given to the patient during this admission?'	787.88
## - 'SIRS RR'	789.76
## - SIRS_WBC	790.37
## - 'Did the patient receive hemodialysis during this admission?'	792.96
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	796.18
## - 'Was the patient placed in a prone position during their admission?'	803.87
## - 'Age at Admission'	847.90
##	AIC
## - 'Please specify: (choice=Asthma)'	815.02
## - Per_Capita	815.05
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	815.08
## - 'Creatinine (if 0 = N/A)'	815.44
## - 'SIRS TEMP'	815.44
## - 'Please specify: (choice=Chronic- Hepatitis C)'	815.47
## - 'Please specify: (choice=Hypertension)'	815.61
## - 'Please specify: (choice=Diabetes)'	815.76

```

## - 'Does the patient have a history of cancer?' 815.88
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 815.98
## - 'Please specify: (choice=Coronary Artery Disease)' 816.06
## <none> 816.61
## - 'Please specify: (choice=Cirrhosis)' 819.31
## - 'Please specify: (choice=Congestive Heart Failure)' 820.86
## - 'Admission Date:' 828.27
## - 'Was plasma given to the patient during this admission?' 829.88
## - 'SIRS RR' 831.76
## - SIRS_WBC 832.37
## - 'Did the patient receive hemodialysis during this admission?' 834.96
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 838.18
## - 'Was the patient placed in a prone position during their admission?' 845.87
## - 'Age at Admission' 889.90
##
## Step: AIC=815.02
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## 'Creatinine (if 0 = N/A)' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
##
##
## Df
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1
## - Per_Capita 1
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - 'SIRS TEMP' 1
## - 'Creatinine (if 0 = N/A)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'Please specify: (choice=Diabetes)' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
## Deviance
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 773.44
## - Per_Capita 773.48
## - 'Please specify: (choice=Chronic- Hepatitis C)' 773.91

```

```

## - 'SIRS TEMP' 773.91
## - 'Creatinine (if 0 = N/A)' 773.93
## - 'Please specify: (choice=Hypertension)' 773.98
## - 'Please specify: (choice=Diabetes)' 774.17
## - 'Does the patient have a history of cancer?' 774.22
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 774.35
## - 'Please specify: (choice=Coronary Artery Disease)' 774.47
## <none> 773.02
## - 'Please specify: (choice=Cirrhosis)' 777.76
## - 'Please specify: (choice=Congestive Heart Failure)' 779.11
## - 'Admission Date:' 786.71
## - 'Was plasma given to the patient during this admission?' 788.67
## - 'SIRS RR' 790.09
## - SIRS_WBC 790.60
## - 'Did the patient receive hemodialysis during this admission?' 793.44
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 796.60
## - 'Was the patient placed in a prone position during their admission?' 804.15
## - 'Age at Admission' 850.70
## AIC
## - 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 813.44
## - Per_Capita 813.48
## - 'Please specify: (choice=Chronic- Hepatitis C)' 813.91
## - 'SIRS TEMP' 813.91
## - 'Creatinine (if 0 = N/A)' 813.93
## - 'Please specify: (choice=Hypertension)' 813.98
## - 'Please specify: (choice=Diabetes)' 814.17
## - 'Does the patient have a history of cancer?' 814.22
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 814.35
## - 'Please specify: (choice=Coronary Artery Disease)' 814.47
## <none> 815.02
## - 'Please specify: (choice=Cirrhosis)' 817.76
## - 'Please specify: (choice=Congestive Heart Failure)' 819.11
## - 'Admission Date:' 826.71
## - 'Was plasma given to the patient during this admission?' 828.67
## - 'SIRS RR' 830.09
## - SIRS_WBC 830.60
## - 'Did the patient receive hemodialysis during this admission?' 833.44
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 836.60
## - 'Was the patient placed in a prone position during their admission?' 844.15
## - 'Age at Admission' 890.70
##
## Step: AIC=813.44
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## 'Creatinine (if 0 = N/A)' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
##
## Df

```

## - Per_Capita	1
## - 'SIRS TEMP'	1
## - 'Please specify: (choice=Chronic- Hepatitis C)'	1
## - 'Creatinine (if 0 = N/A)'	1
## - 'Please specify: (choice=Hypertension)'	1
## - 'Please specify: (choice=Diabetes)'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - 'Please specify: (choice=Coronary Artery Disease)'	1
## <none>	
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - 'Admission Date:'	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'SIRS RR'	1
## - SIRS_WBC	1
## - 'Did the patient receive hemodialysis during this admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'Age at Admission'	1
##	Deviance
## - Per_Capita	773.92
## - 'SIRS TEMP'	774.32
## - 'Please specify: (choice=Chronic- Hepatitis C)'	774.35
## - 'Creatinine (if 0 = N/A)'	774.39
## - 'Please specify: (choice=Hypertension)'	774.42
## - 'Please specify: (choice=Diabetes)'	774.58
## - 'Does the patient have a history of cancer?'	774.61
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	774.83
## - 'Please specify: (choice=Coronary Artery Disease)'	774.90
## <none>	773.44
## - 'Please specify: (choice=Cirrhosis)'	778.03
## - 'Please specify: (choice=Congestive Heart Failure)'	780.31
## - 'Admission Date:'	787.04
## - 'Was plasma given to the patient during this admission?'	788.92
## - 'SIRS RR'	791.06
## - SIRS_WBC	791.17
## - 'Did the patient receive hemodialysis during this admission?'	793.64
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	796.99
## - 'Was the patient placed in a prone position during their admission?'	804.55
## - 'Age at Admission'	853.44
##	AIC
## - Per_Capita	811.92
## - 'SIRS TEMP'	812.32
## - 'Please specify: (choice=Chronic- Hepatitis C)'	812.35
## - 'Creatinine (if 0 = N/A)'	812.39
## - 'Please specify: (choice=Hypertension)'	812.42
## - 'Please specify: (choice=Diabetes)'	812.58
## - 'Does the patient have a history of cancer?'	812.61
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	812.83
## - 'Please specify: (choice=Coronary Artery Disease)'	812.90
## <none>	813.44
## - 'Please specify: (choice=Cirrhosis)'	816.03
## - 'Please specify: (choice=Congestive Heart Failure)'	818.31

```

## - 'Admission Date:' 825.04
## - 'Was plasma given to the patient during this admission?' 826.92
## - 'SIRS RR' 829.06
## - SIRS_WBC 829.17
## - 'Did the patient receive hemodialysis during this admission?' 831.64
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 834.99
## - 'Was the patient placed in a prone position during their admission?' 842.55
## - 'Age at Admission' 891.44
##
## Step: AIC=811.92
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart F
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admissi
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Creatinine (if 0 = N/A)' +
## 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)'
##
##
## Df
## - 'SIRS TEMP' 1
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - 'Creatinine (if 0 = N/A)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Diabetes)' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
## Deviance
## - 'SIRS TEMP' 774.75
## - 'Please specify: (choice=Chronic- Hepatitis C)' 774.78
## - 'Creatinine (if 0 = N/A)' 774.78
## - 'Please specify: (choice=Hypertension)' 774.81
## - 'Does the patient have a history of cancer?' 775.04
## - 'Please specify: (choice=Diabetes)' 775.19
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 775.45
## - 'Please specify: (choice=Coronary Artery Disease)' 775.51
## <none> 773.92
## - 'Please specify: (choice=Cirrhosis)' 778.54
## - 'Please specify: (choice=Congestive Heart Failure)' 780.53
## - 'Admission Date:' 787.71

```

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## - 'Was plasma given to the patient during this admission?' 789.39
## - 'SIRS RR' 791.43
## - SIRS_WBC 791.80
## - 'Did the patient receive hemodialysis during this admission?' 794.48
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 797.42
## - 'Was the patient placed in a prone position during their admission?' 804.82
## - 'Age at Admission' 860.11
## AIC
## - 'SIRS TEMP' 810.75
## - 'Please specify: (choice=Chronic- Hepatitis C)' 810.78
## - 'Creatinine (if 0 = N/A)' 810.78
## - 'Please specify: (choice=Hypertension)' 810.81
## - 'Does the patient have a history of cancer?' 811.04
## - 'Please specify: (choice=Diabetes)' 811.19
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 811.45
## - 'Please specify: (choice=Coronary Artery Disease)' 811.51
## <none> 811.92
## - 'Please specify: (choice=Cirrhosis)' 814.54
## - 'Please specify: (choice=Congestive Heart Failure)' 816.53
## - 'Admission Date:' 823.71
## - 'Was plasma given to the patient during this admission?' 825.39
## - 'SIRS RR' 827.43
## - SIRS_WBC 827.80
## - 'Did the patient receive hemodialysis during this admission?' 830.48
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 833.42
## - 'Was the patient placed in a prone position during their admission?' 840.82
## - 'Age at Admission' 896.11
##
## Step: AIC=810.75
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Creatinine (if 0 = N/A)' +
## 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'Please specify: (choice=Chronic- Hepatitis C)'
##
## Df
## - 'Please specify: (choice=Chronic- Hepatitis C)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'Creatinine (if 0 = N/A)' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Diabetes)' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1

```

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## - SIRS_WBC 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
## Deviance
## - 'Please specify: (choice=Chronic- Hepatitis C)' 775.53
## - 'Please specify: (choice=Hypertension)' 775.60
## - 'Creatinine (if 0 = N/A)' 775.61
## - 'Does the patient have a history of cancer?' 775.90
## - 'Please specify: (choice=Diabetes)' 776.00
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 776.20
## - 'Please specify: (choice=Coronary Artery Disease)' 776.30
## <none> 774.75
## - 'Please specify: (choice=Cirrhosis)' 779.38
## - 'Please specify: (choice=Congestive Heart Failure)' 781.44
## - 'Admission Date:' 789.59
## - 'Was plasma given to the patient during this admission?' 790.41
## - 'SIRS RR' 792.17
## - SIRS_WBC 792.86
## - 'Did the patient receive hemodialysis during this admission?' 795.07
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 798.51
## - 'Was the patient placed in a prone position during their admission?' 805.51
## - 'Age at Admission' 860.24
## AIC
## - 'Please specify: (choice=Chronic- Hepatitis C)' 809.53
## - 'Please specify: (choice=Hypertension)' 809.60
## - 'Creatinine (if 0 = N/A)' 809.61
## - 'Does the patient have a history of cancer?' 809.90
## - 'Please specify: (choice=Diabetes)' 810.00
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 810.20
## - 'Please specify: (choice=Coronary Artery Disease)' 810.30
## <none> 810.75
## - 'Please specify: (choice=Cirrhosis)' 813.38
## - 'Please specify: (choice=Congestive Heart Failure)' 815.44
## - 'Admission Date:' 823.59
## - 'Was plasma given to the patient during this admission?' 824.41
## - 'SIRS RR' 826.17
## - SIRS_WBC 826.86
## - 'Did the patient receive hemodialysis during this admission?' 829.07
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 832.51
## - 'Was the patient placed in a prone position during their admission?' 839.51
## - 'Age at Admission' 894.24
##
## Step: AIC=809.53
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart Failure)'
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?'
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Creatinine (if 0 = N/A)' +
## 'Admission Date:' + 'Please specify: (choice=Diabetes)'

```


##	
##	
## - 'Creatinine (if 0 = N/A)'	Df
## - 'Please specify: (choice=Hypertension)'	1
## - 'Please specify: (choice=Diabetes)'	1
## - 'Does the patient have a history of cancer?'	1
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	1
## - 'Please specify: (choice=Coronary Artery Disease)'	1
## <none>	
## - 'Please specify: (choice=Cirrhosis)'	1
## - 'Please specify: (choice=Congestive Heart Failure)'	1
## - 'Admission Date:'	1
## - 'Was plasma given to the patient during this admission?'	1
## - 'SIRS RR'	1
## - SIRS_WBC	1
## - 'Did the patient receive hemodialysis during this admission?'	1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	1
## - 'Was the patient placed in a prone position during their admission?'	1
## - 'Age at Admission'	1
##	
##	Deviance
## - 'Creatinine (if 0 = N/A)'	776.33
## - 'Please specify: (choice=Hypertension)'	776.43
## - 'Please specify: (choice=Diabetes)'	776.69
## - 'Does the patient have a history of cancer?'	776.80
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	776.92
## - 'Please specify: (choice=Coronary Artery Disease)'	777.14
## <none>	775.53
## - 'Please specify: (choice=Cirrhosis)'	781.63
## - 'Please specify: (choice=Congestive Heart Failure)'	782.12
## - 'Admission Date:'	790.01
## - 'Was plasma given to the patient during this admission?'	791.48
## - 'SIRS RR'	792.57
## - SIRS_WBC	793.56
## - 'Did the patient receive hemodialysis during this admission?'	796.00
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	799.78
## - 'Was the patient placed in a prone position during their admission?'	806.20
## - 'Age at Admission'	860.56
##	
##	AIC
## - 'Creatinine (if 0 = N/A)'	808.33
## - 'Please specify: (choice=Hypertension)'	808.43
## - 'Please specify: (choice=Diabetes)'	808.69
## - 'Does the patient have a history of cancer?'	808.80
## - 'Please specify: (choice=Chronic Renal Insufficiency)'	808.92
## - 'Please specify: (choice=Coronary Artery Disease)'	809.14
## <none>	809.53
## - 'Please specify: (choice=Cirrhosis)'	813.63
## - 'Please specify: (choice=Congestive Heart Failure)'	814.12
## - 'Admission Date:'	822.01
## - 'Was plasma given to the patient during this admission?'	823.48
## - 'SIRS RR'	824.57
## - SIRS_WBC	825.56
## - 'Did the patient receive hemodialysis during this admission?'	828.00
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	831.78
## - 'Was the patient placed in a prone position during their admission?'	838.20

```

## - 'Age at Admission' 892.56
##
## Step: AIC=808.33
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart F
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admissi
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Admission Date:' +
## 'Please specify: (choice=Diabetes)'
##
##
## Df
## - 'Please specify: (choice=Diabetes)' 1
## - 'Please specify: (choice=Hypertension)' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
## Deviance
## - 'Please specify: (choice=Diabetes)' 777.33
## - 'Please specify: (choice=Hypertension)' 777.41
## - 'Does the patient have a history of cancer?' 777.57
## - 'Please specify: (choice=Coronary Artery Disease)' 778.01
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 778.03
## <none> 776.33
## - 'Please specify: (choice=Cirrhosis)' 782.59
## - 'Please specify: (choice=Congestive Heart Failure)' 783.35
## - 'Admission Date:' 790.99
## - 'Was plasma given to the patient during this admission?' 791.63
## - 'SIRS RR' 793.56
## - SIRS_WBC 795.07
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 800.09
## - 'Did the patient receive hemodialysis during this admission?' 803.06
## - 'Was the patient placed in a prone position during their admission?' 806.40
## - 'Age at Admission' 861.19
##
## AIC
## - 'Please specify: (choice=Diabetes)' 807.33
## - 'Please specify: (choice=Hypertension)' 807.41
## - 'Does the patient have a history of cancer?' 807.57
## - 'Please specify: (choice=Coronary Artery Disease)' 808.01
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 808.03
## <none> 808.33

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```

## - 'Please specify: (choice=Cirrhosis)' 812.59
## - 'Please specify: (choice=Congestive Heart Failure)' 813.35
## - 'Admission Date:' 820.99
## - 'Was plasma given to the patient during this admission?' 821.63
## - 'SIRS RR' 823.56
## - SIRS_WBC 825.07
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 830.09
## - 'Did the patient receive hemodialysis during this admission?' 833.06
## - 'Was the patient placed in a prone position during their admission?' 836.40
## - 'Age at Admission' 891.19
##
## Step: AIC=807.33
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Hypertension)' +
## 'Please specify: (choice=Coronary Artery Disease)' + 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Admission Date:'
##
##
## Df
## - 'Please specify: (choice=Hypertension)' 1
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
## Deviance
## - 'Please specify: (choice=Hypertension)' 778.03
## - 'Does the patient have a history of cancer?' 778.65
## - 'Please specify: (choice=Coronary Artery Disease)' 778.77
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 778.93
## <none> 777.33
## - 'Please specify: (choice=Cirrhosis)' 783.15
## - 'Please specify: (choice=Congestive Heart Failure)' 783.99
## - 'Admission Date:' 792.02
## - 'Was plasma given to the patient during this admission?' 792.72
## - 'SIRS RR' 794.25
## - SIRS_WBC 796.32
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 800.60
## - 'Did the patient receive hemodialysis during this admission?' 803.47
## - 'Was the patient placed in a prone position during their admission?' 808.02
## - 'Age at Admission' 863.40
##
## AIC

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## - 'Please specify: (choice=Hypertension)' 806.03
## - 'Does the patient have a history of cancer?' 806.65
## - 'Please specify: (choice=Coronary Artery Disease)' 806.77
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 806.93
## <none> 807.33
## - 'Please specify: (choice=Cirrhosis)' 811.15
## - 'Please specify: (choice=Congestive Heart Failure)' 811.99
## - 'Admission Date:' 820.02
## - 'Was plasma given to the patient during this admission?' 820.72
## - 'SIRS RR' 822.25
## - SIRS_WBC 824.32
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 828.60
## - 'Did the patient receive hemodialysis during this admission?' 831.47
## - 'Was the patient placed in a prone position during their admission?' 836.02
## - 'Age at Admission' 891.40
##
## Step: AIC=806.03
## death ~ 'Does the patient have a history of cancer?' + 'Please specify: (choice=Coronary Artery Disea
## 'Please specify: (choice=Congestive Heart Failure)' + 'Please specify: (choice=Chronic Renal Insu
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admissi
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Admission Date:'
##
##
## Df
## - 'Does the patient have a history of cancer?' 1
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## <none>
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
## Deviance
## - 'Does the patient have a history of cancer?' 779.34
## - 'Please specify: (choice=Coronary Artery Disease)' 779.73
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 779.93
## <none> 778.03
## - 'Please specify: (choice=Cirrhosis)' 783.92
## - 'Please specify: (choice=Congestive Heart Failure)' 784.68
## - 'Admission Date:' 792.81
## - 'Was plasma given to the patient during this admission?' 793.27
## - 'SIRS RR' 794.78
## - SIRS_WBC 796.86
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 801.11
## - 'Did the patient receive hemodialysis during this admission?' 804.96
## - 'Was the patient placed in a prone position during their admission?' 808.70

```

```

## - 'Age at Admission' 871.15
## AIC
## - 'Does the patient have a history of cancer?' 805.34
## - 'Please specify: (choice=Coronary Artery Disease)' 805.73
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 805.93
## <none> 806.03
## - 'Please specify: (choice=Cirrhosis)' 809.92
## - 'Please specify: (choice=Congestive Heart Failure)' 810.68
## - 'Admission Date:' 818.81
## - 'Was plasma given to the patient during this admission?' 819.27
## - 'SIRS RR' 820.78
## - SIRS_WBC 822.86
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 827.11
## - 'Did the patient receive hemodialysis during this admission?' 830.96
## - 'Was the patient placed in a prone position during their admission?' 834.70
## - 'Age at Admission' 897.15
##
## Step: AIC=805.34
## death ~ 'Please specify: (choice=Coronary Artery Disease)' +
## 'Please specify: (choice=Congestive Heart Failure)' + 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Admission Date:'
##
## Df
## - 'Please specify: (choice=Coronary Artery Disease)' 1
## <none>
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
## Deviance
## - 'Please specify: (choice=Coronary Artery Disease)' 781.14
## <none> 779.34
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 781.57
## - 'Please specify: (choice=Cirrhosis)' 785.11
## - 'Please specify: (choice=Congestive Heart Failure)' 785.69
## - 'Admission Date:' 793.61
## - 'Was plasma given to the patient during this admission?' 794.24
## - 'SIRS RR' 796.12
## - SIRS_WBC 799.19
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 802.85
## - 'Did the patient receive hemodialysis during this admission?' 805.48
## - 'Was the patient placed in a prone position during their admission?' 809.37
## - 'Age at Admission' 877.26

```

```

##                                                    AIC
## - 'Please specify: (choice=Coronary Artery Disease)' 805.14
## <none> 805.34
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 805.57
## - 'Please specify: (choice=Cirrhosis)' 809.11
## - 'Please specify: (choice=Congestive Heart Failure)' 809.69
## - 'Admission Date:' 817.61
## - 'Was plasma given to the patient during this admission?' 818.24
## - 'SIRS RR' 820.12
## - SIRS_WBC 823.19
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 826.85
## - 'Did the patient receive hemodialysis during this admission?' 829.48
## - 'Was the patient placed in a prone position during their admission?' 833.37
## - 'Age at Admission' 901.26
##
## Step: AIC=805.14
## death ~ 'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Admission Date:'
##
##                                                    Df
## <none>
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## - 'Please specify: (choice=Cirrhosis)' 1
## - 'Please specify: (choice=Congestive Heart Failure)' 1
## - 'Admission Date:' 1
## - 'Was plasma given to the patient during this admission?' 1
## - 'SIRS RR' 1
## - SIRS_WBC 1
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## - 'Did the patient receive hemodialysis during this admission?' 1
## - 'Was the patient placed in a prone position during their admission?' 1
## - 'Age at Admission' 1
##
##                                                    Deviance
## <none> 781.14
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 783.53
## - 'Please specify: (choice=Cirrhosis)' 786.53
## - 'Please specify: (choice=Congestive Heart Failure)' 789.92
## - 'Admission Date:' 794.85
## - 'Was plasma given to the patient during this admission?' 796.33
## - 'SIRS RR' 797.05
## - SIRS_WBC 801.23
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 805.07
## - 'Did the patient receive hemodialysis during this admission?' 807.62
## - 'Was the patient placed in a prone position during their admission?' 811.21
## - 'Age at Admission' 890.65
##
##                                                    AIC
## <none> 805.14
## - 'Please specify: (choice=Chronic Renal Insufficiency)' 805.53
## - 'Please specify: (choice=Cirrhosis)' 808.53

```

```
## - 'Please specify: (choice=Congestive Heart Failure)' 811.92
## - 'Admission Date:' 816.85
## - 'Was plasma given to the patient during this admission?' 818.33
## - 'SIRS RR' 819.05
## - SIRS_WBC 823.23
## - 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 827.07
## - 'Did the patient receive hemodialysis during this admission?' 829.62
## - 'Was the patient placed in a prone position during their admission?' 833.21
## - 'Age at Admission' 912.65
```

```
##
```

```
## Call: glm(formula = death ~ 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Admission Date:',
## family = binomial, data = complete.df.minus.labs)
```

```
##
```

```
## Coefficients:
```

```
## (Intercept)
## 473.49870
## 'Please specify: (choice=Congestive Heart Failure)'1
## 1.01369
## 'Please specify: (choice=Chronic Renal Insufficiency)'1
## 0.47631
## 'Please specify: (choice=Cirrhosis)'1
## 1.90178
## 'Did the patient receive hemodialysis during this admission?'1
## 1.59933
## 'Was plasma given to the patient during this admission?'1
## 1.07010
## 'Was the patient placed in a prone position during their admission?'1
## 1.25059
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1
## 0.99830
## 'Age at Admission'
## 0.06572
## 'SIRS RR'
## 0.84886
## SIRS_WBC
## 0.91056
## 'Admission Date:'
## -0.02621
##
```

```
## Degrees of Freedom: 991 Total (i.e. Null); 980 Residual
```

```
## Null Deviance: 1072
```

```
## Residual Deviance: 781.1 AIC: 805.1
```

```
best.step.2 = glm(formula = death ~ 'Please specify: (choice=Congestive Heart Failure)' +
'Please specify: (choice=Chronic Renal Insufficiency)' +
'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
'Was plasma given to the patient during this admission?' +
```

```

'Was the patient placed in a prone position during their admission?' +
'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
'Age at Admission' + 'SIRS RR' + SIRS_WBC + 'Admission Date:',
family = binomial, data = complete.df.minus.labs) # AIC is equal to 805
best.step.2.summary = summary(best.step.2)

best.step.2.summary.p.values = best.step.2.summary$coefficients[,4]
best.step.2.conf.intervals = exp(cbind(coef(best.step.2), confint(best.step.2)))

## Waiting for profiling to be done...

best.step.2.conf.intervals.df = data.frame(best.step.2.conf.intervals)
best.step.2.conf.intervals.df$p.values = best.step.2.summary.p.values

logitgof(under.0.25.variables.no.redcap.no.labs.death, fitted(best.step.2), g = 10) # 0.09253

## Warning in logitgof(under.0.25.variables.no.redcap.no.labs.death,
## fitted(best.step.2), : At least one cell in the expected frequencies table is <
## 1. Chi-square approximation may be incorrect.

##
## Hosmer and Lemeshow test (binary model)
##
## data: under.0.25.variables.no.redcap.no.labs.death, fitted(best.step.2)
## X-squared = 13.609, df = 8, p-value = 0.09253

## were there any predictors of mortality within those who got plasma?

## MODEL 4a
row.names(complete.df) <- 1:nrow(complete.df)

# removed: 'Was the patient intubated when plasma was given?', because only on one side
my.full.match = matchit('Was plasma given to the patient during this admission?' ~ 'Insurance Class' +

## Warning in model.matrix.default(tt, data = mf): the response appeared on the
## right-hand side and was dropped

## Warning in model.matrix.default(tt, data = mf): problem with term 12 in
## model.matrix: no columns are assigned

## Warning in model.matrix.default(mt, mf, contrasts): the response appeared on the
## right-hand side and was dropped

## Warning in model.matrix.default(mt, mf, contrasts): problem with term 12 in
## model.matrix: no columns are assigned

summary(my.full.match)

```



```

##
## Call:
## matchit(formula = 'Was plasma given to the patient during this admission?' ~
##   'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
##   'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary D
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this adm
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##   SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +
##   'D-Domer' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
##   'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)',
##   data = complete.df, method = "nearest")
##
## Summary of balance for all data:
##
##
## distance
## 'Insurance Class'COMM
## 'Insurance Class'MEDICAID
## 'Insurance Class'MEDICARE
## 'Insurance Class'OTHER
## 'Insurance Class'SP
## 'Race:'American Indian/Alaskan Native
## 'Race:'Asian
## 'Race:'Black
## 'Race:'Native Hawaiian/Pacific Isle
## 'Race:'Other
## 'Race:'Unknown
## 'Does the patient have a history of cancer?'1
## 'Please specify: (choice=Hypertension)'1
## 'Please specify: (choice=Coronary Artery Disease)'1
## 'Please specify: (choice=Congestive Heart Failure)'1
## 'Please specify: (choice=Asthma)'1
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1
## 'Please specify: (choice=Chronic Renal Insufficiency)'1
## 'Please specify: (choice=Cirrhosis)'1
## 'Did the patient receive hemodialysis during this admission?'1
## 'Was the patient placed in a prone position during their admission?'1
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1
## 'Age at Admission'
## Per_Capita
## 'SIRS RR'
## SIRS_WBC
## SIRS...110
## 'Creatinine (if 0 = N/A)'
## Ferritin
## CRP
## 'D-Domer'
## 'Admission Date:'
## 'Please specify: (choice=Diabetes)'1

```

	Means Treated
distance	0.4025
'Insurance Class'COMM	0.2787
'Insurance Class'MEDICAID	0.2131
'Insurance Class'MEDICARE	0.5082
'Insurance Class'OTHER	0.0000
'Insurance Class'SP	0.0000
'Race:'American Indian/Alaskan Native	0.0164
'Race:'Asian	0.0328
'Race:'Black	0.1311
'Race:'Native Hawaiian/Pacific Isle	0.0000
'Race:'Other	0.0656
'Race:'Unknown	0.2459
'Does the patient have a history of cancer?'1	0.1311
'Please specify: (choice=Hypertension)'1	0.5738
'Please specify: (choice=Coronary Artery Disease)'1	0.1311
'Please specify: (choice=Congestive Heart Failure)'1	0.0164
'Please specify: (choice=Asthma)'1	0.0328
'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0492
'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0492
'Please specify: (choice=Cirrhosis)'1	0.0164
'Did the patient receive hemodialysis during this admission?'1	0.2459
'Was the patient placed in a prone position during their admission?'1	0.3770
'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.4590
'Age at Admission'	67.8689
Per_Capita	48489.4098
'SIRS RR'	0.8033
SIRS_WBC	0.2951
SIRS...110	2.0164
'Creatinine (if 0 = N/A)'	1.0705
Ferritin	738.1639
CRP	177.8328
'D-Domer'	7594.3115
'Admission Date:'	18369.5902
'Please specify: (choice=Diabetes)'1	0.3770

## 'SIRS TEMP'	0.2295
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0164
##	Means Control
## distance	0.1365
## 'Insurance Class'COMM	0.2772
## 'Insurance Class'MEDICAID	0.2285
## 'Insurance Class'MEDICARE	0.4794
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0150
## 'Race:'American Indian/Alaskan Native	0.0037
## 'Race:'Asian	0.0112
## 'Race:'Black	0.2060
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0562
## 'Race:'Unknown	0.1648
## 'Does the patient have a history of cancer?'1	0.1536
## 'Please specify: (choice=Hypertension)'1	0.5506
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1086
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0262
## 'Please specify: (choice=Asthma)'1	0.0861
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0562
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0637
## 'Please specify: (choice=Cirrhosis)'1	0.0037
## 'Did the patient receive hemodialysis during this admission?'1	0.0337
## 'Was the patient placed in a prone position during their admission?'1	0.2060
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.4082
## 'Age at Admission'	65.3258
## Per_Capita	49635.9551
## 'SIRS RR'	0.7378
## SIRS_WBC	0.2060
## SIRS...110	1.8052
## 'Creatinine (if 0 = N/A)'	1.1524
## Ferritin	1059.6730
## CRP	123.6281
## 'D-Domer'	5144.9513
## 'Admission Date:'	18365.1199
## 'Please specify: (choice=Diabetes)'1	0.3333
## 'SIRS TEMP'	0.2472
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0037
##	SD Control
## distance	0.1369
## 'Insurance Class'COMM	0.4484
## 'Insurance Class'MEDICAID	0.4206
## 'Insurance Class'MEDICARE	0.5005
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.1217
## 'Race:'American Indian/Alaskan Native	0.0612
## 'Race:'Asian	0.1056
## 'Race:'Black	0.4052
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2307
## 'Race:'Unknown	0.3717
## 'Does the patient have a history of cancer?'1	0.3612
## 'Please specify: (choice=Hypertension)'1	0.4984

## 'Please specify: (choice=Coronary Artery Disease)'1	0.3117
## 'Please specify: (choice=Congestive Heart Failure)'1	0.1601
## 'Please specify: (choice=Asthma)'1	0.2811
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2307
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2446
## 'Please specify: (choice=Cirrhosis)'1	0.0612
## 'Did the patient receive hemodialysis during this admission?'1	0.1808
## 'Was the patient placed in a prone position during their admission?'1	0.4052
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.4924
## 'Age at Admission'	16.9471
## Per_Capita	20831.6095
## 'SIRS RR'	0.4406
## SIRS_WBC	0.4052
## SIRS...110	0.9960
## 'Creatinine (if 0 = N/A)'	1.0342
## Ferritin	6687.5194
## CRP	88.4459
## 'D-Domer'	14157.8212
## 'Admission Date:'	14.1730
## 'Please specify: (choice=Diabetes)'1	0.4723
## 'SIRS TEMP'	0.4322
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0612
##	Mean Diff
## distance	0.2660
## 'Insurance Class'COMM	0.0015
## 'Insurance Class'MEDICAID	-0.0153
## 'Insurance Class'MEDICARE	0.0288
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	-0.0150
## 'Race:'American Indian/Alaskan Native	0.0126
## 'Race:'Asian	0.0216
## 'Race:'Black	-0.0748
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0094
## 'Race:'Unknown	0.0811
## 'Does the patient have a history of cancer?'1	-0.0224
## 'Please specify: (choice=Hypertension)'1	0.0232
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0225
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0098
## 'Please specify: (choice=Asthma)'1	-0.0534
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0070
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	-0.0145
## 'Please specify: (choice=Cirrhosis)'1	0.0126
## 'Did the patient receive hemodialysis during this admission?'1	0.2122
## 'Was the patient placed in a prone position during their admission?'1	0.1711
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0508
## 'Age at Admission'	2.5430
## Per_Capita	-1146.5452
## 'SIRS RR'	0.0655
## SIRS_WBC	0.0891
## SIRS...110	0.2111
## 'Creatinine (if 0 = N/A)'	-0.0819
## Ferritin	-321.5091
## CRP	54.2047

## 'D-Domer'	2449.3602
## 'Admission Date:'	4.4703
## 'Please specify: (choice=Diabetes)'1	0.0437
## 'SIRS TEMP'	-0.0177
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0126
##	eQQ Med
## distance	0.2413
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0000
## 'Age at Admission'	2.0000
## Per_Capita	565.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	80.0000
## CRP	60.3000
## 'D-Domer'	200.0000
## 'Admission Date:'	5.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.2630
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0164
## 'Insurance Class'MEDICARE	0.0328
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0164
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0164
## 'Race:'Black	0.0820
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000

## 'Race:'Unknown	0.0820
## 'Does the patient have a history of cancer?'1	0.0328
## 'Please specify: (choice=Hypertension)'1	0.0328
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0164
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0164
## 'Please specify: (choice=Asthma)'1	0.0492
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0164
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0164
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2131
## 'Was the patient placed in a prone position during their admission?'1	0.1639
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0492
## 'Age at Admission'	3.7377
## Per_Capita	1808.8689
## 'SIRS RR'	0.0656
## SIRS_WBC	0.0820
## SIRS...110	0.2787
## 'Creatinine (if 0 = N/A)'	0.2180
## Ferritin	1852.6508
## CRP	54.2541
## 'D-Domer'	2358.0000
## 'Admission Date:'	5.1475
## 'Please specify: (choice=Diabetes)'1	0.0492
## 'SIRS TEMP'	0.0164
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Max
## distance	0.4895
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	1.0000
## 'Age at Admission'	18.0000
## Per_Capita	15315.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000

## 'Creatinine (if 0 = N/A)'	2.4000
## Ferritin	107819.7000
## CRP	78.4000
## 'D-Domer'	42709.0000
## 'Admission Date:'	18.0000
## 'Please specify: (choice=Diabetes)'	1.0000
## 'SIRS TEMP'	1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'	0.0000
##	
##	
## Summary of balance for matched data:	
##	Means Treated
## distance	0.4025
## 'Insurance Class'COMM	0.2787
## 'Insurance Class'MEDICAID	0.2131
## 'Insurance Class'MEDICARE	0.5082
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0164
## 'Race:'Asian	0.0328
## 'Race:'Black	0.1311
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0656
## 'Race:'Unknown	0.2459
## 'Does the patient have a history of cancer?'	0.1311
## 'Please specify: (choice=Hypertension)'	0.5738
## 'Please specify: (choice=Coronary Artery Disease)'	0.1311
## 'Please specify: (choice=Congestive Heart Failure)'	0.0164
## 'Please specify: (choice=Asthma)'	0.0328
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	0.0492
## 'Please specify: (choice=Chronic Renal Insufficiency)'	0.0492
## 'Please specify: (choice=Cirrhosis)'	0.0164
## 'Did the patient receive hemodialysis during this admission?'	0.2459
## 'Was the patient placed in a prone position during their admission?'	0.3770
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'	0.4590
## 'Age at Admission'	67.8689
## Per_Capita	48489.4098
## 'SIRS RR'	0.8033
## SIRS_WBC	0.2951
## SIRS...110	2.0164
## 'Creatinine (if 0 = N/A)'	1.0705
## Ferritin	738.1639
## CRP	177.8328
## 'D-Domer'	7594.3115
## 'Admission Date:'	18369.5902
## 'Please specify: (choice=Diabetes)'	0.3770
## 'SIRS TEMP'	0.2295
## 'Please specify: (choice=Chronic- Hepatitis C)'	0.0164
##	Means Control
## distance	0.3018
## 'Insurance Class'COMM	0.2951
## 'Insurance Class'MEDICAID	0.1639
## 'Insurance Class'MEDICARE	0.5410
## 'Insurance Class'OTHER	0.0000

## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0164
## 'Race:'Asian	0.0164
## 'Race:'Black	0.1967
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0492
## 'Race:'Unknown	0.1967
## 'Does the patient have a history of cancer?'1	0.1475
## 'Please specify: (choice=Hypertension)'1	0.6393
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0820
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0164
## 'Please specify: (choice=Asthma)'1	0.0164
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0492
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0492
## 'Please specify: (choice=Cirrhosis)'1	0.0164
## 'Did the patient receive hemodialysis during this admission?'1	0.1148
## 'Was the patient placed in a prone position during their admission?'1	0.3279
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.3770
## 'Age at Admission'	69.3607
## Per_Capita	47583.1639
## 'SIRS RR'	0.7213
## SIRS_WBC	0.3115
## SIRS...110	1.9836
## 'Creatinine (if 0 = N/A)'	1.2721
## Ferritin	747.9836
## CRP	183.1787
## 'D-Domer'	8645.6230
## 'Admission Date:'	18370.5574
## 'Please specify: (choice=Diabetes)'1	0.3770
## 'SIRS TEMP'	0.2295
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0164
##	SD Control
## distance	0.1901
## 'Insurance Class'COMM	0.4599
## 'Insurance Class'MEDICAID	0.3733
## 'Insurance Class'MEDICARE	0.5025
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.1280
## 'Race:'Asian	0.1280
## 'Race:'Black	0.4008
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2180
## 'Race:'Unknown	0.4008
## 'Does the patient have a history of cancer?'1	0.3576
## 'Please specify: (choice=Hypertension)'1	0.4842
## 'Please specify: (choice=Coronary Artery Disease)'1	0.2766
## 'Please specify: (choice=Congestive Heart Failure)'1	0.1280
## 'Please specify: (choice=Asthma)'1	0.1280
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2180
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2180
## 'Please specify: (choice=Cirrhosis)'1	0.1280
## 'Did the patient receive hemodialysis during this admission?'1	0.3214
## 'Was the patient placed in a prone position during their admission?'1	0.4733

## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.4887
## 'Age at Admission'	15.2447
## Per_Capita	17737.2901
## 'SIRS RR'	0.4521
## SIRS_WBC	0.4669
## SIRS...110	0.9218
## 'Creatinine (if 0 = N/A)'	1.3560
## Ferritin	523.5259
## CRP	108.1718
## 'D-Domer'	21417.6319
## 'Admission Date:'	16.7666
## 'Please specify: (choice=Diabetes)'1	0.4887
## 'SIRS TEMP'	0.4240
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.1280
##	Mean Diff
## distance	0.1007
## 'Insurance Class'COMM	-0.0164
## 'Insurance Class'MEDICAID	0.0492
## 'Insurance Class'MEDICARE	-0.0328
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0164
## 'Race:'Black	-0.0656
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0164
## 'Race:'Unknown	0.0492
## 'Does the patient have a history of cancer?'1	-0.0164
## 'Please specify: (choice=Hypertension)'1	-0.0656
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0492
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0164
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1311
## 'Was the patient placed in a prone position during their admission?'1	0.0492
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0820
## 'Age at Admission'	-1.4918
## Per_Capita	906.2459
## 'SIRS RR'	0.0820
## SIRS_WBC	-0.0164
## SIRS...110	0.0328
## 'Creatinine (if 0 = N/A)'	-0.2016
## Ferritin	-9.8197
## CRP	-5.3459
## 'D-Domer'	-1051.3115
## 'Admission Date:'	-0.9672
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Med
## distance	0.0474
## 'Insurance Class'COMM	0.0000

## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0000
## 'Age at Admission'	2.0000
## Per_Capita	835.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	40.0000
## CRP	13.3000
## 'D-Domer'	346.0000
## 'Admission Date:'	3.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.1009
## 'Insurance Class'COMM	0.0164
## 'Insurance Class'MEDICAID	0.0492
## 'Insurance Class'MEDICARE	0.0328
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0164
## 'Race:'Black	0.0656
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0164
## 'Race:'Unknown	0.0492
## 'Does the patient have a history of cancer?'1	0.0164
## 'Please specify: (choice=Hypertension)'1	0.0656
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0492
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0164
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000

## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1311
## 'Was the patient placed in a prone position during their admission?'1	0.0492
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0820
## 'Age at Admission'	2.1148
## Per_Capita	2838.5082
## 'SIRS RR'	0.0820
## SIRS_WBC	0.0164
## SIRS...110	0.2295
## 'Creatinine (if 0 = N/A)'	0.3000
## Ferritin	64.2131
## CRP	15.2705
## 'D-Domer'	1704.0000
## 'Admission Date:'	3.6557
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Max
## distance	0.3183
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	1.0000
## 'Age at Admission'	9.0000
## Per_Capita	30530.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	3.0000
## Ferritin	1138.0000
## CRP	53.9000
## 'D-Domer'	17862.0000
## 'Admission Date:'	18.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000

```

##
## Percent Balance Improvement:
##
## distance 62.1531
## 'Insurance Class'COMM -968.0000
## 'Insurance Class'MEDICAID -220.4000
## 'Insurance Class'MEDICARE -13.8593
## 'Insurance Class'OTHER 0.0000
## 'Insurance Class'SP 100.0000
## 'Race:'American Indian/Alaskan Native 100.0000
## 'Race:'Asian 23.9316
## 'Race:'Black 12.3872
## 'Race:'Native Hawaiian/Pacific Isle 0.0000
## 'Race:'Other -74.5098
## 'Race:'Unknown 39.3641
## 'Does the patient have a history of cancer?'1 26.8493
## 'Please specify: (choice=Hypertension)'1 -182.5397
## 'Please specify: (choice=Coronary Artery Disease)'1 -118.2561
## 'Please specify: (choice=Congestive Heart Failure)'1 100.0000
## 'Please specify: (choice=Asthma)'1 69.2750
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 100.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 100.0000
## 'Please specify: (choice=Cirrhosis)'1 100.0000
## 'Did the patient receive hemodialysis during this admission?'1 38.1944
## 'Was the patient placed in a prone position during their admission?'1 71.2491
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1 -61.4268
## 'Age at Admission' 41.3371
## Per_Capita 20.9586
## 'SIRS RR' -25.2345
## SIRS_WBC 81.5989
## SIRS...110 84.4722
## 'Creatinine (if 0 = N/A)' -146.0737
## Ferritin 96.9458
## CRP 90.1376
## 'D-Domer' 57.0781
## 'Admission Date:' 78.3636
## 'Please specify: (choice=Diabetes)'1 100.0000
## 'SIRS TEMP' 100.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1 100.0000
##
## eQQ Med
## distance 80.3361
## 'Insurance Class'COMM 0.0000
## 'Insurance Class'MEDICAID 0.0000
## 'Insurance Class'MEDICARE 0.0000
## 'Insurance Class'OTHER 0.0000
## 'Insurance Class'SP 0.0000
## 'Race:'American Indian/Alaskan Native 0.0000
## 'Race:'Asian 0.0000
## 'Race:'Black 0.0000
## 'Race:'Native Hawaiian/Pacific Isle 0.0000
## 'Race:'Other 0.0000
## 'Race:'Unknown 0.0000
## 'Does the patient have a history of cancer?'1 0.0000
## 'Please specify: (choice=Hypertension)'1 0.0000

```

## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0000
## 'Age at Admission'	0.0000
## Per_Capita	-47.7876
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## Ferritin	50.0000
## CRP	77.9436
## 'D-Domer'	-73.0000
## 'Admission Date:'	40.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	61.6491
## 'Insurance Class'COMM	-Inf
## 'Insurance Class'MEDICAID	-200.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	100.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	20.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	-Inf
## 'Race:'Unknown	40.0000
## 'Does the patient have a history of cancer?'1	50.0000
## 'Please specify: (choice=Hypertension)'1	-100.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	-200.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	100.0000
## 'Please specify: (choice=Asthma)'1	66.6667
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	100.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	100.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	38.4615
## 'Was the patient placed in a prone position during their admission?'1	70.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	-66.6667
## 'Age at Admission'	43.4211
## Per_Capita	-56.9217
## 'SIRS RR'	-25.0000
## SIRS_WBC	80.0000
## SIRS...110	17.6471
## 'Creatinine (if 0 = N/A)'	-37.5940
## Ferritin	96.5340
## CRP	71.8538

```

## 'D-Domer' 27.7354
## 'Admission Date:' 28.9809
## 'Please specify: (choice=Diabetes)'1 100.0000
## 'SIRS TEMP' 100.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1 0.0000
## eQQ Max
## distance 34.9704
## 'Insurance Class'COMM -Inf
## 'Insurance Class'MEDICAID 0.0000
## 'Insurance Class'MEDICARE 0.0000
## 'Insurance Class'OTHER 0.0000
## 'Insurance Class'SP 100.0000
## 'Race:'American Indian/Alaskan Native 0.0000
## 'Race:'Asian 0.0000
## 'Race:'Black 0.0000
## 'Race:'Native Hawaiian/Pacific Isle 0.0000
## 'Race:'Other -Inf
## 'Race:'Unknown 0.0000
## 'Does the patient have a history of cancer?'1 0.0000
## 'Please specify: (choice=Hypertension)'1 0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1 0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1 100.0000
## 'Please specify: (choice=Asthma)'1 0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 100.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 100.0000
## 'Please specify: (choice=Cirrhosis)'1 0.0000
## 'Did the patient receive hemodialysis during this admission?'1 0.0000
## 'Was the patient placed in a prone position during their admission?'1 0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1 0.0000
## 'Age at Admission' 50.0000
## Per_Capita -99.3470
## 'SIRS RR' 0.0000
## SIRS_WBC 0.0000
## SIRS...110 0.0000
## 'Creatinine (if 0 = N/A)' -25.0000
## Ferritin 98.9445
## CRP 31.2500
## 'D-Domer' 58.1774
## 'Admission Date:' 0.0000
## 'Please specify: (choice=Diabetes)'1 100.0000
## 'SIRS TEMP' 100.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1 0.0000
##
## Sample sizes:
## Control Treated
## All 267 61
## Matched 61 61
## Unmatched 206 0
## Discarded 0 0

```

```

matched.cohort = get_matches(my.full.match, complete.df, id_cols = NULL, newdata = NULL) # sample size

```

```

# is there any differene between the groups
binary.variables = matched.cohort %>%

```

```

dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history)
)

chi.p.exit = vector()
chi.variable.name = vector()

for ( i in c(2:8, 9, 10:16)) {
  variable.1 = binary.variables[[i]][binary.variables$Was.plasma.given.to.the.patient.during.this.admission]
  variable.0 = binary.variables[[i]][binary.variables$Was.plasma.given.to.the.patient.during.this.admission]
  chisquare.test = chisq.test(variable.1, variable.0)
  chisquare.test.p.value = chisquare.test$p.value
  chi.p.exit[i] = chisquare.test.p.value
  chi.variable.name[i] = colnames(binary.variables)[i]
}

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

chi.df = data.frame(chi.variable.name, chi.p.exit) # not sig different by p = 0.05 for any

```

```

numerical.variables = matched.cohort %>%
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Age.at.Admission, Per_Capita, S

```

```

p.value.exit = vector()
variable.name.exit = vector()

for ( i in c(2:10,12)) { # first column is plasma # skip date
  variable.1 = numerical.variables[[i]][numerical.variables$Was.plasma.given.to.the.patient.during.this
  variable.0 = numerical.variables[[i]][numerical.variables$Was.plasma.given.to.the.patient.during.this
  middle.t.test = t.test(variable.1, variable.0)
  t.test.p.value = middle.t.test$p.value
  p.value.exit[i] = t.test.p.value
  variable.name.exit[i] = colnames(numerical.variables)[i]
}

t.test.df = data.frame(variable.name.exit, p.value.exit)

## only significant different one in matching is length of stay
match.1.glm = glm(death ~ Was.plasma.given.to.the.patient.during.this.admission., data = matched.cohort
match.1.summary = summary(match.1.glm) # p value 0.003504
match.1.conf.intervals = exp(cbind(coef(match.1.glm), confint(match.1.glm))) # OR 3.1034483, CI 1.46952

```

```
## Waiting for profiling to be done...
```

There is no longer match.2. It was coded incorrectly and fixed while named match.3, so match.3 was left.

```
## okay - but what if we increase the sample size using the second saturated logisitc regression?
# this drops ferritin, d dimer and , and crp

```

```
row.names(complete.df.minus.labs) <- 1:nrow(complete.df.minus.labs) # sample size: 992

```

```
my.full.match.3 = matchit('Was plasma given to the patient during this admission?' ~ 'Insurance Class'

```

```
## Warning in model.matrix.default(tt, data = mf): the response appeared on the
## right-hand side and was dropped

```

```
## Warning in model.matrix.default(tt, data = mf): problem with term 12 in
## model.matrix: no columns are assigned

```

```
## Warning in model.matrix.default(mt, mf, contrasts): the response appeared on the
## right-hand side and was dropped

```

```
## Warning in model.matrix.default(mt, mf, contrasts): problem with term 12 in
## model.matrix: no columns are assigned

```

```
summary(my.full.match.3)

```

```
##
```

```
## Call:
```

```
## matchit(formula = 'Was plasma given to the patient during this admission?' ~
## 'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)'
## 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary D

```

```

##      'Please specify: (choice=Chronic Renal Insufficiency)' +
##      'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this adm
##      'Was plasma given to the patient during this admission?' +
##      'Was the patient placed in a prone position during their admission?' +
##      'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##      'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##      SIRS...110 + 'Creatinine (if 0 = N/A)' + 'Admission Date:' +
##      'Please specify: (choice=Diabetes)' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepati
##      data = complete.df.minus.labs, method = "nearest")
##
## Summary of balance for all data:
##
##                                     Means Treated
## distance                                     0.3159
## 'Insurance Class'COMM                       0.2857
## 'Insurance Class'MEDICAID                   0.2095
## 'Insurance Class'MEDICARE                   0.4952
## 'Insurance Class'OTHER                      0.0000
## 'Insurance Class'SP                         0.0095
## 'Race:'American Indian/Alaskan Native      0.0095
## 'Race:'Asian                                0.0286
## 'Race:'Black                                0.1143
## 'Race:'Native Hawaiian/Pacific Isle       0.0000
## 'Race:'Other                                0.0571
## 'Race:'Unknown                              0.2000
## 'Does the patient have a history of cancer?'1 0.1238
## 'Please specify: (choice=Hypertension)'1    0.5429
## 'Please specify: (choice=Coronary Artery Disease)'1 0.1714
## 'Please specify: (choice=Congestive Heart Failure)'1 0.0381
## 'Please specify: (choice=Asthma)'1          0.0381
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0476
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 0.0857
## 'Please specify: (choice=Cirrhosis)'1      0.0095
## 'Did the patient receive hemodialysis during this admission?'1 0.2571
## 'Was the patient placed in a prone position during their admission?'1 0.4286
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1 0.4952
## 'Age at Admission'                          67.5238
## Per_Capita                                  51696.9048
## 'SIRS RR'                                   0.8190
## SIRS_WBC                                    0.3333
## SIRS...110                                  2.1143
## 'Creatinine (if 0 = N/A)'                   1.1676
## 'Admission Date:'                           18369.2286
## 'Please specify: (choice=Diabetes)'1         0.3429
## 'SIRS TEMP'                                 0.2476
## 'Please specify: (choice=Chronic- Hepatitis C)'1 0.0190
##
##                                     Means Control
## distance                                     0.0810
## 'Insurance Class'COMM                       0.2807
## 'Insurance Class'MEDICAID                   0.1917
## 'Insurance Class'MEDICARE                   0.5152
## 'Insurance Class'OTHER                      0.0011
## 'Insurance Class'SP                         0.0113
## 'Race:'American Indian/Alaskan Native      0.0045
## 'Race:'Asian                                0.0203

```


## 'Race:'Black	0.2074
## 'Race:'Native Hawaiian/Pacific Isle	0.0011
## 'Race:'Other	0.0474
## 'Race:'Unknown	0.1466
## 'Does the patient have a history of cancer?'1	0.1578
## 'Please specify: (choice=Hypertension)'1	0.5344
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1319
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0609
## 'Please specify: (choice=Asthma)'1	0.0665
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0778
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0699
## 'Please specify: (choice=Cirrhosis)'1	0.0101
## 'Did the patient receive hemodialysis during this admission?'1	0.0474
## 'Was the patient placed in a prone position during their admission?'1	0.1522
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.3337
## 'Age at Admission'	66.2356
## Per_Capita	51175.9899
## 'SIRS RR'	0.6731
## SIRS_WBC	0.2368
## SIRS...110	1.7294
## 'Creatinine (if 0 = N/A)'	1.3526
## 'Admission Date:'	18362.3946
## 'Please specify: (choice=Diabetes)'1	0.3157
## 'SIRS TEMP'	0.2480
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0056
##	SD Control
## distance	0.1018
## 'Insurance Class'COMM	0.4496
## 'Insurance Class'MEDICAID	0.3938
## 'Insurance Class'MEDICARE	0.5001
## 'Insurance Class'OTHER	0.0336
## 'Insurance Class'SP	0.1056
## 'Race:'American Indian/Alaskan Native	0.0670
## 'Race:'Asian	0.1411
## 'Race:'Black	0.4057
## 'Race:'Native Hawaiian/Pacific Isle	0.0336
## 'Race:'Other	0.2125
## 'Race:'Unknown	0.3539
## 'Does the patient have a history of cancer?'1	0.3648
## 'Please specify: (choice=Hypertension)'1	0.4991
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3386
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2392
## 'Please specify: (choice=Asthma)'1	0.2493
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2680
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2551
## 'Please specify: (choice=Cirrhosis)'1	0.1003
## 'Did the patient receive hemodialysis during this admission?'1	0.2125
## 'Was the patient placed in a prone position during their admission?'1	0.3594
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.4718
## 'Age at Admission'	17.7951
## Per_Capita	24367.9005
## 'SIRS RR'	0.4694
## SIRS_WBC	0.4253
## SIRS...110	1.0073

## 'Creatinine (if 0 = N/A)'	1.6524
## 'Admission Date:'	15.9847
## 'Please specify: (choice=Diabetes)'1	0.4650
## 'SIRS TEMP'	0.4321
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0749
##	Mean Diff
## distance	0.2349
## 'Insurance Class'COMM	0.0050
## 'Insurance Class'MEDICAID	0.0179
## 'Insurance Class'MEDICARE	-0.0200
## 'Insurance Class'OTHER	-0.0011
## 'Insurance Class'SP	-0.0018
## 'Race:'American Indian/Alaskan Native	0.0050
## 'Race:'Asian	0.0083
## 'Race:'Black	-0.0932
## 'Race:'Native Hawaiian/Pacific Isle	-0.0011
## 'Race:'Other	0.0098
## 'Race:'Unknown	0.0534
## 'Does the patient have a history of cancer?'1	-0.0340
## 'Please specify: (choice=Hypertension)'1	0.0085
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0395
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0228
## 'Please specify: (choice=Asthma)'1	-0.0284
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0302
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0158
## 'Please specify: (choice=Cirrhosis)'1	-0.0006
## 'Did the patient receive hemodialysis during this admission?'1	0.2098
## 'Was the patient placed in a prone position during their admission?'1	0.2764
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.1615
## 'Age at Admission'	1.2882
## Per_Capita	520.9149
## 'SIRS RR'	0.1460
## SIRS_WBC	0.0966
## SIRS...110	0.3849
## 'Creatinine (if 0 = N/A)'	-0.1850
## 'Admission Date:'	6.8340
## 'Please specify: (choice=Diabetes)'1	0.0272
## 'SIRS TEMP'	-0.0004
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0134
##	eQQ Med
## distance	0.1697
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000

## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0000
## 'Age at Admission'	3.0000
## Per_Capita	835.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## 'Admission Date:'	8.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.2315
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0190
## 'Insurance Class'MEDICARE	0.0190
## 'Insurance Class'OTHER	0.0095
## 'Insurance Class'SP	0.0095
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0095
## 'Race:'Black	0.0952
## 'Race:'Native Hawaiian/Pacific Isle	0.0095
## 'Race:'Other	0.0095
## 'Race:'Unknown	0.0476
## 'Does the patient have a history of cancer?'1	0.0381
## 'Please specify: (choice=Hypertension)'1	0.0095
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0381
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0286
## 'Please specify: (choice=Asthma)'1	0.0286
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0286
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0095
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2095
## 'Was the patient placed in a prone position during their admission?'1	0.2762
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.1619
## 'Age at Admission'	4.0381
## Per_Capita	4010.7714
## 'SIRS RR'	0.1524
## SIRS_WBC	0.0952
## SIRS...110	0.3905
## 'Creatinine (if 0 = N/A)'	0.2810
## 'Admission Date:'	7.6286
## 'Please specify: (choice=Diabetes)'1	0.0286
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0095
##	eQQ Max

## distance	0.5755
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	1.0000
## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	1.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	1.0000
## 'Age at Admission'	23.0000
## Per_Capita	263789.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	7.7000
## 'Admission Date:'	19.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.0000
##	
##	
## Summary of balance for matched data:	
##	Means Treated
## distance	0.3159
## 'Insurance Class'COMM	0.2857
## 'Insurance Class'MEDICAID	0.2095
## 'Insurance Class'MEDICARE	0.4952
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0095
## 'Race:'American Indian/Alaskan Native	0.0095
## 'Race:'Asian	0.0286
## 'Race:'Black	0.1143
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0571
## 'Race:'Unknown	0.2000
## 'Does the patient have a history of cancer?'1	0.1238
## 'Please specify: (choice=Hypertension)'1	0.5429
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1714
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0381
## 'Please specify: (choice=Asthma)'1	0.0381

## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0476
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0857
## 'Please specify: (choice=Cirrhosis)'1	0.0095
## 'Did the patient receive hemodialysis during this admission?'1	0.2571
## 'Was the patient placed in a prone position during their admission?'1	0.4286
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.4952
## 'Age at Admission'	67.5238
## Per_Capita	51696.9048
## 'SIRS RR'	0.8190
## SIRS_WBC	0.3333
## SIRS...110	2.1143
## 'Creatinine (if 0 = N/A)'	1.1676
## 'Admission Date:'	18369.2286
## 'Please specify: (choice=Diabetes)'1	0.3429
## 'SIRS TEMP'	0.2476
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0190
##	Means Control
## distance	0.2502
## 'Insurance Class'COMM	0.2857
## 'Insurance Class'MEDICAID	0.1905
## 'Insurance Class'MEDICARE	0.5238
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0190
## 'Race:'Asian	0.0286
## 'Race:'Black	0.1143
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0381
## 'Race:'Unknown	0.2286
## 'Does the patient have a history of cancer?'1	0.1429
## 'Please specify: (choice=Hypertension)'1	0.5429
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1810
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0571
## 'Please specify: (choice=Asthma)'1	0.0190
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0571
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0952
## 'Please specify: (choice=Cirrhosis)'1	0.0190
## 'Did the patient receive hemodialysis during this admission?'1	0.1714
## 'Was the patient placed in a prone position during their admission?'1	0.4762
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.4667
## 'Age at Admission'	68.4000
## Per_Capita	50263.6667
## 'SIRS RR'	0.8190
## SIRS_WBC	0.3238
## SIRS...110	2.0286
## 'Creatinine (if 0 = N/A)'	1.3010
## 'Admission Date:'	18369.2381
## 'Please specify: (choice=Diabetes)'1	0.3524
## 'SIRS TEMP'	0.2762
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0190
##	SD Control
## distance	0.1847
## 'Insurance Class'COMM	0.4539
## 'Insurance Class'MEDICAID	0.3946

## 'Insurance Class'MEDICARE	0.5018
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.1373
## 'Race:'Asian	0.1674
## 'Race:'Black	0.3197
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.1923
## 'Race:'Unknown	0.4219
## 'Does the patient have a history of cancer?'1	0.3516
## 'Please specify: (choice=Hypertension)'1	0.5005
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3868
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2332
## 'Please specify: (choice=Asthma)'1	0.1373
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2332
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2950
## 'Please specify: (choice=Cirrhosis)'1	0.1373
## 'Did the patient receive hemodialysis during this admission?'1	0.3787
## 'Was the patient placed in a prone position during their admission?'1	0.5018
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.5013
## 'Age at Admission'	15.5678
## Per_Capita	21305.8289
## 'SIRS RR'	0.3868
## SIRS_WBC	0.4702
## SIRS...110	0.9851
## 'Creatinine (if 0 = N/A)'	1.1751
## 'Admission Date:'	18.9145
## 'Please specify: (choice=Diabetes)'1	0.4800
## 'SIRS TEMP'	0.4493
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.1373
##	Mean Diff
## distance	0.0658
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0190
## 'Insurance Class'MEDICARE	-0.0286
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0095
## 'Race:'American Indian/Alaskan Native	-0.0095
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0190
## 'Race:'Unknown	-0.0286
## 'Does the patient have a history of cancer?'1	-0.0190
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	-0.0095
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0190
## 'Please specify: (choice=Asthma)'1	0.0190
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0095
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	-0.0095
## 'Please specify: (choice=Cirrhosis)'1	-0.0095
## 'Did the patient receive hemodialysis during this admission?'1	0.0857
## 'Was the patient placed in a prone position during their admission?'1	-0.0476
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0286

## 'Age at Admission'	-0.8762
## Per_Capita	1433.2381
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0095
## SIRS...110	0.0857
## 'Creatinine (if 0 = N/A)'	-0.1333
## 'Admission Date:'	-0.0095
## 'Please specify: (choice=Diabetes)'1	-0.0095
## 'SIRS TEMP'	-0.0286
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Med
## distance	0.0008
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0000
## 'Age at Admission'	3.0000
## Per_Capita	1202.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## 'Admission Date:'	3.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.0659
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0190
## 'Insurance Class'MEDICARE	0.0286
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0095
## 'Race:'American Indian/Alaskan Native	0.0095
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000

## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0190
## 'Race:'Unknown	0.0286
## 'Does the patient have a history of cancer?'1	0.0190
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0095
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0190
## 'Please specify: (choice=Asthma)'1	0.0190
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0095
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0095
## 'Please specify: (choice=Cirrhosis)'1	0.0095
## 'Did the patient receive hemodialysis during this admission?'1	0.0857
## 'Was the patient placed in a prone position during their admission?'1	0.0476
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0286
## 'Age at Admission'	2.7238
## Per_Capita	2257.5619
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0095
## SIRS...110	0.1238
## 'Creatinine (if 0 = N/A)'	0.2476
## 'Admission Date:'	4.3524
## 'Please specify: (choice=Diabetes)'1	0.0095
## 'SIRS TEMP'	0.0286
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Max
## distance	0.2806
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	1.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	1.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	1.0000
## 'Age at Admission'	9.0000
## Per_Capita	19521.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	4.2000

## 'Admission Date:'	19.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	
## Percent Balance Improvement:	
##	Mean Diff.
## distance	72.0139
## 'Insurance Class'COMM	100.0000
## 'Insurance Class'MEDICAID	-6.6106
## 'Insurance Class'MEDICARE	-42.9876
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	-444.1718
## 'Race:'American Indian/Alaskan Native	-89.9358
## 'Race:'Asian	100.0000
## 'Race:'Black	100.0000
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	-94.5175
## 'Race:'Unknown	46.5341
## 'Does the patient have a history of cancer?'1	44.0202
## 'Please specify: (choice=Hypertension)'1	100.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	75.9033
## 'Please specify: (choice=Congestive Heart Failure)'1	16.3996
## 'Please specify: (choice=Asthma)'1	32.9807
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	68.4342
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	39.7828
## 'Please specify: (choice=Cirrhosis)'1	-1429.3103
## 'Did the patient receive hemodialysis during this admission?'1	59.1433
## 'Was the patient placed in a prone position during their admission?'1	82.7700
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	82.3119
## 'Age at Admission'	31.9825
## Per_Capita	-175.1386
## 'SIRS RR'	100.0000
## SIRS_WBC	90.1390
## SIRS...110	77.7285
## 'Creatinine (if 0 = N/A)'	27.9397
## 'Admission Date:'	99.8606
## 'Please specify: (choice=Diabetes)'1	64.9684
## 'SIRS TEMP'	-6902.6316
## 'Please specify: (choice=Chronic- Hepatitis C)'1	100.0000
##	eQQ Med
## distance	99.5373
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000

## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	0.0000
## 'Age at Admission'	0.0000
## Per_Capita	-43.9521
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## 'Admission Date:'	62.5000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	71.5492
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	-50.0000
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	-Inf
## 'Race:'Asian	100.0000
## 'Race:'Black	100.0000
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	-100.0000
## 'Race:'Unknown	40.0000
## 'Does the patient have a history of cancer?'1	50.0000
## 'Please specify: (choice=Hypertension)'1	100.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	75.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	33.3333
## 'Please specify: (choice=Asthma)'1	33.3333
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	66.6667
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	-Inf
## 'Did the patient receive hemodialysis during this admission?'1	59.0909
## 'Was the patient placed in a prone position during their admission?'1	82.7586
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1	82.3529
## 'Age at Admission'	32.5472
## Per_Capita	43.7125
## 'SIRS RR'	100.0000
## SIRS_WBC	90.0000
## SIRS...110	68.2927
## 'Creatinine (if 0 = N/A)'	11.8644
## 'Admission Date:'	42.9463
## 'Please specify: (choice=Diabetes)'1	66.6667
## 'SIRS TEMP'	-Inf
## 'Please specify: (choice=Chronic- Hepatitis C)'1	100.0000

```

## eQQ Max
## distance 51.2306
## 'Insurance Class'COMM 0.0000
## 'Insurance Class'MEDICAID 0.0000
## 'Insurance Class'MEDICARE 0.0000
## 'Insurance Class'OTHER 100.0000
## 'Insurance Class'SP 0.0000
## 'Race:'American Indian/Alaskan Native -Inf
## 'Race:'Asian 100.0000
## 'Race:'Black 100.0000
## 'Race:'Native Hawaiian/Pacific Isle 100.0000
## 'Race:'Other 0.0000
## 'Race:'Unknown 0.0000
## 'Does the patient have a history of cancer?'1 0.0000
## 'Please specify: (choice=Hypertension)'1 100.0000
## 'Please specify: (choice=Coronary Artery Disease)'1 0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1 0.0000
## 'Please specify: (choice=Asthma)'1 0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 0.0000
## 'Please specify: (choice=Cirrhosis)'1 -Inf
## 'Did the patient receive hemodialysis during this admission?'1 0.0000
## 'Was the patient placed in a prone position during their admission?'1 0.0000
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?'1 0.0000
## 'Age at Admission' 60.8696
## Per_Capita 92.5998
## 'SIRS RR' 100.0000
## SIRS_WBC 0.0000
## SIRS...110 0.0000
## 'Creatinine (if 0 = N/A)' 45.4545
## 'Admission Date:' 0.0000
## 'Please specify: (choice=Diabetes)'1 0.0000
## 'SIRS TEMP' -Inf
## 'Please specify: (choice=Chronic- Hepatitis C)'1 100.0000
##
## Sample sizes:
## Control Treated
## All 887 105
## Matched 105 105
## Unmatched 782 0
## Discarded 0 0

```

```

matched.cohort.3 = get_matches(my.full.match.3, complete.df.minus.labs, id_cols = NULL, newdata = NULL)

```

```

## just need dems for matched.cohort

```

```

row.names(no.labs.dems.na) <- 1:nrow(no.labs.dems.na) # sample size: 984

```

```

my.full.match.3.dem = matchit('Was plasma given to the patient during this admission?' ~ 'Insurance Cl

```

```

## Warning in model.matrix.default(tt, data = mf): the response appeared on the
## right-hand side and was dropped

```

```

## Warning in model.matrix.default(tt, data = mf): problem with term 12 in
## model.matrix: no columns are assigned

```

```
## Warning in model.matrix.default(mt, mf, contrasts): the response appeared on the
## right-hand side and was dropped
```

```
## Warning in model.matrix.default(mt, mf, contrasts): problem with term 12 in
## model.matrix: no columns are assigned
```

```
matched.cohort.3.dem = get_matches(my.full.match.3.dem, no.labs.dems.na, id_cols = NULL, newdata = NULL,
# is there any difference between the groups
binary.variables.3 = matched.cohort.3 %>%
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history)

chi.p.exit.3 = vector()
chi.variable.name.3 = vector()

for ( i in c(2:8,9, 10:16)) {
  variable.1 = binary.variables.3[[i]][binary.variables.3$Was.plasma.given.to.the.patient.during.this.admission.]
  variable.0 = binary.variables.3[[i]][binary.variables.3$Does.the.patient.have.a.history]
  chisquare.test = chisq.test(variable.1, variable.0)
  chisquare.test.p.value = chisquare.test$p.value
  chi.p.exit.3[i] = chisquare.test.p.value
  chi.variable.name.3[i] = colnames(binary.variables.3)[i]
}
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
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## incorrect
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```
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## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
chi.df.3 = data.frame(chi.variable.name.3, chi.p.exit.3) # insurance class significantly different
```

```
numerical.variables.3 = matched.cohort.3 %>%
```

```
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Age.at.Admission, Per_Capita, )
```

```
p.value.exit.3 = vector()
```

```
variable.name.exit.3 = vector()
```

```
for ( i in c(2:7, 9:ncol(numerical.variables.3)) ) { # first column is plasma # skip date
```

```
  variable.1 = numerical.variables.3[[i]][numerical.variables.3$Was.plasma.given.to.the.patient.during.
```

```
  variable.0 = numerical.variables.3[[i]][numerical.variables.3$Was.plasma.given.to.the.patient.during.
```

```
  middle.t.test = t.test(variable.1, variable.0)
```

```
  t.test.p.value = middle.t.test$p.value
```

```
  p.value.exit.3[i] = t.test.p.value
```

```
  variable.name.exit.3[i] = colnames(numerical.variables.3)[i]
```

```
}
```

```
t.test.df.3 = data.frame(variable.name.exit.3, p.value.exit.3) ## none sig different
```

```
## no significant differences
```

```
match.3.glm = glm(death ~ Was.plasma.given.to.the.patient.during.this.admission., data = matched.cohort
```

```
match.3.summary = summary(match.3.glm) # p =0.03744
```

```
match.3.conf.intervals = exp(cbind(coef(match.3.glm), confint(match.3.glm))) # 1.7970648 ci 1.0377565
```

```
## Waiting for profiling to be done...
```

```
# mortality in 3 days
```

```
## changing it mortality in 4 days to increase the number of deaths
```

```
## dying in 4 days is still quick clinically
```

```
death.3.days = relevant.columns %>%
```

```
  filter(Length_of_Stay <= 4 & death == 1)
```

```
death.3.days$quick.death = 1
```

```
alive.3.days = relevant.columns %>%
```

```
  filter(Length_of_Stay > 4 | death == 0)
```

```
alive.3.days$quick.death = 0
```

```
quick.death.df = rbind(death.3.days, alive.3.days)
```

```
exit.df.3 = data.frame()
```

```
for ( i in 3:ncol(quick.death.df) ){ # first column is just redcap number and second is always first vis
```

```
  middle = quick.death.df
```

```
  variable.selected = middle[[i]]
```

```
  middle.glm = glm(middle$quick.death~ variable.selected, family = binomial)
```

```
  middle.glm.summary = summary(middle.glm)
```

```
  middle.glm.summary.df = data.frame(middle.glm.summary$coefficients)
```

```
  middle.glm.summary.df = middle.glm.summary.df[-1,] # delete intercept row
```

```

column.name.selected = colnames(middle)[i]
if (nrow(middle.glm.summary.df) == 1){
  row.names(middle.glm.summary.df) = paste(column.name.selected)
}

exit.df.3 = rbind(exit.df.3, middle.glm.summary.df)
# print(colnames(middle)[i])
# print(summary(middle.glm))
}

```

```
## Warning: glm.fit: algorithm did not converge
```

```

quick.death.p.less.0.25 = exit.df.3[exit.df.3$Pr...z.. < 0.25,]
# removing nitric oxide due to lack of clinical interest and small sample size

# MODEL #
quick.death.variables.selected = quick.death.df %>%
  dplyr::select('Patient Sex:', 'Insurance Class', 'Please specify: (choice=Hypertension)', 'Please specify: (choice=Coronary Artery Disease)', 'Please specify: (choice=Congestive Heart Failure)', 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)', 'Please specify: (choice=Chronic Renal Insufficiency)', 'Please specify: (choice=Cirrhosis)', 'Does the patient have a history of metabolic disease?', 'Please specify: (choice=Diabetes)', 'Was plasma given to the patient during this admission?', 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?', 'Age at Admission', 'Patient BMI', 'SIRS RR', 'SIRS_WBC', 'SIRS...110')
quick.death.variables.selected.na = na.omit(quick.death.variables.selected) # 496 pts

# df for dems
quick.dems = quick.death.df %>%
  dplyr::select('REDCap Record ID', 'Patient Sex:', 'Insurance Class', 'Please specify: (choice=Hypertension)', 'Please specify: (choice=Coronary Artery Disease)', 'Please specify: (choice=Congestive Heart Failure)', 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)', 'Please specify: (choice=Chronic Renal Insufficiency)', 'Please specify: (choice=Cirrhosis)', 'Does the patient have a history of metabolic disease?', 'Please specify: (choice=Diabetes)', 'Was plasma given to the patient during this admission?', 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?', 'Age at Admission', 'Patient BMI', 'SIRS RR', 'SIRS_WBC', 'SIRS...110')
quick.dems.na = na.omit(quick.dems)

#MODEL 2A
quick.death.glm = glm(quick.death ~ ., family = binomial, data = quick.death.variables.selected.na)
quick.death.summary = summary(quick.death.glm)
length(quick.death.glm$residuals) #sample size is 496

```

```
## [1] 496
```

```
car::vif(quick.death.glm)
```

```

##
## 'Patient Sex:' 1.270814
## 'Insurance Class' 2.230879
## 'Please specify: (choice=Hypertension)' 1.282939
## 'Please specify: (choice=Coronary Artery Disease)' 1.424558
## 'Please specify: (choice=Congestive Heart Failure)' 1.477491
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1.158470
## 'Please specify: (choice=Chronic Renal Insufficiency)' 1.375085
## 'Please specify: (choice=Cirrhosis)' 1.000000
## 'Does the patient have a history of metabolic disease?' 3.858944
## 'Please specify: (choice=Diabetes)' 3.752277
## 'Was plasma given to the patient during this admission?' 1.087457
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1.205630
## 'Age at Admission' 2.183664
## 'Patient BMI' 1.360653
## 'SIRS RR' 1.616308
## SIRS_WBC 1.402419
## SIRS...110 1.967505

```

```

## 'Creatinine (if 0 = N/A)' 4.146063
## CRP 1.265745
## 'D-Domer' 1.176228
## 'Please specify: (choice=End Stage Renal Failure)' 4.373899
## Df
## 'Patient Sex:' 1
## 'Insurance Class' 3
## 'Please specify: (choice=Hypertension)' 1
## 'Please specify: (choice=Coronary Artery Disease)' 1
## 'Please specify: (choice=Congestive Heart Failure)' 1
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1
## 'Please specify: (choice=Chronic Renal Insufficiency)' 1
## 'Please specify: (choice=Cirrhosis)' 1
## 'Does the patient have a history of metabolic disease?' 1
## 'Please specify: (choice=Diabetes)' 1
## 'Was plasma given to the patient during this admission?' 1
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1
## 'Age at Admission' 1
## 'Patient BMI' 1
## 'SIRS RR' 1
## SIRS_WBC 1
## SIRS...110 1
## 'Creatinine (if 0 = N/A)' 1
## CRP 1
## 'D-Domer' 1
## 'Please specify: (choice=End Stage Renal Failure)' 1
## GVIF^(1/(2*Df))
## 'Patient Sex:' 1.127304
## 'Insurance Class' 1.143087
## 'Please specify: (choice=Hypertension)' 1.132669
## 'Please specify: (choice=Coronary Artery Disease)' 1.193548
## 'Please specify: (choice=Congestive Heart Failure)' 1.215521
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1.076322
## 'Please specify: (choice=Chronic Renal Insufficiency)' 1.172640
## 'Please specify: (choice=Cirrhosis)' 1.000000
## 'Does the patient have a history of metabolic disease?' 1.964420
## 'Please specify: (choice=Diabetes)' 1.937080
## 'Was plasma given to the patient during this admission?' 1.042812
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1.098012
## 'Age at Admission' 1.477722
## 'Patient BMI' 1.166470
## 'SIRS RR' 1.271341
## SIRS_WBC 1.184238
## SIRS...110 1.402678
## 'Creatinine (if 0 = N/A)' 2.036188
## CRP 1.125053
## 'D-Domer' 1.084541
## 'Please specify: (choice=End Stage Renal Failure)' 2.091387

```

```

quick.death.summary.p.values = quick.death.summary$coefficients[,4]
quick.death.conf.intervals = exp(cbind(coef(quick.death.glm), confint(quick.death.glm)))

```

```

## Waiting for profiling to be done...

```



```

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
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## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning in regularize.values(x, y, ties, missing(ties), na.rm = na.rm):
## collapsing to unique 'x' values
quick.death.conf.intervals.df = data.frame(quick.death.conf.intervals)
quick.death.conf.intervals.df$p.values = quick.death.summary.p.values
logitgof(quick.death.variables.selected.na$quick.death, fitted(quick.death.glm), g = 10) #p = 0.2705

## Warning in logitgof(quick.death.variables.selected.na$quick.death,
## fitted(quick.death.glm), : At least one cell in the expected frequencies table
## is < 1. Chi-square approximation may be incorrect.

##

```

```

## Hosmer and Lemeshow test (binary model)
##
## data: quick.death.variables.selected.na$quick.death, fitted(quick.death.glm)
## X-squared = 9.9232, df = 8, p-value = 0.2705

quick.death.variables.selected.no.labs = quick.death.df %>%
  dplyr::select('Patient Sex:', 'Insurance Class', 'Please specify: (choice=Hypertension)', 'Please spe

quick.death.df.na = na.omit(quick.death.variables.selected.no.labs) # 1084 people
table(quick.death.df.na$quick.death) ## 64 people died in 4 days

##
##    0    1
## 1020  64

# MODEL 2B
quick.death.variables.selected.crp = quick.death.df %>%
  dplyr::select('Patient Sex:', 'Insurance Class', 'Please specify: (choice=Hypertension)', 'Please spe

quick.death.variables.selected.crp.dem = quick.death.df %>%
  dplyr::select('REDCap Record ID', 'Patient Sex:', 'Insurance Class', 'Please specify: (choice=Hyperte
quick.death.variables.selected.crp.dem.na = na.omit(quick.death.variables.selected.crp.dem)

quick.death.variables.selected.crp.na = na.omit(quick.death.variables.selected.crp) #650 people
table(quick.death.variables.selected.crp.na$quick.death) ## 19 died out of 650

##
##    0    1
## 631  19

## model 2b
quick.death.just.crp.glm = glm(quick.death ~ ., family = binomial, data = quick.death.variables.selected

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

quick.death.just.crp.summary = summary(quick.death.just.crp.glm)
length(quick.death.just.crp.glm$residuals) #sample size is 650

## [1] 650

quick.death.just.crp.summary.p.values = quick.death.just.crp.summary$coefficients[,4]
quick.death.just.crp.conf.intervals = exp(cbind(coef(quick.death.just.crp.glm), confint(quick.death.jus

## Waiting for profiling to be done...

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

```



```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
quick.death.just.crp.conf.intervals.df = data.frame(quick.death.just.crp.conf.intervals)
quick.death.just.crp.conf.intervals.df$p.values = quick.death.just.crp.summary.p.values
car::vif(quick.death.just.crp.glm)
```

```
##
##                                     GVIF
## 'Patient Sex:'                      1.255696
## 'Insurance Class'                   2.102303
## 'Please specify: (choice=Hypertension)‘ 1.235363
## 'Please specify: (choice=Coronary Artery Disease)‘ 1.337077
## 'Please specify: (choice=Congestive Heart Failure)‘ 1.254696
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)‘ 1.180778
## 'Please specify: (choice=Chronic Renal Insufficiency)‘ 1.335314
## 'Please specify: (choice=Cirrhosis)‘ 1.000000
## 'Does the patient have a history of metabolic disease?‘ 3.180585
## 'Please specify: (choice=Diabetes)‘ 3.065003
## 'Was plasma given to the patient during this admission?‘ 1.134984
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient’s admission?‘ 1.142668
## 'Age at Admission‘ 2.335976
## 'Patient BMI‘ 1.313999
## 'SIRS RR‘ 1.458493
## SIRS_WBC 1.254228
## SIRS...110 1.687018
## CRP 1.186419
## 'Please specify: (choice=End Stage Renal Failure)‘ 1.242134
##                                     Df
## 'Patient Sex:' 1
## 'Insurance Class' 3
## 'Please specify: (choice=Hypertension)‘ 1
## 'Please specify: (choice=Coronary Artery Disease)‘ 1
## 'Please specify: (choice=Congestive Heart Failure)‘ 1
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)‘ 1
## 'Please specify: (choice=Chronic Renal Insufficiency)‘ 1
## 'Please specify: (choice=Cirrhosis)‘ 1
## 'Does the patient have a history of metabolic disease?‘ 1
## 'Please specify: (choice=Diabetes)‘ 1
## 'Was plasma given to the patient during this admission?‘ 1
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient’s admission?‘ 1
## 'Age at Admission‘ 1
## 'Patient BMI‘ 1
## 'SIRS RR‘ 1
## SIRS_WBC 1
## SIRS...110 1
```



```

## CRP 1
## 'Please specify: (choice=End Stage Renal Failure)' 1
## GVIF^(1/(2*Df))
## 'Patient Sex:' 1.120578
## 'Insurance Class' 1.131834
## 'Please specify: (choice=Hypertension)' 1.111469
## 'Please specify: (choice=Coronary Artery Disease)' 1.156321
## 'Please specify: (choice=Congestive Heart Failure)' 1.120132
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' 1.086636
## 'Please specify: (choice=Chronic Renal Insufficiency)' 1.155558
## 'Please specify: (choice=Cirrhosis)' 1.000000
## 'Does the patient have a history of metabolic disease?' 1.783419
## 'Please specify: (choice=Diabetes)' 1.750715
## 'Was plasma given to the patient during this admission?' 1.065356
## 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' 1.068956
## 'Age at Admission' 1.528390
## 'Patient BMI' 1.146298
## 'SIRS RR' 1.207681
## SIRS_WBC 1.119923
## SIRS...110 1.298853
## CRP 1.089228
## 'Please specify: (choice=End Stage Renal Failure)' 1.114511

```

```
logitgof(quick.death.variables.selected.crp.na$quick.death, fitted(quick.death.just.crp.glm), g = 10) #
```

```

## Warning in logitgof(quick.death.variables.selected.crp.na$quick.death,
## fitted(quick.death.just.crp.glm), : At least one cell in the expected
## frequencies table is < 1. Chi-square approximation may be incorrect.

```

```

##
## Hosmer and Lemeshow test (binary model)
##
## data: quick.death.variables.selected.crp.na$quick.death, fitted(quick.death.just.crp.glm)
## X-squared = 11.468, df = 8, p-value = 0.1766

```

```

## is there any difference in mortality those that received hydroxychloroquine
hcq.data = relevant.columns
hcq.simple.glm = glm(death ~ 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admi
hcq.simple.summary = summary(hcq.simple.glm) #p = 7.37e-11
hcq.simple.conf.intervals = exp(cbind(coef(hcq.simple.glm), confint(hcq.simple.glm))) # OR 2.6442308 1..

```

```
## Waiting for profiling to be done...
```

```

hcq.select = hcq.data %>%
  dplyr::select('REDCap Record ID', 'Insurance Class', 'Race:', 'Does the patient have a history of can

hcq.select.na = na.omit(hcq.select)

hcq.select.no.labs = subset(hcq.select, select = - c(Ferritin, CRP, 'D-Domer'))
hcq.select.no.labs.na = na.omit(hcq.select.no.labs)

```

```
row.names(hcq.select.na) <- 1:nrow(hcq.select.na)
```

```
my.hcq.match = matchit('COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +  
summary(my.hcq.match))
```

```
##
```

```
## Call:
```

```
## matchit(formula = 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +  
##   'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +  
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +  
##   'Please specify: (choice=Congestive Heart Failure)' +  
##   'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary D' +  
##   'Please specify: (choice=Chronic Renal Insufficiency)' +  
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this adm' +  
##   'Was plasma given to the patient during this admission?' +  
##   'Was the patient placed in a prone position during their admission?' +  
##   'Was plasma given to the patient during this admission?' +  
##   'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +  
##   SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +  
##   'D-Domer' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +  
##   'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)',  
##   data = hcq.select.na, method = "nearest")
```

```
##
```

```
## Summary of balance for all data:
```

	Means Treated
## distance	0.6041
## 'Insurance Class'COMM	0.3212
## 'Insurance Class'MEDICAID	0.2482
## 'Insurance Class'MEDICARE	0.4161
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0146
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0219
## 'Race:'Black	0.2044
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0730
## 'Race:'Unknown	0.1460
## 'Does the patient have a history of cancer?'1	0.1241
## 'Please specify: (choice=Hypertension)'1	0.5985
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1241
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0219
## 'Please specify: (choice=Asthma)'1	0.0584
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0584
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0657
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1095
## 'Was plasma given to the patient during this admission?'1	0.2044
## 'Was the patient placed in a prone position during their admission?'1	0.3504
## 'Age at Admission'	63.5693
## Per_Capita	48386.9197
## 'SIRS RR'	0.8029
## SIRS_WBC	0.1679
## SIRS...110	1.9270

## 'Creatinine (if 0 = N/A)'	1.1861
## Ferritin	764.9416
## CRP	151.0547
## 'D-Dimer'	6769.0803
## 'Admission Date:'	18358.5985
## 'Please specify: (choice=Diabetes)'1	0.3869
## 'SIRS TEMP'	0.2920
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0073
##	Means Control
## distance	0.2840
## 'Insurance Class'COMM	0.2461
## 'Insurance Class'MEDICAID	0.2094
## 'Insurance Class'MEDICARE	0.5340
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0105
## 'Race:'American Indian/Alaskan Native	0.0105
## 'Race:'Asian	0.0105
## 'Race:'Black	0.1832
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0471
## 'Race:'Unknown	0.2042
## 'Does the patient have a history of cancer?'1	0.1675
## 'Please specify: (choice=Hypertension)'1	0.5236
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1047
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0262
## 'Please specify: (choice=Asthma)'1	0.0890
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0524
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0576
## 'Please specify: (choice=Cirrhosis)'1	0.0105
## 'Did the patient receive hemodialysis during this admission?'1	0.0471
## 'Was plasma given to the patient during this admission?'1	0.1728
## 'Was the patient placed in a prone position during their admission?'1	0.1571
## 'Age at Admission'	67.3979
## Per_Capita	50165.6859
## 'SIRS RR'	0.7120
## SIRS_WBC	0.2618
## SIRS...110	1.7853
## 'Creatinine (if 0 = N/A)'	1.1021
## Ferritin	1168.3963
## CRP	121.2670
## 'D-Dimer'	4762.2565
## 'Admission Date:'	18371.2251
## 'Please specify: (choice=Diabetes)'1	0.3089
## 'SIRS TEMP'	0.2094
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0052
##	SD Control
## distance	0.2412
## 'Insurance Class'COMM	0.4319
## 'Insurance Class'MEDICAID	0.4080
## 'Insurance Class'MEDICARE	0.5002
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.1021
## 'Race:'American Indian/Alaskan Native	0.1021
## 'Race:'Asian	0.1021

## 'Race:'Black	0.3879
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2125
## 'Race:'Unknown	0.4042
## 'Does the patient have a history of cancer?'1	0.3744
## 'Please specify: (choice=Hypertension)'1	0.5008
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3070
## 'Please specify: (choice=Congestive Heart Failure)'1	0.1601
## 'Please specify: (choice=Asthma)'1	0.2855
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2233
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2336
## 'Please specify: (choice=Cirrhosis)'1	0.1021
## 'Did the patient receive hemodialysis during this admission?'1	0.2125
## 'Was plasma given to the patient during this admission?'1	0.3790
## 'Was the patient placed in a prone position during their admission?'1	0.3648
## 'Age at Admission'	17.2876
## Per_Capita	21893.1784
## 'SIRS RR'	0.4540
## SIRS_WBC	0.4408
## SIRS...110	0.9793
## 'Creatinine (if 0 = N/A)'	0.9945
## Ferritin	7905.9423
## CRP	93.6599
## 'D-Domer'	11930.6583
## 'Admission Date:'	14.8007
## 'Please specify: (choice=Diabetes)'1	0.4633
## 'SIRS TEMP'	0.4080
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0724
##	Mean Diff
## distance	0.3202
## 'Insurance Class'COMM	0.0751
## 'Insurance Class'MEDICAID	0.0388
## 'Insurance Class'MEDICARE	-0.1180
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0041
## 'Race:'American Indian/Alaskan Native	-0.0105
## 'Race:'Asian	0.0114
## 'Race:'Black	0.0211
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0259
## 'Race:'Unknown	-0.0582
## 'Does the patient have a history of cancer?'1	-0.0435
## 'Please specify: (choice=Hypertension)'1	0.0750
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0194
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0043
## 'Please specify: (choice=Asthma)'1	-0.0306
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0060
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0081
## 'Please specify: (choice=Cirrhosis)'1	-0.0105
## 'Did the patient receive hemodialysis during this admission?'1	0.0624
## 'Was plasma given to the patient during this admission?'1	0.0316
## 'Was the patient placed in a prone position during their admission?'1	0.1933
## 'Age at Admission'	-3.8286
## Per_Capita	-1778.7662

## 'SIRS RR'	0.0909
## SIRS_WBC	-0.0939
## SIRS...110	0.1417
## 'Creatinine (if 0 = N/A)'	0.0840
## Ferritin	-403.4547
## CRP	29.7877
## 'D-Domer'	2006.8237
## 'Admission Date:'	-12.6266
## 'Please specify: (choice=Diabetes)'1	0.0780
## 'SIRS TEMP'	0.0825
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0021
##	eQQ Med
## distance	0.3509
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	4.0000
## Per_Capita	1736.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	164.0000
## CRP	36.7000
## 'D-Domer'	148.0000
## 'Admission Date:'	13.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.3221
## 'Insurance Class'COMM	0.0803
## 'Insurance Class'MEDICAID	0.0438
## 'Insurance Class'MEDICARE	0.1168
## 'Insurance Class'OTHER	0.0000

## 'Insurance Class'SP	0.0073
## 'Race:'American Indian/Alaskan Native	0.0073
## 'Race:'Asian	0.0146
## 'Race:'Black	0.0219
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0292
## 'Race:'Unknown	0.0584
## 'Does the patient have a history of cancer?'1	0.0438
## 'Please specify: (choice=Hypertension)'1	0.0803
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0219
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0292
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0073
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0073
## 'Please specify: (choice=Cirrhosis)'1	0.0073
## 'Did the patient receive hemodialysis during this admission?'1	0.0657
## 'Was plasma given to the patient during this admission?'1	0.0365
## 'Was the patient placed in a prone position during their admission?'1	0.1971
## 'Age at Admission'	4.3869
## Per_Capita	3139.3139
## 'SIRS RR'	0.0949
## SIRS_WBC	0.0949
## SIRS...110	0.1460
## 'Creatinine (if 0 = N/A)'	0.1168
## Ferritin	959.4504
## CRP	32.4058
## 'D-Domer'	2314.5255
## 'Admission Date:'	12.4964
## 'Please specify: (choice=Diabetes)'1	0.0803
## 'SIRS TEMP'	0.0876
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Max
## distance	0.457
## 'Insurance Class'COMM	1.000
## 'Insurance Class'MEDICAID	1.000
## 'Insurance Class'MEDICARE	1.000
## 'Insurance Class'OTHER	0.000
## 'Insurance Class'SP	1.000
## 'Race:'American Indian/Alaskan Native	1.000
## 'Race:'Asian	1.000
## 'Race:'Black	1.000
## 'Race:'Native Hawaiian/Pacific Isle	0.000
## 'Race:'Other	1.000
## 'Race:'Unknown	1.000
## 'Does the patient have a history of cancer?'1	1.000
## 'Please specify: (choice=Hypertension)'1	1.000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.000
## 'Please specify: (choice=Asthma)'1	1.000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.000
## 'Please specify: (choice=Cirrhosis)'1	1.000
## 'Did the patient receive hemodialysis during this admission?'1	1.000
## 'Was plasma given to the patient during this admission?'1	1.000

## 'Was the patient placed in a prone position during their admission?'	1.000
## 'Age at Admission'	12.000
## Per_Capita	30530.000
## 'SIRS RR'	1.000
## SIRS_WBC	1.000
## SIRS...110	1.000
## 'Creatinine (if 0 = N/A)'	3.500
## Ferritin	107819.700
## CRP	55.700
## 'D-Domer'	57634.000
## 'Admission Date:'	36.000
## 'Please specify: (choice=Diabetes)'	1.000
## 'SIRS TEMP'	1.000
## 'Please specify: (choice=Chronic- Hepatitis C)'	0.000
##	
##	
## Summary of balance for matched data:	
##	Means Treated
## distance	0.6041
## 'Insurance Class'COMM	0.3212
## 'Insurance Class'MEDICAID	0.2482
## 'Insurance Class'MEDICARE	0.4161
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0146
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0219
## 'Race:'Black	0.2044
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0730
## 'Race:'Unknown	0.1460
## 'Does the patient have a history of cancer?'	0.1241
## 'Please specify: (choice=Hypertension)'	0.5985
## 'Please specify: (choice=Coronary Artery Disease)'	0.1241
## 'Please specify: (choice=Congestive Heart Failure)'	0.0219
## 'Please specify: (choice=Asthma)'	0.0584
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	0.0584
## 'Please specify: (choice=Chronic Renal Insufficiency)'	0.0657
## 'Please specify: (choice=Cirrhosis)'	0.0000
## 'Did the patient receive hemodialysis during this admission?'	0.1095
## 'Was plasma given to the patient during this admission?'	0.2044
## 'Was the patient placed in a prone position during their admission?'	0.3504
## 'Age at Admission'	63.5693
## Per_Capita	48386.9197
## 'SIRS RR'	0.8029
## SIRS_WBC	0.1679
## SIRS...110	1.9270
## 'Creatinine (if 0 = N/A)'	1.1861
## Ferritin	764.9416
## CRP	151.0547
## 'D-Domer'	6769.0803
## 'Admission Date:'	18358.5985
## 'Please specify: (choice=Diabetes)'	0.3869
## 'SIRS TEMP'	0.2920
## 'Please specify: (choice=Chronic- Hepatitis C)'	0.0073

	Means	Control
##		
## distance		0.3803
## 'Insurance Class'COMM		0.2555
## 'Insurance Class'MEDICAID		0.2482
## 'Insurance Class'MEDICARE		0.4818
## 'Insurance Class'OTHER		0.0000
## 'Insurance Class'SP		0.0146
## 'Race:'American Indian/Alaskan Native		0.0000
## 'Race:'Asian		0.0146
## 'Race:'Black		0.1825
## 'Race:'Native Hawaiian/Pacific Isle		0.0000
## 'Race:'Other		0.0584
## 'Race:'Unknown		0.1825
## 'Does the patient have a history of cancer?'1		0.1387
## 'Please specify: (choice=Hypertension)'1		0.5182
## 'Please specify: (choice=Coronary Artery Disease)'1		0.1168
## 'Please specify: (choice=Congestive Heart Failure)'1		0.0292
## 'Please specify: (choice=Asthma)'1		0.0949
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1		0.0657
## 'Please specify: (choice=Chronic Renal Insufficiency)'1		0.0511
## 'Please specify: (choice=Cirrhosis)'1		0.0000
## 'Did the patient receive hemodialysis during this admission?'1		0.0657
## 'Was plasma given to the patient during this admission?'1		0.1898
## 'Was the patient placed in a prone position during their admission?'1		0.1898
## 'Age at Admission'		65.3942
## Per_Capita	48660.0219	
## 'SIRS RR'		0.7956
## SIRS_WBC		0.2263
## SIRS...110		1.8832
## 'Creatinine (if 0 = N/A)'		1.0847
## Ferritin		629.1533
## CRP		132.2124
## 'D-Domer'		4286.7445
## 'Admission Date:'	18365.5036	
## 'Please specify: (choice=Diabetes)'1		0.3066
## 'SIRS TEMP'		0.2482
## 'Please specify: (choice=Chronic- Hepatitis C)'1		0.0000
##		
	SD	Control
## distance		0.2190
## 'Insurance Class'COMM		0.4377
## 'Insurance Class'MEDICAID		0.4335
## 'Insurance Class'MEDICARE		0.5015
## 'Insurance Class'OTHER		0.0000
## 'Insurance Class'SP		0.1204
## 'Race:'American Indian/Alaskan Native		0.0000
## 'Race:'Asian		0.1204
## 'Race:'Black		0.3877
## 'Race:'Native Hawaiian/Pacific Isle		0.0000
## 'Race:'Other		0.2353
## 'Race:'Unknown		0.3877
## 'Does the patient have a history of cancer?'1		0.3469
## 'Please specify: (choice=Hypertension)'1		0.5015
## 'Please specify: (choice=Coronary Artery Disease)'1		0.3223
## 'Please specify: (choice=Congestive Heart Failure)'1		0.1690

## 'Please specify: (choice=Asthma)'1	0.2941
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2487
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2210
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2487
## 'Was plasma given to the patient during this admission?'1	0.3936
## 'Was the patient placed in a prone position during their admission?'1	0.3936
## 'Age at Admission'	17.3808
## Per_Capita	21533.8711
## 'SIRS RR'	0.4047
## SIRS_WBC	0.4200
## SIRS...110	0.9782
## 'Creatinine (if 0 = N/A)'	1.0582
## Ferritin	442.0046
## CRP	92.2906
## 'D-Domer'	10938.5545
## 'Admission Date:'	11.4308
## 'Please specify: (choice=Diabetes)'1	0.4628
## 'SIRS TEMP'	0.4335
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Mean Diff
## distance	0.2238
## 'Insurance Class'COMM	0.0657
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	-0.0657
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0073
## 'Race:'Black	0.0219
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0146
## 'Race:'Unknown	-0.0365
## 'Does the patient have a history of cancer?'1	-0.0146
## 'Please specify: (choice=Hypertension)'1	0.0803
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0073
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0073
## 'Please specify: (choice=Asthma)'1	-0.0365
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0073
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0146
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0438
## 'Was plasma given to the patient during this admission?'1	0.0146
## 'Was the patient placed in a prone position during their admission?'1	0.1606
## 'Age at Admission'	-1.8248
## Per_Capita	-273.1022
## 'SIRS RR'	0.0073
## SIRS_WBC	-0.0584
## SIRS...110	0.0438
## 'Creatinine (if 0 = N/A)'	0.1015
## Ferritin	135.7883
## CRP	18.8423
## 'D-Domer'	2482.3358
## 'Admission Date:'	-6.9051

## 'Please specify: (choice=Diabetes)'1	0.0803
## 'SIRS TEMP'	0.0438
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0073
##	eQQ Med
## distance	0.2489
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	3.0000
## Per_Capita	1590.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	135.0000
## CRP	25.1000
## 'D-Domer'	103.0000
## 'Admission Date:'	6.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.2238
## 'Insurance Class'COMM	0.0657
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0657
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0073
## 'Race:'Black	0.0219
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0146
## 'Race:'Unknown	0.0365
## 'Does the patient have a history of cancer?'1	0.0146

## 'Please specify: (choice=Hypertension)'1	0.0803
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0073
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0073
## 'Please specify: (choice=Asthma)'1	0.0365
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0073
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0146
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0438
## 'Was plasma given to the patient during this admission?'1	0.0146
## 'Was the patient placed in a prone position during their admission?'1	0.1606
## 'Age at Admission'	3.5182
## Per_Capita	2533.3212
## 'SIRS RR'	0.0073
## SIRS_WBC	0.0584
## SIRS...110	0.0730
## 'Creatinine (if 0 = N/A)'	0.1482
## Ferritin	152.4015
## CRP	21.7533
## 'D-Domer'	2567.8540
## 'Admission Date:'	6.9051
## 'Please specify: (choice=Diabetes)'1	0.0803
## 'SIRS TEMP'	0.0438
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0073
##	eQQ Max
## distance	0.3113
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was plasma given to the patient during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	9.0000
## Per_Capita	20909.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	2.7000
## Ferritin	1138.0000

## CRP	64.1000
## 'D-Domer'	50585.0000
## 'Admission Date:'	15.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.0000
##	
## Percent Balance Improvement:	
##	Mean Diff.
## distance	30.0875
## 'Insurance Class'COMM	12.5191
## 'Insurance Class'MEDICAID	100.0000
## 'Insurance Class'MEDICARE	44.3149
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	100.0000
## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	36.1204
## 'Race:'Black	-3.6166
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	43.5746
## 'Race:'Unknown	37.2948
## 'Does the patient have a history of cancer?'1	66.4028
## 'Please specify: (choice=Hypertension)'1	-7.0846
## 'Please specify: (choice=Coronary Artery Disease)'1	62.3274
## 'Please specify: (choice=Congestive Heart Failure)'1	-70.5357
## 'Please specify: (choice=Asthma)'1	-19.2260
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-20.8861
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	-80.1887
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	29.7794
## 'Was plasma given to the patient during this admission?'1	53.8089
## 'Was the patient placed in a prone position during their admission?'1	16.9237
## 'Age at Admission'	52.3367
## Per_Capita	84.6465
## 'SIRS RR'	91.9680
## SIRS_WBC	37.8103
## SIRS...110	69.0855
## 'Creatinine (if 0 = N/A)'	-20.7322
## Ferritin	66.3436
## CRP	36.7446
## 'D-Domer'	-23.6948
## 'Admission Date:'	45.3130
## 'Please specify: (choice=Diabetes)'1	-2.9902
## 'SIRS TEMP'	46.9444
## 'Please specify: (choice=Chronic- Hepatitis C)'1	-253.7037
##	eQQ Med
## distance	29.0588
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000

## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	25.0000
## Per_Capita	8.4101
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## Ferritin	17.6829
## CRP	31.6076
## 'D-Domer'	30.4054
## 'Admission Date:'	53.8462
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	30.5024
## 'Insurance Class'COMM	18.1818
## 'Insurance Class'MEDICAID	100.0000
## 'Insurance Class'MEDICARE	43.7500
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	100.0000
## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	50.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	50.0000
## 'Race:'Unknown	37.5000
## 'Does the patient have a history of cancer?'1	66.6667
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	66.6667
## 'Please specify: (choice=Congestive Heart Failure)'1	-Inf
## 'Please specify: (choice=Asthma)'1	-25.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	-100.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	33.3333
## 'Was plasma given to the patient during this admission?'1	60.0000
## 'Was the patient placed in a prone position during their admission?'1	18.5185
## 'Age at Admission'	19.8003
## Per_Capita	19.3033

```

## 'SIRS RR' 92.3077
## SIRS_WBC 38.4615
## SIRS...110 50.0000
## 'Creatinine (if 0 = N/A)' -26.8750
## Ferritin 84.1158
## CRP 32.8723
## 'D-Domer' -10.9452
## 'Admission Date:' 44.7430
## 'Please specify: (choice=Diabetes)'1 0.0000
## 'SIRS TEMP' 50.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1 -Inf
## eQQ Max
## distance 31.8979
## 'Insurance Class'COMM 0.0000
## 'Insurance Class'MEDICAID 100.0000
## 'Insurance Class'MEDICARE 0.0000
## 'Insurance Class'OTHER 0.0000
## 'Insurance Class'SP 100.0000
## 'Race:'American Indian/Alaskan Native 100.0000
## 'Race:'Asian 0.0000
## 'Race:'Black 0.0000
## 'Race:'Native Hawaiian/Pacific Isle 0.0000
## 'Race:'Other 0.0000
## 'Race:'Unknown 0.0000
## 'Does the patient have a history of cancer?'1 0.0000
## 'Please specify: (choice=Hypertension)'1 0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1 0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1 -Inf
## 'Please specify: (choice=Asthma)'1 0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 0.0000
## 'Please specify: (choice=Cirrhosis)'1 100.0000
## 'Did the patient receive hemodialysis during this admission?'1 0.0000
## 'Was plasma given to the patient during this admission?'1 0.0000
## 'Was the patient placed in a prone position during their admission?'1 0.0000
## 'Age at Admission' 25.0000
## Per_Capita 31.5133
## 'SIRS RR' 0.0000
## SIRS_WBC 0.0000
## SIRS...110 0.0000
## 'Creatinine (if 0 = N/A)' 22.8571
## Ferritin 98.9445
## CRP -15.0808
## 'D-Domer' 12.2306
## 'Admission Date:' 58.3333
## 'Please specify: (choice=Diabetes)'1 0.0000
## 'SIRS TEMP' 0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1 -Inf
##
## Sample sizes:
## Control Treated
## All 191 137
## Matched 137 137
## Unmatched 54 0

```

```
## Discarded      0      0
```

```
matched.cohort.hcq = get_matches(my.hcq.match, hcq.select.na, id_cols = NULL, newdata = NULL) #274 pts  
  
# is there any difference between the groups  
binary.variables.hcq = matched.cohort.hcq %>%  
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history)  
  
chi.p.exit.hcq = vector()  
chi.variable.name.hcq = vector()  
  
for ( i in c(1:8,10:11, 13,14,15)) { # cirrhosis one level  
  variable.1 = binary.variables.hcq[[i]][binary.variables.hcq$COVID..Was.hydroxychloroquine..Plaquenil.  
  variable.0 = binary.variables.hcq[[i]][binary.variables.hcq$COVID..Was.hydroxychloroquine..Plaquenil.  
  chisquare.test = chisq.test(variable.1, variable.0)  
  chisquare.test.p.value = chisquare.test$p.value  
  chi.p.exit.hcq[i] = chisquare.test.p.value  
  chi.variable.name.hcq[i] = colnames(binary.variables.hcq)[i]  
}
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be  
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be  
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be  
## incorrect
```

```
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## incorrect
```

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## incorrect
```

```
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## incorrect
```

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## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be  
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be  
## incorrect
```

```
chi.df.hcq = data.frame(chi.variable.name.hcq, chi.p.exit.hcq) # proning diff
```

```
numerical.variables.hcq = matched.cohort.hcq %>%  
  dplyr::select(COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission., Age.at  
p.value.exit.hcq = vector()
```

```

variable.name.exit.hcq = vector()

for ( i in c(2:10,12)) { # hcq 1 # skip date
  variable.1 = numerical.variables.hcq[[i]][numerical.variables.hcq$COVID..Was.hydroxychloroquine..Plaque
  variable.0 = numerical.variables.hcq[[i]][numerical.variables.hcq$COVID..Was.hydroxychloroquine..Plaque
  middle.t.test = t.test(variable.1, variable.0)
  t.test.p.value = middle.t.test$p.value
  p.value.exit.hcq[i] = t.test.p.value
  variable.name.exit.hcq[i] = colnames(numerical.variables.hcq)[i]
}

t.test.df.hcq = data.frame(variable.name.exit.hcq, p.value.exit.hcq) # Sig different: ferritin

## only significant different one in matching is length of stay
match.hcq.glm = glm(death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admissi
match.hcq.summary = summary(match.hcq.glm) # p 0.000991 ss = 122
match.hcq.conf.intervals = exp(cbind(coef(match.hcq.glm), confint(match.hcq.glm))) # OR = 3.6076555 1.7

## Waiting for profiling to be done...

row.names(hcq.select.no.labs.na) <- 1:nrow(hcq.select.no.labs.na)

my.full.match.hcq.2 = matchit('COVID- Was hydroxychloroquine (Plaquenil) given during the patient's adm
summary(my.full.match.hcq.2)

##
## Call:
## matchit(formula = 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
##   'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary D
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this adm
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##   SIRS...110 + 'Creatinine (if 0 = N/A)' + 'Admission Date:' +
##   'Please specify: (choice=Diabetes)' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepati
##   data = hcq.select.no.labs.na, method = "nearest")
##
## Summary of balance for all data:
##
##                                     Means Treated
## distance                               0.5040
## 'Insurance Class'COMM                   0.3391
## 'Insurance Class'MEDICAID                0.2270
## 'Insurance Class'MEDICARE                0.4167
## 'Insurance Class'OTHER                   0.0000
## 'Insurance Class'SP                      0.0172
## 'Race:'American Indian/Alaskan Native   0.0057
## 'Race:'Asian                             0.0201
## 'Race:'Black                             0.2040

```


## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0603
## 'Race:'Unknown	0.1552
## 'Does the patient have a history of cancer?'1	0.1379
## 'Please specify: (choice=Hypertension)'1	0.5172
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1207
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0316
## 'Please specify: (choice=Asthma)'1	0.0603
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0603
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0776
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1006
## 'Was plasma given to the patient during this admission?'1	0.1494
## 'Was the patient placed in a prone position during their admission?'1	0.3046
## 'Age at Admission'	63.8420
## Per_Capita	50036.1236
## 'SIRS RR'	0.7730
## SIRS_WBC	0.2385
## SIRS...110	1.9397
## 'Creatinine (if 0 = N/A)'	1.2552
## 'Admission Date:'	18355.6523
## 'Please specify: (choice=Diabetes)'1	0.3391
## 'SIRS TEMP'	0.3132
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0086
##	Means Control
## distance	0.2680
## 'Insurance Class'COMM	0.2500
## 'Insurance Class'MEDICAID	0.1755
## 'Insurance Class'MEDICARE	0.5652
## 'Insurance Class'OTHER	0.0016
## 'Insurance Class'SP	0.0078
## 'Race:'American Indian/Alaskan Native	0.0047
## 'Race:'Asian	0.0217
## 'Race:'Black	0.1941
## 'Race:'Native Hawaiian/Pacific Isle	0.0016
## 'Race:'Other	0.0419
## 'Race:'Unknown	0.1506
## 'Does the patient have a history of cancer?'1	0.1630
## 'Please specify: (choice=Hypertension)'1	0.5450
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1444
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0730
## 'Please specify: (choice=Asthma)'1	0.0652
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0823
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0683
## 'Please specify: (choice=Cirrhosis)'1	0.0155
## 'Did the patient receive hemodialysis during this admission?'1	0.0528
## 'Was plasma given to the patient during this admission?'1	0.0823
## 'Was the patient placed in a prone position during their admission?'1	0.1149
## 'Age at Admission'	67.7391
## Per_Capita	51876.8742
## 'SIRS RR'	0.6429
## SIRS_WBC	0.2516
## SIRS...110	1.6786
## 'Creatinine (if 0 = N/A)'	1.3752

## 'Admission Date:'	18367.1522
## 'Please specify: (choice=Diabetes)'1	0.3075
## 'SIRS TEMP'	0.2127
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0062
##	SD Control
## distance	0.2048
## 'Insurance Class'COMM	0.4333
## 'Insurance Class'MEDICAID	0.3807
## 'Insurance Class'MEDICARE	0.4961
## 'Insurance Class'OTHER	0.0394
## 'Insurance Class'SP	0.0878
## 'Race:'American Indian/Alaskan Native	0.0681
## 'Race:'Asian	0.1459
## 'Race:'Black	0.3958
## 'Race:'Native Hawaiian/Pacific Isle	0.0394
## 'Race:'Other	0.2006
## 'Race:'Unknown	0.3580
## 'Does the patient have a history of cancer?'1	0.3697
## 'Please specify: (choice=Hypertension)'1	0.4984
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3518
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2603
## 'Please specify: (choice=Asthma)'1	0.2471
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2750
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2525
## 'Please specify: (choice=Cirrhosis)'1	0.1237
## 'Did the patient receive hemodialysis during this admission?'1	0.2238
## 'Was plasma given to the patient during this admission?'1	0.2750
## 'Was the patient placed in a prone position during their admission?'1	0.3192
## 'Age at Admission'	18.3275
## Per_Capita	25092.8188
## 'SIRS RR'	0.4795
## SIRS_WBC	0.4342
## SIRS...110	1.0011
## 'Creatinine (if 0 = N/A)'	1.7388
## 'Admission Date:'	17.1454
## 'Please specify: (choice=Diabetes)'1	0.4618
## 'SIRS TEMP'	0.4096
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0786
##	Mean Diff
## distance	0.2360
## 'Insurance Class'COMM	0.0891
## 'Insurance Class'MEDICAID	0.0515
## 'Insurance Class'MEDICARE	-0.1486
## 'Insurance Class'OTHER	-0.0016
## 'Insurance Class'SP	0.0095
## 'Race:'American Indian/Alaskan Native	0.0011
## 'Race:'Asian	-0.0016
## 'Race:'Black	0.0099
## 'Race:'Native Hawaiian/Pacific Isle	-0.0016
## 'Race:'Other	0.0184
## 'Race:'Unknown	0.0046
## 'Does the patient have a history of cancer?'1	-0.0251
## 'Please specify: (choice=Hypertension)'1	-0.0278
## 'Please specify: (choice=Coronary Artery Disease)'1	-0.0237

## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0414
## 'Please specify: (choice=Asthma)'1	-0.0049
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0220
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0093
## 'Please specify: (choice=Cirrhosis)'1	-0.0155
## 'Did the patient receive hemodialysis during this admission?'1	0.0478
## 'Was plasma given to the patient during this admission?'1	0.0671
## 'Was the patient placed in a prone position during their admission?'1	0.1897
## 'Age at Admission'	-3.8972
## Per_Capita	-1840.7507
## 'SIRS RR'	0.1301
## SIRS_WBC	-0.0130
## SIRS...110	0.2611
## 'Creatinine (if 0 = N/A)'	-0.1200
## 'Admission Date:'	-11.4999
## 'Please specify: (choice=Diabetes)'1	0.0316
## 'SIRS TEMP'	0.1005
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0024
##	eQQ Med
## distance	0.2522
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	4.0000
## Per_Capita	1600.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## 'Admission Date:'	10.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.2364

## 'Insurance Class'COMM	0.0891
## 'Insurance Class'MEDICAID	0.0517
## 'Insurance Class'MEDICARE	0.1466
## 'Insurance Class'OTHER	0.0029
## 'Insurance Class'SP	0.0086
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0029
## 'Race:'Black	0.0115
## 'Race:'Native Hawaiian/Pacific Isle	0.0029
## 'Race:'Other	0.0172
## 'Race:'Unknown	0.0057
## 'Does the patient have a history of cancer?'1	0.0259
## 'Please specify: (choice=Hypertension)'1	0.0259
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0230
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0402
## 'Please specify: (choice=Asthma)'1	0.0057
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0230
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0086
## 'Please specify: (choice=Cirrhosis)'1	0.0144
## 'Did the patient receive hemodialysis during this admission?'1	0.0489
## 'Was plasma given to the patient during this admission?'1	0.0661
## 'Was the patient placed in a prone position during their admission?'1	0.1897
## 'Age at Admission'	4.8333
## Per_Capita	2959.3132
## 'SIRS RR'	0.1322
## SIRS_WBC	0.0115
## SIRS...110	0.2644
## 'Creatinine (if 0 = N/A)'	0.1693
## 'Admission Date:'	11.4943
## 'Please specify: (choice=Diabetes)'1	0.0316
## 'SIRS TEMP'	0.1006
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0029
##	eQQ Max
## distance	0.2923
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	1.0000
## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	1.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	1.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000

```

## 'Was plasma given to the patient during this admission?'1      1.0000
## 'Was the patient placed in a prone position during their admission?'1  1.0000
## 'Age at Admission'                                           10.0000
## Per_Capita                                                    263789.0000
## 'SIRS RR'                                                     1.0000
## SIRS_WBC                                                       1.0000
## SIRS...110                                                    1.0000
## 'Creatinine (if 0 = N/A)'<                                     3.2000
## 'Admission Date:'                                             34.0000
## 'Please specify: (choice=Diabetes)'1                          1.0000
## 'SIRS TEMP'                                                  1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1             1.0000
##
##
## Summary of balance for matched data:
##
##
## Means Treated
## distance                                                       0.5040
## 'Insurance Class'COMM                                         0.3391
## 'Insurance Class'MEDICAID                                     0.2270
## 'Insurance Class'MEDICARE                                     0.4167
## 'Insurance Class'OTHER                                       0.0000
## 'Insurance Class'SP                                          0.0172
## 'Race:'American Indian/Alaskan Native                       0.0057
## 'Race:'Asian                                                 0.0201
## 'Race:'Black                                                 0.2040
## 'Race:'Native Hawaiian/Pacific Isle                         0.0000
## 'Race:'Other                                                0.0603
## 'Race:'Unknown                                              0.1552
## 'Does the patient have a history of cancer?'1              0.1379
## 'Please specify: (choice=Hypertension)'1                    0.5172
## 'Please specify: (choice=Coronary Artery Disease)'1         0.1207
## 'Please specify: (choice=Congestive Heart Failure)'1        0.0316
## 'Please specify: (choice=Asthma)'1                          0.0603
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1  0.0603
## 'Please specify: (choice=Chronic Renal Insufficiency)'1    0.0776
## 'Please specify: (choice=Cirrhosis)'1                       0.0000
## 'Did the patient receive hemodialysis during this admission?'1  0.1006
## 'Was plasma given to the patient during this admission?'1  0.1494
## 'Was the patient placed in a prone position during their admission?'1  0.3046
## 'Age at Admission'                                           63.8420
## Per_Capita                                                    50036.1236
## 'SIRS RR'                                                     0.7730
## SIRS_WBC                                                       0.2385
## SIRS...110                                                    1.9397
## 'Creatinine (if 0 = N/A)'<                                     1.2552
## 'Admission Date:'                                             18355.6523
## 'Please specify: (choice=Diabetes)'1                          0.3391
## 'SIRS TEMP'                                                  0.3132
## 'Please specify: (choice=Chronic- Hepatitis C)'1             0.0086
##
## Means Control
## distance                                                       0.4136
## 'Insurance Class'COMM                                         0.3190
## 'Insurance Class'MEDICAID                                     0.2184
## 'Insurance Class'MEDICARE                                     0.4540

```

## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0086
## 'Race:'American Indian/Alaskan Native	0.0029
## 'Race:'Asian	0.0259
## 'Race:'Black	0.2011
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0460
## 'Race:'Unknown	0.1437
## 'Does the patient have a history of cancer?'1	0.1437
## 'Please specify: (choice=Hypertension)'1	0.5201
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1149
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0316
## 'Please specify: (choice=Asthma)'1	0.0661
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0632
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0776
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0661
## 'Was plasma given to the patient during this admission?'1	0.1034
## 'Was the patient placed in a prone position during their admission?'1	0.1753
## 'Age at Admission'	65.1379
## Per_Capita	49975.4138
## 'SIRS RR'	0.7069
## SIRS_WBC	0.2443
## SIRS...110	1.8305
## 'Creatinine (if 0 = N/A)'	1.3118
## 'Admission Date:'	18357.0718
## 'Please specify: (choice=Diabetes)'1	0.3161
## 'SIRS TEMP'	0.2845
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0029
##	SD Control
## distance	0.1649
## 'Insurance Class'COMM	0.4667
## 'Insurance Class'MEDICAID	0.4137
## 'Insurance Class'MEDICARE	0.4986
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0926
## 'Race:'American Indian/Alaskan Native	0.0536
## 'Race:'Asian	0.1590
## 'Race:'Black	0.4014
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2097
## 'Race:'Unknown	0.3513
## 'Does the patient have a history of cancer?'1	0.3513
## 'Please specify: (choice=Hypertension)'1	0.5003
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3194
## 'Please specify: (choice=Congestive Heart Failure)'1	0.1752
## 'Please specify: (choice=Asthma)'1	0.2488
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2437
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2679
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2488
## 'Was plasma given to the patient during this admission?'1	0.3050
## 'Was the patient placed in a prone position during their admission?'1	0.3808
## 'Age at Admission'	18.2766

## Per_Capita	21937.3362
## 'SIRS RR'	0.4558
## SIRS_WBC	0.4303
## SIRS...110	1.0228
## 'Creatinine (if 0 = N/A)'	1.6774
## 'Admission Date:'	12.0162
## 'Please specify: (choice=Diabetes)'1	0.4656
## 'SIRS TEMP'	0.4518
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0536
##	Mean Diff
## distance	0.0904
## 'Insurance Class'COMM	0.0201
## 'Insurance Class'MEDICAID	0.0086
## 'Insurance Class'MEDICARE	-0.0374
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0086
## 'Race:'American Indian/Alaskan Native	0.0029
## 'Race:'Asian	-0.0057
## 'Race:'Black	0.0029
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0144
## 'Race:'Unknown	0.0115
## 'Does the patient have a history of cancer?'1	-0.0057
## 'Please specify: (choice=Hypertension)'1	-0.0029
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0057
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	-0.0057
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0029
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0345
## 'Was plasma given to the patient during this admission?'1	0.0460
## 'Was the patient placed in a prone position during their admission?'1	0.1293
## 'Age at Admission'	-1.2960
## Per_Capita	60.7098
## 'SIRS RR'	0.0661
## SIRS_WBC	-0.0057
## SIRS...110	0.1092
## 'Creatinine (if 0 = N/A)'	-0.0566
## 'Admission Date:'	-1.4195
## 'Please specify: (choice=Diabetes)'1	0.0230
## 'SIRS TEMP'	0.0287
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0057
##	eQQ Med
## distance	0.1095
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000

## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	3.0000
## Per_Capita	113.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## 'Admission Date:'	1.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.0904
## 'Insurance Class'COMM	0.0201
## 'Insurance Class'MEDICAID	0.0086
## 'Insurance Class'MEDICARE	0.0374
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0086
## 'Race:'American Indian/Alaskan Native	0.0029
## 'Race:'Asian	0.0057
## 'Race:'Black	0.0029
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0144
## 'Race:'Unknown	0.0115
## 'Does the patient have a history of cancer?'1	0.0057
## 'Please specify: (choice=Hypertension)'1	0.0029
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0057
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0057
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0029
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0345
## 'Was plasma given to the patient during this admission?'1	0.0460
## 'Was the patient placed in a prone position during their admission?'1	0.1293
## 'Age at Admission'	3.4741
## Per_Capita	1242.7960
## 'SIRS RR'	0.0661
## SIRS_WBC	0.0057
## SIRS...110	0.1092
## 'Creatinine (if 0 = N/A)'	0.1101
## 'Admission Date:'	2.2241

## 'Please specify: (choice=Diabetes)'1	0.0230
## 'SIRS TEMP'	0.0287
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0057
##	eQQ Max
## distance	0.1429
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	1.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was plasma given to the patient during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	10.0000
## Per_Capita	15315.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	3.5000
## 'Admission Date:'	13.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.0000
##	
## Percent Balance Improvement:	
##	Mean Diff.
## distance	61.6981
## 'Insurance Class'COMM	77.4194
## 'Insurance Class'MEDICAID	83.2756
## 'Insurance Class'MEDICARE	74.8528
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	9.0395
## 'Race:'American Indian/Alaskan Native	-163.9344
## 'Race:'Asian	-253.8462
## 'Race:'Black	71.0432
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	21.9961
## 'Race:'Unknown	-152.5490
## 'Does the patient have a history of cancer?'1	77.1144
## 'Please specify: (choice=Hypertension)'1	89.6596

## 'Please specify: (choice=Coronary Artery Disease)'1	75.7713
## 'Please specify: (choice=Congestive Heart Failure)'1	100.0000
## 'Please specify: (choice=Asthma)'1	-17.9487
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	86.9106
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	100.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	27.8297
## 'Was plasma given to the patient during this admission?'1	31.5076
## 'Was the patient placed in a prone position during their admission?'1	31.8310
## 'Age at Admission'	66.7457
## Per_Capita	96.7019
## 'SIRS RR'	49.2114
## SIRS_WBC	55.9508
## SIRS...110	58.1761
## 'Creatinine (if 0 = N/A)'	52.8189
## 'Admission Date:'	87.6560
## 'Please specify: (choice=Diabetes)'1	27.3138
## 'SIRS TEMP'	71.4032
## 'Please specify: (choice=Chronic- Hepatitis C)'1	-138.5185
##	eQQ Med
## distance	56.5565
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	25.0000
## Per_Capita	92.9375
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## 'Admission Date:'	90.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean

## distance	61.7400
## 'Insurance Class'COMM	77.4194
## 'Insurance Class'MEDICAID	83.3333
## 'Insurance Class'MEDICARE	74.5098
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	-Inf
## 'Race:'Asian	-100.0000
## 'Race:'Black	75.0000
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	16.6667
## 'Race:'Unknown	-100.0000
## 'Does the patient have a history of cancer?'1	77.7778
## 'Please specify: (choice=Hypertension)'1	88.8889
## 'Please specify: (choice=Coronary Artery Disease)'1	75.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	100.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	87.5000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	100.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	29.4118
## 'Was plasma given to the patient during this admission?'1	30.4348
## 'Was the patient placed in a prone position during their admission?'1	31.8182
## 'Age at Admission'	28.1213
## Per_Capita	58.0039
## 'SIRS RR'	50.0000
## SIRS_WBC	50.0000
## SIRS...110	58.6957
## 'Creatinine (if 0 = N/A)'	34.9745
## 'Admission Date:'	80.6500
## 'Please specify: (choice=Diabetes)'1	27.2727
## 'SIRS TEMP'	71.4286
## 'Please specify: (choice=Chronic- Hepatitis C)'1	-100.0000
##	eQQ Max
## distance	51.1091
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	-Inf
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	100.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	100.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000

```

## 'Did the patient receive hemodialysis during this admission?'1      0.0000
## 'Was plasma given to the patient during this admission?'1          0.0000
## 'Was the patient placed in a prone position during their admission?'1 0.0000
## 'Age at Admission'                                                0.0000
## Per_Capita                                                         94.1942
## 'SIRS RR'                                                          0.0000
## SIRS_WBC                                                           0.0000
## SIRS...110                                                         0.0000
## 'Creatinine (if 0 = N/A)'                                          -9.3750
## 'Admission Date:'                                                61.7647
## 'Please specify: (choice=Diabetes)'1                                0.0000
## 'SIRS TEMP'                                                        0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1                    0.0000
##
## Sample sizes:
##           Control Treated
## All           644    348
## Matched       348    348
## Unmatched     296     0
## Discarded      0     0

```

```

matched.cohort.hcq.2 = get_matches(my.full.match.hcq.2, hcq.select.no.labs.na, id_cols = NULL, newdata =
# is there any differene between the groups
binary.variables.hcq.2 = matched.cohort.hcq.2 %>%
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history)

chi.p.exit.3.hcq.2 = vector()
chi.variable.name.3.hcq.2 = vector()

for ( i in c(1:8,10:11, 13:ncol(binary.variables.hcq.2))) { # cirrhosis
  variable.1 = binary.variables.hcq.2[[i]][binary.variables.hcq.2$COVID..Was.hydroxychloroquine..Plaque
  variable.0 = binary.variables.hcq.2[[i]][binary.variables.hcq.2$COVID..Was.hydroxychloroquine..Plaque
  chisquare.test = chisq.test(variable.1, variable.0)
  chisquare.test.p.value = chisquare.test$p.value
  chi.p.exit.3.hcq.2[i] = chisquare.test.p.value
  chi.variable.name.3.hcq.2[i] = colnames(binary.variables.hcq.2)[i]
}

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
chi.df.3.hcq.2 = data.frame(chi.variable.name.3.hcq.2, chi.p.exit.3.hcq.2) # prone diff
```

```
numerical.variables.hcq.2 = matched.cohort.hcq.2 %>%
```

```
  dplyr::select(COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission., Age.at
```

```
p.value.exit.3.hcq.2 = vector()
```

```
variable.name.exit.3.hcq.2 = vector()
```

```
for ( i in c(2:7, 9:ncol(numerical.variables.hcq.2))) { # first column is hcq # skip date
```

```
  variable.1 = numerical.variables.hcq.2[[i]][numerical.variables.hcq.2$COVID..Was.hydroxychloroquine..
```

```
  variable.0 = numerical.variables.hcq.2[[i]][numerical.variables.hcq.2$COVID..Was.hydroxychloroquine..
```

```
  middle.t.test = t.test(variable.1, variable.0)
```

```
  t.test.p.value = middle.t.test$p.value
```

```
  p.value.exit.3.hcq.2[i] = t.test.p.value
```

```
  variable.name.exit.3.hcq.2[i] = colnames(numerical.variables.hcq.2)[i]
```

```
}
```

```
t.test.df.hcq.3 = data.frame(variable.name.exit.3.hcq.2, p.value.exit.3.hcq.2) # sirs rr diff
```

```
match.hcq.2.glm = glm(death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admi
```

```
match.hcq.2.summary = summary(match.hcq.2.glm) # p = 3.36e-06 ss = 696
```

```
match.hcq.2.conf.intervals = exp(cbind(coef(match.hcq.2.glm), confint(match.hcq.2.glm))) # 2.2775330 1.
```

```
## Waiting for profiling to be done...
```

```
## hcq with sirs of 2 or more
```

```
hcq.data.sirs.2 = hcq.data %>%
```

```
  filter(SIRS...110 >= 2)
```

```
hcq.simple.glm.sirs.2 = glm(death ~ 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient
```

```
hcq.simple.summary.sirs.2 = summary(hcq.simple.glm.sirs.2) #p = 0.000321
```

```
hcq.simple.conf.intervals.sirs.2 = exp(cbind(coef(hcq.simple.glm.sirs.2), confint(hcq.simple.glm.sirs.2
```

```
## Waiting for profiling to be done...
```

```
hcq.select.sirs.2 = hcq.data.sirs.2 %>%
```

```
  dplyr::select('REDCap Record ID', 'Insurance Class', 'Race:', 'Does the patient have a history of can
```

```
hcq.select.na.sirs.2.na = na.omit(hcq.select.sirs.2) # 214 labs sirs 2
```

```
hcq.select.no.labs.sirs.2 = subset(hcq.select.sirs.2, select = - c(Ferritin, CRP, 'D-Domer'))
hcq.select.no.labs.na.sirs.2 = na.omit(hcq.select.no.labs.sirs.2) # 597 no labs sirs 2
```

```
# sirs greater than 2 smaller sample size with labs
```

```
row.names(hcq.select.na.sirs.2.na) <- 1:nrow(hcq.select.na.sirs.2.na)
```

```
my.hcq.match.sirs.2 = matchit('COVID- Was hydroxychloroquine (Plaquenil) given during the patient's adm
summary(my.hcq.match.sirs.2)
```

```
##
```

```
## Call:
```

```
## matchit(formula = 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
## 'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
## 'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
## 'Please specify: (choice=Congestive Heart Failure)' +
## 'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary D
## 'Please specify: (choice=Chronic Renal Insufficiency)' +
## 'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this adm
## 'Was plasma given to the patient during this admission?' +
## 'Was the patient placed in a prone position during their admission?' +
## 'Was plasma given to the patient during this admission?' +
## 'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
## SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +
## 'D-Domer' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
## 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)',
## data = hcq.select.na.sirs.2.na, method = "nearest")
##
```

```
## Summary of balance for all data:
```

	Means Treated
## distance	0.6182
## 'Insurance Class'COMM	0.3333
## 'Insurance Class'MEDICAID	0.2667
## 'Insurance Class'MEDICARE	0.3778
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0222
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0333
## 'Race:'Black	0.2111
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0667
## 'Race:'Unknown	0.1889
## 'Does the patient have a history of cancer?'1	0.1111
## 'Please specify: (choice=Hypertension)'1	0.5778
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0222
## 'Please specify: (choice=Asthma)'1	0.0889
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0667
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0667
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1222
## 'Was plasma given to the patient during this admission?'1	0.2333
## 'Was the patient placed in a prone position during their admission?'1	0.3889
## 'Age at Admission'	61.4667

## Per_Capita	49196.2889
## 'SIRS RR'	0.9222
## SIRS_WBC	0.2000
## SIRS...110	2.4889
## 'Creatinine (if 0 = N/A)'	1.2767
## Ferritin	757.9444
## CRP	161.3878
## 'D-Domer'	7055.2556
## 'Admission Date:'	18358.8556
## 'Please specify: (choice=Diabetes)'1	0.3778
## 'SIRS TEMP'	0.4333
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0111
##	Means Control
## distance	0.2771
## 'Insurance Class'COMM	0.3145
## 'Insurance Class'MEDICAID	0.2661
## 'Insurance Class'MEDICARE	0.4032
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0161
## 'Race:'American Indian/Alaskan Native	0.0081
## 'Race:'Asian	0.0161
## 'Race:'Black	0.1935
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0403
## 'Race:'Unknown	0.2016
## 'Does the patient have a history of cancer?'1	0.1613
## 'Please specify: (choice=Hypertension)'1	0.4597
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0806
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0161
## 'Please specify: (choice=Asthma)'1	0.1129
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0403
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0242
## 'Please specify: (choice=Cirrhosis)'1	0.0081
## 'Did the patient receive hemodialysis during this admission?'1	0.0403
## 'Was plasma given to the patient during this admission?'1	0.1855
## 'Was the patient placed in a prone position during their admission?'1	0.2097
## 'Age at Admission'	62.5161
## Per_Capita	49730.3145
## 'SIRS RR'	0.8871
## SIRS_WBC	0.2903
## SIRS...110	2.3871
## 'Creatinine (if 0 = N/A)'	0.9790
## Ferritin	651.1855
## CRP	129.8073
## 'D-Domer'	4096.8710
## 'Admission Date:'	18371.4919
## 'Please specify: (choice=Diabetes)'1	0.2984
## 'SIRS TEMP'	0.3145
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	SD Control
## distance	0.2320
## 'Insurance Class'COMM	0.4662
## 'Insurance Class'MEDICAID	0.4437
## 'Insurance Class'MEDICARE	0.4925

## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.1265
## 'Race:'American Indian/Alaskan Native	0.0898
## 'Race:'Asian	0.1265
## 'Race:'Black	0.3967
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.1975
## 'Race:'Unknown	0.4028
## 'Does the patient have a history of cancer?'1	0.3693
## 'Please specify: (choice=Hypertension)'1	0.5004
## 'Please specify: (choice=Coronary Artery Disease)'1	0.2734
## 'Please specify: (choice=Congestive Heart Failure)'1	0.1265
## 'Please specify: (choice=Asthma)'1	0.3178
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.1975
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.1543
## 'Please specify: (choice=Cirrhosis)'1	0.0898
## 'Did the patient receive hemodialysis during this admission?'1	0.1975
## 'Was plasma given to the patient during this admission?'1	0.3903
## 'Was the patient placed in a prone position during their admission?'1	0.4087
## 'Age at Admission'	17.0635
## Per_Capita	20960.2987
## 'SIRS RR'	0.3178
## SIRS_WBC	0.4558
## SIRS...110	0.5661
## 'Creatinine (if 0 = N/A)'	0.8738
## Ferritin	485.2778
## CRP	97.8496
## 'D-Domer'	10562.1701
## 'Admission Date:'	14.5817
## 'Please specify: (choice=Diabetes)'1	0.4594
## 'SIRS TEMP'	0.4662
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Mean Diff
## distance	0.3411
## 'Insurance Class'COMM	0.0188
## 'Insurance Class'MEDICAID	0.0005
## 'Insurance Class'MEDICARE	-0.0254
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0061
## 'Race:'American Indian/Alaskan Native	-0.0081
## 'Race:'Asian	0.0172
## 'Race:'Black	0.0176
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0263
## 'Race:'Unknown	-0.0127
## 'Does the patient have a history of cancer?'1	-0.0502
## 'Please specify: (choice=Hypertension)'1	0.1181
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0194
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0061
## 'Please specify: (choice=Asthma)'1	-0.0240
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0263
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0425
## 'Please specify: (choice=Cirrhosis)'1	-0.0081
## 'Did the patient receive hemodialysis during this admission?'1	0.0819

## 'Was plasma given to the patient during this admission?'1	0.0478
## 'Was the patient placed in a prone position during their admission?'1	0.1792
## 'Age at Admission'	-1.0495
## Per_Capita	-534.0256
## 'SIRS RR'	0.0351
## SIRS_WBC	-0.0903
## SIRS...110	0.1018
## 'Creatinine (if 0 = N/A)'	0.2976
## Ferritin	106.7590
## CRP	31.5805
## 'D-Domer'	2958.3846
## 'Admission Date:'	-12.6364
## 'Please specify: (choice=Diabetes)'1	0.0794
## 'SIRS TEMP'	0.1188
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0111
##	eQQ Med
## distance	0.3754
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	2.0000
## Per_Capita	2812.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	139.0000
## CRP	39.9500
## 'D-Domer'	117.0000
## 'Admission Date:'	14.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.3438

## 'Insurance Class'COMM	0.0222
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0222
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0111
## 'Race:'American Indian/Alaskan Native	0.0111
## 'Race:'Asian	0.0222
## 'Race:'Black	0.0222
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0333
## 'Race:'Unknown	0.0111
## 'Does the patient have a history of cancer?'1	0.0444
## 'Please specify: (choice=Hypertension)'1	0.1222
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0222
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0111
## 'Please specify: (choice=Asthma)'1	0.0222
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0333
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0444
## 'Please specify: (choice=Cirrhosis)'1	0.0111
## 'Did the patient receive hemodialysis during this admission?'1	0.0889
## 'Was plasma given to the patient during this admission?'1	0.0556
## 'Was the patient placed in a prone position during their admission?'1	0.1778
## 'Age at Admission'	3.2889
## Per_Capita	3584.0889
## 'SIRS RR'	0.0444
## SIRS_WBC	0.0889
## SIRS...110	0.1111
## 'Creatinine (if 0 = N/A)'	0.2933
## Ferritin	137.0667
## CRP	38.6989
## 'D-Domer'	3035.6889
## 'Admission Date:'	12.4222
## 'Please specify: (choice=Diabetes)'1	0.0778
## 'SIRS TEMP'	0.1222
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0111
##	eQQ Max
## distance	0.4655
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	1.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000

## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	1.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was plasma given to the patient during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	10.0000
## Per_Capita	19521.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	5.6000
## Ferritin	1138.0000
## CRP	90.5000
## 'D-Domer'	70326.0000
## 'Admission Date:'	36.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.0000
##	
##	
## Summary of balance for matched data:	
##	Means Treated
## distance	0.6182
## 'Insurance Class'COMM	0.3333
## 'Insurance Class'MEDICAID	0.2667
## 'Insurance Class'MEDICARE	0.3778
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0222
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0333
## 'Race:'Black	0.2111
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0667
## 'Race:'Unknown	0.1889
## 'Does the patient have a history of cancer?'1	0.1111
## 'Please specify: (choice=Hypertension)'1	0.5778
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0222
## 'Please specify: (choice=Asthma)'1	0.0889
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0667
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0667
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1222
## 'Was plasma given to the patient during this admission?'1	0.2333
## 'Was the patient placed in a prone position during their admission?'1	0.3889
## 'Age at Admission'	61.4667
## Per_Capita	49196.2889
## 'SIRS RR'	0.9222
## SIRS_WBC	0.2000
## SIRS...110	2.4889
## 'Creatinine (if 0 = N/A)'	1.2767
## Ferritin	757.9444
## CRP	161.3878
## 'D-Domer'	7055.2556

## 'Admission Date:'	18358.8556
## 'Please specify: (choice=Diabetes)'1	0.3778
## 'SIRS TEMP'	0.4333
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0111
##	Means Control
## distance	0.3665
## 'Insurance Class'COMM	0.3222
## 'Insurance Class'MEDICAID	0.3333
## 'Insurance Class'MEDICARE	0.3222
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0222
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0111
## 'Race:'Black	0.2111
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0556
## 'Race:'Unknown	0.2222
## 'Does the patient have a history of cancer?'1	0.1222
## 'Please specify: (choice=Hypertension)'1	0.4778
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0889
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0222
## 'Please specify: (choice=Asthma)'1	0.1333
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0444
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0222
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0556
## 'Was plasma given to the patient during this admission?'1	0.1778
## 'Was the patient placed in a prone position during their admission?'1	0.2333
## 'Age at Admission'	59.6333
## Per_Capita	47959.1444
## 'SIRS RR'	0.9333
## SIRS_WBC	0.2222
## SIRS...110	2.4889
## 'Creatinine (if 0 = N/A)'	0.9511
## Ferritin	671.0889
## CRP	144.6356
## 'D-Domer'	4077.9222
## 'Admission Date:'	18366.1889
## 'Please specify: (choice=Diabetes)'1	0.3000
## 'SIRS TEMP'	0.3778
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	SD Control
## distance	0.2113
## 'Insurance Class'COMM	0.4699
## 'Insurance Class'MEDICAID	0.4740
## 'Insurance Class'MEDICARE	0.4699
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.1482
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.1054
## 'Race:'Black	0.4104
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2303
## 'Race:'Unknown	0.4181

## 'Does the patient have a history of cancer?'1	0.3294
## 'Please specify: (choice=Hypertension)'1	0.5023
## 'Please specify: (choice=Coronary Artery Disease)'1	0.2862
## 'Please specify: (choice=Congestive Heart Failure)'1	0.1482
## 'Please specify: (choice=Asthma)'1	0.3418
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2072
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.1482
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2303
## 'Was plasma given to the patient during this admission?'1	0.3845
## 'Was the patient placed in a prone position during their admission?'1	0.4253
## 'Age at Admission'	16.4121
## Per_Capita	19986.9225
## 'SIRS RR'	0.2508
## SIRS_WBC	0.4181
## SIRS...110	0.6042
## 'Creatinine (if 0 = N/A)'	0.9252
## Ferritin	484.6926
## CRP	100.1406
## 'D-Domer'	11599.7511
## 'Admission Date:'	11.8558
## 'Please specify: (choice=Diabetes)'1	0.4608
## 'SIRS TEMP'	0.4875
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Mean Diff
## distance	0.2517
## 'Insurance Class'COMM	0.0111
## 'Insurance Class'MEDICAID	-0.0667
## 'Insurance Class'MEDICARE	0.0556
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0222
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0111
## 'Race:'Unknown	-0.0333
## 'Does the patient have a history of cancer?'1	-0.0111
## 'Please specify: (choice=Hypertension)'1	0.1000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0111
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	-0.0444
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0222
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0444
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0667
## 'Was plasma given to the patient during this admission?'1	0.0556
## 'Was the patient placed in a prone position during their admission?'1	0.1556
## 'Age at Admission'	1.8333
## Per_Capita	1237.1444
## 'SIRS RR'	-0.0111
## SIRS_WBC	-0.0222
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.3256

## Ferritin	86.8556
## CRP	16.7522
## 'D-Dimer'	2977.3333
## 'Admission Date:'	-7.3333
## 'Please specify: (choice=Diabetes)'1	0.0778
## 'SIRS TEMP'	0.0556
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0111
##	eQQ Med
## distance	0.2757
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	3.0000
## Per_Capita	1945.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	104.5000
## CRP	27.5000
## 'D-Dimer'	223.5000
## 'Admission Date:'	7.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.2517
## 'Insurance Class'COMM	0.0111
## 'Insurance Class'MEDICAID	0.0667
## 'Insurance Class'MEDICARE	0.0556
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0222
## 'Race:'Black	0.0000

## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0111
## 'Race:'Unknown	0.0333
## 'Does the patient have a history of cancer?'1	0.0111
## 'Please specify: (choice=Hypertension)'1	0.1000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0111
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0444
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0222
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0444
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0667
## 'Was plasma given to the patient during this admission?'1	0.0556
## 'Was the patient placed in a prone position during their admission?'1	0.1556
## 'Age at Admission'	3.4778
## Per_Capita	2849.9667
## 'SIRS RR'	0.0111
## SIRS_WBC	0.0222
## SIRS...110	0.0222
## 'Creatinine (if 0 = N/A)'	0.3256
## Ferritin	115.5222
## CRP	27.2367
## 'D-Domer'	2990.0444
## 'Admission Date:'	7.3778
## 'Please specify: (choice=Diabetes)'1	0.0778
## 'SIRS TEMP'	0.0556
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0111
##	eQQ Max
## distance	0.3326
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was plasma given to the patient during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	11.0000
## Per_Capita	17454.0000
## 'SIRS RR'	1.0000

## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	5.6000
## Ferritin	1138.0000
## CRP	91.2000
## 'D-Domer'	56392.0000
## 'Admission Date:'	18.0000
## 'Please specify: (choice=Diabetes)'	1.0000
## 'SIRS TEMP'	1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'	1.0000
##	
## Percent Balance Improvement:	
##	Mean Diff.
## distance	26.2203
## 'Insurance Class'COMM	40.9524
## 'Insurance Class'MEDICAID	-12300.0000
## 'Insurance Class'MEDICARE	-118.3099
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	100.0000
## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	-29.1667
## 'Race:'Black	100.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	57.8231
## 'Race:'Unknown	-161.9718
## 'Does the patient have a history of cancer?'	77.8571
## 'Please specify: (choice=Hypertension)'	15.3263
## 'Please specify: (choice=Coronary Artery Disease)'	42.5926
## 'Please specify: (choice=Congestive Heart Failure)'	100.0000
## 'Please specify: (choice=Asthma)'	-85.0746
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	15.6463
## 'Please specify: (choice=Chronic Renal Insufficiency)'	-4.6414
## 'Please specify: (choice=Cirrhosis)'	100.0000
## 'Did the patient receive hemodialysis during this admission?'	18.5996
## 'Was plasma given to the patient during this admission?'	-16.1049
## 'Was the patient placed in a prone position during their admission?'	13.2000
## 'Age at Admission'	-74.6926
## Per_Capita	-131.6639
## 'SIRS RR'	68.3673
## SIRS_WBC	75.3968
## SIRS...110	100.0000
## 'Creatinine (if 0 = N/A)'	-9.3810
## Ferritin	18.6433
## CRP	46.9539
## 'D-Domer'	-0.6405
## 'Admission Date:'	41.9665
## 'Please specify: (choice=Diabetes)'	2.0316
## 'SIRS TEMP'	53.2428
## 'Please specify: (choice=Chronic- Hepatitis C)'	0.0000
##	eQQ Med
## distance	26.5631
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000

## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	-50.0000
## Per_Capita	30.8321
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## Ferritin	24.8201
## CRP	31.1640
## 'D-Domer'	-91.0256
## 'Admission Date:'	50.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	26.7916
## 'Insurance Class'COMM	50.0000
## 'Insurance Class'MEDICAID	-Inf
## 'Insurance Class'MEDICARE	-150.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	100.0000
## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	100.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	66.6667
## 'Race:'Unknown	-200.0000
## 'Does the patient have a history of cancer?'1	75.0000
## 'Please specify: (choice=Hypertension)'1	18.1818
## 'Please specify: (choice=Coronary Artery Disease)'1	50.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	100.0000
## 'Please specify: (choice=Asthma)'1	-100.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	33.3333
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	25.0000

```

## 'Was plasma given to the patient during this admission?'1      0.0000
## 'Was the patient placed in a prone position during their admission?'1 12.5000
## 'Age at Admission'                                           -5.7432
## Per_Capita                                                    20.4828
## 'SIRS RR'                                                     75.0000
## SIRS_WBC                                                       75.0000
## SIRS...110                                                    80.0000
## 'Creatinine (if 0 = N/A)'<                                     -10.9848
## Ferritin                                                       15.7182
## CRP                                                            29.6190
## 'D-Domer'                                                     1.5036
## 'Admission Date:'                                             40.6082
## 'Please specify: (choice=Diabetes)'1                          0.0000
## 'SIRS TEMP'                                                  54.5455
## 'Please specify: (choice=Chronic- Hepatitis C)'1             0.0000
##                                                                eQQ Max
## distance                                                       28.5423
## 'Insurance Class'COMM                                         0.0000
## 'Insurance Class'MEDICAID                                     -Inf
## 'Insurance Class'MEDICARE                                    0.0000
## 'Insurance Class'OTHER                                       0.0000
## 'Insurance Class'SP                                           100.0000
## 'Race:'American Indian/Alaskan Native                       100.0000
## 'Race:'Asian                                                  0.0000
## 'Race:'Black                                                  100.0000
## 'Race:'Native Hawaiian/Pacific Isle                          0.0000
## 'Race:'Other                                                  0.0000
## 'Race:'Unknown                                               0.0000
## 'Does the patient have a history of cancer?'1                0.0000
## 'Please specify: (choice=Hypertension)'1                      0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1          0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1         100.0000
## 'Please specify: (choice=Asthma)'1                            0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1      0.0000
## 'Please specify: (choice=Cirrhosis)'1                        100.0000
## 'Did the patient receive hemodialysis during this admission?'1 0.0000
## 'Was plasma given to the patient during this admission?'1   0.0000
## 'Was the patient placed in a prone position during their admission?'1 0.0000
## 'Age at Admission'                                           -10.0000
## Per_Capita                                                    10.5886
## 'SIRS RR'                                                     0.0000
## SIRS_WBC                                                       0.0000
## SIRS...110                                                    0.0000
## 'Creatinine (if 0 = N/A)'<                                     0.0000
## Ferritin                                                       0.0000
## CRP                                                            -0.7735
## 'D-Domer'                                                     19.8134
## 'Admission Date:'                                             50.0000
## 'Please specify: (choice=Diabetes)'1                          0.0000
## 'SIRS TEMP'                                                  0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1             0.0000
##
## Sample sizes:

```

```
##           Control Treated
## All           124      90
## Matched       90      90
## Unmatched     34       0
## Discarded      0       0
```

```
matched.cohort.hcq.sirs.2 = get_matches(my.hcq.match.sirs.2, hcq.select.na.sirs.2.na, id_cols = NULL, n
# is there any differene between the groups
binary.variables.hcq.sirs.2 = matched.cohort.hcq.sirs.2 %>%
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history
chi.p.exit.hcq.sirs.2 = vector()
chi.variable.name.hcq.sirs.2 = vector()

for ( i in c(1:8, 10:11, 13,14,15)) { # cirrhosis hep c
  variable.1 = binary.variables.hcq.sirs.2[[i]][binary.variables.hcq.sirs.2$COVID..Was.hydroxychloroqui
  variable.0 = binary.variables.hcq.sirs.2[[i]][binary.variables.hcq.sirs.2$COVID..Was.hydroxychloroqui
  chisquare.test = chisq.test(variable.1, variable.0)
  chisquare.test.p.value = chisquare.test$p.value
  chi.p.exit.hcq.sirs.2[i] = chisquare.test.p.value
  chi.variable.name.hcq.sirs.2[i] = colnames(binary.variables.hcq.sirs.2)[i]
}
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

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## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```

chi.df.hcq.sirs.2 = data.frame(chi.variable.name.hcq.sirs.2, chi.p.exit.hcq.sirs.2) # no diff

numerical.variables.hcq.sirs.2 = matched.cohort.hcq.sirs.2 %>%
  dplyr::select(COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission., Age.at

p.value.exit.hcq.sirs.2 = vector()
variable.name.exit.hcq.sirs.2 = vector()

for ( i in c(2:10, 12)) { # hcq 1 # skip date
  variable.1 = numerical.variables.hcq.sirs.2[[i]][numerical.variables.hcq.sirs.2$COVID..Was.hydroxychl
  variable.0 = numerical.variables.hcq.sirs.2[[i]][numerical.variables.hcq.sirs.2$COVID..Was.hydroxychl
  middle.t.test = t.test(variable.1, variable.0)
  t.test.p.value = middle.t.test$p.value
  p.value.exit.hcq.sirs.2[i] = t.test.p.value
  variable.name.exit.hcq.sirs.2[i] = colnames(numerical.variables.hcq)[i]
}

t.test.df.hcq = data.frame(variable.name.exit.hcq.sirs.2, p.value.exit.hcq.sirs.2) # no diff

match.hcq.glm.sirs.2 = glm(death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s
match.hcq.summary.sirs.2 = summary(match.hcq.glm.sirs.2) #p 0.0167 ss= 180
match.hcq.conf.intervals.sirs.2 = exp(cbind(coef(match.hcq.glm.sirs.2), confint(match.hcq.glm.sirs.2)))

## Waiting for profiling to be done...

## sirs 2 with larger sample size and no labs
row.names(hcq.select.no.labs.na.sirs.2) <- 1:nrow(hcq.select.no.labs.na.sirs.2)

my.full.match.hcq.sirs.2.no.labs = matchit('COVID- Was hydroxychloroquine (Plaquenil) given during the p
summary(my.full.match.hcq.sirs.2.no.labs)

##
## Call:
## matchit(formula = 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
##   'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary D
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this adm
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'Was plasma given to the patient during this admission?' +
##   'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##   SIRS...110 + 'Creatinine (if 0 = N/A)' + 'Admission Date:' +
##   'Please specify: (choice=Diabetes)' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepati
##   data = hcq.select.no.labs.na.sirs.2, method = "nearest")
##
## Summary of balance for all data:
##
## distance
##
## Means Treated
## 0.5378

```

## 'Insurance Class'COMM	0.3793
## 'Insurance Class'MEDICAID	0.2414
## 'Insurance Class'MEDICARE	0.3621
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0172
## 'Race:'American Indian/Alaskan Native	0.0043
## 'Race:'Asian	0.0216
## 'Race:'Black	0.2155
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0517
## 'Race:'Unknown	0.1853
## 'Does the patient have a history of cancer?'1	0.1250
## 'Please specify: (choice=Hypertension)'1	0.5043
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1034
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0302
## 'Please specify: (choice=Asthma)'1	0.0733
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0603
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0647
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1121
## 'Was plasma given to the patient during this admission?'1	0.1767
## 'Was the patient placed in a prone position during their admission?'1	0.3276
## 'Age at Admission'	61.5862
## Per_Capita	49159.8491
## 'SIRS RR'	0.8793
## SIRS_WBC	0.2672
## SIRS...110	2.5000
## 'Creatinine (if 0 = N/A)'	1.3022
## 'Admission Date:'	18355.4741
## 'Please specify: (choice=Diabetes)'1	0.3578
## 'SIRS TEMP'	0.4483
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0129
##	Means Control
## distance	0.2938
## 'Insurance Class'COMM	0.2822
## 'Insurance Class'MEDICAID	0.1945
## 'Insurance Class'MEDICARE	0.5096
## 'Insurance Class'OTHER	0.0027
## 'Insurance Class'SP	0.0110
## 'Race:'American Indian/Alaskan Native	0.0055
## 'Race:'Asian	0.0274
## 'Race:'Black	0.1945
## 'Race:'Native Hawaiian/Pacific Isle	0.0027
## 'Race:'Other	0.0411
## 'Race:'Unknown	0.1534
## 'Does the patient have a history of cancer?'1	0.1753
## 'Please specify: (choice=Hypertension)'1	0.4822
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1205
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0603
## 'Please specify: (choice=Asthma)'1	0.0822
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0822
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0438
## 'Please specify: (choice=Cirrhosis)'1	0.0110
## 'Did the patient receive hemodialysis during this admission?'1	0.0438

## 'Was plasma given to the patient during this admission?'1	0.1014
## 'Was the patient placed in a prone position during their admission?'1	0.1699
## 'Age at Admission'	65.4082
## Per_Capita	51657.1507
## 'SIRS RR'	0.8603
## SIRS_WBC	0.2877
## SIRS...110	2.4164
## 'Creatinine (if 0 = N/A)'	1.2238
## 'Admission Date:'	18367.2986
## 'Please specify: (choice=Diabetes)'1	0.3205
## 'SIRS TEMP'	0.3425
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	SD Control
## distance	0.2171
## 'Insurance Class'COMM	0.4507
## 'Insurance Class'MEDICAID	0.3964
## 'Insurance Class'MEDICARE	0.5006
## 'Insurance Class'OTHER	0.0523
## 'Insurance Class'SP	0.1043
## 'Race:'American Indian/Alaskan Native	0.0739
## 'Race:'Asian	0.1635
## 'Race:'Black	0.3964
## 'Race:'Native Hawaiian/Pacific Isle	0.0523
## 'Race:'Other	0.1988
## 'Race:'Unknown	0.3609
## 'Does the patient have a history of cancer?'1	0.3808
## 'Please specify: (choice=Hypertension)'1	0.5004
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3260
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2383
## 'Please specify: (choice=Asthma)'1	0.2750
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2750
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2050
## 'Please specify: (choice=Cirrhosis)'1	0.1043
## 'Did the patient receive hemodialysis during this admission?'1	0.2050
## 'Was plasma given to the patient during this admission?'1	0.3022
## 'Was the patient placed in a prone position during their admission?'1	0.3760
## 'Age at Admission'	18.2305
## Per_Capita	22169.4493
## 'SIRS RR'	0.3472
## SIRS_WBC	0.4533
## SIRS...110	0.5946
## 'Creatinine (if 0 = N/A)'	1.3991
## 'Admission Date:'	16.3982
## 'Please specify: (choice=Diabetes)'1	0.4673
## 'SIRS TEMP'	0.4752
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Mean Diff
## distance	0.2439
## 'Insurance Class'COMM	0.0971
## 'Insurance Class'MEDICAID	0.0469
## 'Insurance Class'MEDICARE	-0.1475
## 'Insurance Class'OTHER	-0.0027
## 'Insurance Class'SP	0.0063
## 'Race:'American Indian/Alaskan Native	-0.0012

## 'Race:'Asian	-0.0058
## 'Race:'Black	0.0210
## 'Race:'Native Hawaiian/Pacific Isle	-0.0027
## 'Race:'Other	0.0106
## 'Race:'Unknown	0.0319
## 'Does the patient have a history of cancer?'1	-0.0503
## 'Please specify: (choice=Hypertension)'1	0.0221
## 'Please specify: (choice=Coronary Artery Disease)'1	-0.0171
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0301
## 'Please specify: (choice=Asthma)'1	-0.0089
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0218
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0208
## 'Please specify: (choice=Cirrhosis)'1	-0.0110
## 'Did the patient receive hemodialysis during this admission?'1	0.0682
## 'Was plasma given to the patient during this admission?'1	0.0754
## 'Was the patient placed in a prone position during their admission?'1	0.1577
## 'Age at Admission'	-3.8220
## Per_Capita	-2497.3015
## 'SIRS RR'	0.0190
## SIRS_WBC	-0.0204
## SIRS...110	0.0836
## 'Creatinine (if 0 = N/A)'	0.0783
## 'Admission Date:'	-11.8245
## 'Please specify: (choice=Diabetes)'1	0.0372
## 'SIRS TEMP'	0.1058
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0129
##	eQQ Med
## distance	0.2616
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	4.0000
## Per_Capita	1879.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000

## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## 'Admission Date:'	11.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.2448
## 'Insurance Class'COMM	0.0991
## 'Insurance Class'MEDICAID	0.0474
## 'Insurance Class'MEDICARE	0.1466
## 'Insurance Class'OTHER	0.0043
## 'Insurance Class'SP	0.0086
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0043
## 'Race:'Black	0.0216
## 'Race:'Native Hawaiian/Pacific Isle	0.0043
## 'Race:'Other	0.0129
## 'Race:'Unknown	0.0345
## 'Does the patient have a history of cancer?'1	0.0474
## 'Please specify: (choice=Hypertension)'1	0.0216
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0172
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0302
## 'Please specify: (choice=Asthma)'1	0.0086
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0216
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0216
## 'Please specify: (choice=Cirrhosis)'1	0.0086
## 'Did the patient receive hemodialysis during this admission?'1	0.0690
## 'Was plasma given to the patient during this admission?'1	0.0776
## 'Was the patient placed in a prone position during their admission?'1	0.1595
## 'Age at Admission'	4.8017
## Per_Capita	2839.3017
## 'SIRS RR'	0.0216
## SIRS_WBC	0.0216
## SIRS...110	0.0819
## 'Creatinine (if 0 = N/A)'	0.1043
## 'Admission Date:'	11.8534
## 'Please specify: (choice=Diabetes)'1	0.0388
## 'SIRS TEMP'	0.1078
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0129
##	eQQ Max
## distance	0.3243
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	1.0000
## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	1.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	1.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000

## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	1.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was plasma given to the patient during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	10.0000
## Per_Capita	20909.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	2.3000
## 'Admission Date:'	34.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	1.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.0000
##	
##	
## Summary of balance for matched data:	
##	Means Treated
## distance	0.5378
## 'Insurance Class'COMM	0.3793
## 'Insurance Class'MEDICAID	0.2414
## 'Insurance Class'MEDICARE	0.3621
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0172
## 'Race:'American Indian/Alaskan Native	0.0043
## 'Race:'Asian	0.0216
## 'Race:'Black	0.2155
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0517
## 'Race:'Unknown	0.1853
## 'Does the patient have a history of cancer?'1	0.1250
## 'Please specify: (choice=Hypertension)'1	0.5043
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1034
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0302
## 'Please specify: (choice=Asthma)'1	0.0733
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0603
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0647
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.1121
## 'Was plasma given to the patient during this admission?'1	0.1767
## 'Was the patient placed in a prone position during their admission?'1	0.3276
## 'Age at Admission'	61.5862
## Per_Capita	49159.8491
## 'SIRS RR'	0.8793
## SIRS_WBC	0.2672
## SIRS...110	2.5000
## 'Creatinine (if 0 = N/A)'	1.3022
## 'Admission Date:'	18355.4741

## 'Please specify: (choice=Diabetes)'1	0.3578
## 'SIRS TEMP'	0.4483
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0129
##	Means Control
## distance	0.4183
## 'Insurance Class'COMM	0.3190
## 'Insurance Class'MEDICAID	0.2457
## 'Insurance Class'MEDICARE	0.4224
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0129
## 'Race:'American Indian/Alaskan Native	0.0043
## 'Race:'Asian	0.0216
## 'Race:'Black	0.2155
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0431
## 'Race:'Unknown	0.1724
## 'Does the patient have a history of cancer?'1	0.1466
## 'Please specify: (choice=Hypertension)'1	0.4784
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1078
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0603
## 'Please specify: (choice=Asthma)'1	0.1078
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0690
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0647
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0647
## 'Was plasma given to the patient during this admission?'1	0.1207
## 'Was the patient placed in a prone position during their admission?'1	0.2241
## 'Age at Admission'	63.3103
## Per_Capita	51047.0259
## 'SIRS RR'	0.8966
## SIRS_WBC	0.2888
## SIRS...110	2.5086
## 'Creatinine (if 0 = N/A)'	1.2638
## 'Admission Date:'	18358.7672
## 'Please specify: (choice=Diabetes)'1	0.3190
## 'SIRS TEMP'	0.4181
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	SD Control
## distance	0.1735
## 'Insurance Class'COMM	0.4671
## 'Insurance Class'MEDICAID	0.4314
## 'Insurance Class'MEDICARE	0.4950
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.1132
## 'Race:'American Indian/Alaskan Native	0.0657
## 'Race:'Asian	0.1455
## 'Race:'Black	0.4121
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2035
## 'Race:'Unknown	0.3786
## 'Does the patient have a history of cancer?'1	0.3544
## 'Please specify: (choice=Hypertension)'1	0.5006
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3107
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2386

## 'Please specify: (choice=Asthma)'1	0.3107
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2539
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.2464
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2464
## 'Was plasma given to the patient during this admission?'1	0.3265
## 'Was the patient placed in a prone position during their admission?'1	0.4179
## 'Age at Admission'	18.4045
## Per_Capita	22417.6636
## 'SIRS RR'	0.3052
## SIRS_WBC	0.4542
## SIRS...110	0.6378
## 'Creatinine (if 0 = N/A)'	1.6035
## 'Admission Date:'	11.7895
## 'Please specify: (choice=Diabetes)'1	0.4671
## 'SIRS TEMP'	0.4943
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Mean Diff
## distance	0.1195
## 'Insurance Class'COMM	0.0603
## 'Insurance Class'MEDICAID	-0.0043
## 'Insurance Class'MEDICARE	-0.0603
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0043
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0086
## 'Race:'Unknown	0.0129
## 'Does the patient have a history of cancer?'1	-0.0216
## 'Please specify: (choice=Hypertension)'1	0.0259
## 'Please specify: (choice=Coronary Artery Disease)'1	-0.0043
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0302
## 'Please specify: (choice=Asthma)'1	-0.0345
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0086
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0474
## 'Was plasma given to the patient during this admission?'1	0.0560
## 'Was the patient placed in a prone position during their admission?'1	0.1034
## 'Age at Admission'	-1.7241
## Per_Capita	-1887.1767
## 'SIRS RR'	-0.0172
## SIRS_WBC	-0.0216
## SIRS...110	-0.0086
## 'Creatinine (if 0 = N/A)'	0.0384
## 'Admission Date:'	-3.2931
## 'Please specify: (choice=Diabetes)'1	0.0388
## 'SIRS TEMP'	0.0302
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0129
##	eQQ Med
## distance	0.1337
## 'Insurance Class'COMM	0.0000

## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	3.0000
## Per_Capita	1858.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## 'Admission Date:'	3.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.1195
## 'Insurance Class'COMM	0.0603
## 'Insurance Class'MEDICAID	0.0043
## 'Insurance Class'MEDICARE	0.0603
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0043
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0086
## 'Race:'Unknown	0.0129
## 'Does the patient have a history of cancer?'1	0.0216
## 'Please specify: (choice=Hypertension)'1	0.0259
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0043
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0302
## 'Please specify: (choice=Asthma)'1	0.0345
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0086
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0474
## 'Was plasma given to the patient during this admission?'1	0.0560

## 'Was the patient placed in a prone position during their admission?'1	0.1034
## 'Age at Admission'	3.8448
## Per_Capita	2716.4440
## 'SIRS RR'	0.0172
## SIRS_WBC	0.0216
## SIRS...110	0.0172
## 'Creatinine (if 0 = N/A)'	0.1341
## 'Admission Date:'	3.5172
## 'Please specify: (choice=Diabetes)'1	0.0388
## 'SIRS TEMP'	0.0302
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0129
##	eQQ Max
## distance	0.172
## 'Insurance Class'COMM	1.000
## 'Insurance Class'MEDICAID	1.000
## 'Insurance Class'MEDICARE	1.000
## 'Insurance Class'OTHER	0.000
## 'Insurance Class'SP	1.000
## 'Race:'American Indian/Alaskan Native	0.000
## 'Race:'Asian	0.000
## 'Race:'Black	0.000
## 'Race:'Native Hawaiian/Pacific Isle	0.000
## 'Race:'Other	1.000
## 'Race:'Unknown	1.000
## 'Does the patient have a history of cancer?'1	1.000
## 'Please specify: (choice=Hypertension)'1	1.000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.000
## 'Please specify: (choice=Asthma)'1	1.000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.000
## 'Please specify: (choice=Cirrhosis)'1	0.000
## 'Did the patient receive hemodialysis during this admission?'1	1.000
## 'Was plasma given to the patient during this admission?'1	1.000
## 'Was the patient placed in a prone position during their admission?'1	1.000
## 'Age at Admission'	10.000
## Per_Capita	20909.000
## 'SIRS RR'	1.000
## SIRS_WBC	1.000
## SIRS...110	1.000
## 'Creatinine (if 0 = N/A)'	3.400
## 'Admission Date:'	15.000
## 'Please specify: (choice=Diabetes)'1	1.000
## 'SIRS TEMP'	1.000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.000
##	
## Percent Balance Improvement:	
##	Mean Diff.
## distance	51.0257
## 'Insurance Class'COMM	37.8648
## 'Insurance Class'MEDICAID	90.8014
## 'Insurance Class'MEDICARE	59.0938
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	31.3910

## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	100.0000
## 'Race:'Black	100.0000
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	18.8889
## 'Race:'Unknown	59.4895
## 'Does the patient have a history of cancer?'1	57.1898
## 'Please specify: (choice=Hypertension)'1	-16.9247
## 'Please specify: (choice=Coronary Artery Disease)'1	74.7928
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.2354
## 'Please specify: (choice=Asthma)'1	-286.7550
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	60.5405
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	100.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	30.5123
## 'Was plasma given to the patient during this admission?'1	25.6386
## 'Was the patient placed in a prone position during their admission?'1	34.4115
## 'Age at Admission'	54.8893
## Per_Capita	24.4314
## 'SIRS RR'	9.4293
## SIRS_WBC	-5.4913
## SIRS...110	89.6834
## 'Creatinine (if 0 = N/A)'	51.0185
## 'Admission Date:'	72.1501
## 'Please specify: (choice=Diabetes)'1	-4.2526
## 'SIRS TEMP'	71.4844
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Med
## distance	48.8867
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	25.0000
## Per_Capita	1.1176
## 'SIRS RR'	0.0000

## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## 'Admission Date:'	72.7273
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	51.1985
## 'Insurance Class'COMM	39.1304
## 'Insurance Class'MEDICAID	90.9091
## 'Insurance Class'MEDICARE	58.8235
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	50.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	100.0000
## 'Race:'Black	100.0000
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	33.3333
## 'Race:'Unknown	62.5000
## 'Does the patient have a history of cancer?'1	54.5455
## 'Please specify: (choice=Hypertension)'1	-20.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	75.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	-300.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	60.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	100.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	31.2500
## 'Was plasma given to the patient during this admission?'1	27.7778
## 'Was the patient placed in a prone position during their admission?'1	35.1351
## 'Age at Admission'	19.9282
## Per_Capita	4.3270
## 'SIRS RR'	20.0000
## SIRS_WBC	0.0000
## SIRS...110	78.9474
## 'Creatinine (if 0 = N/A)'	-28.5124
## 'Admission Date:'	70.3273
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	72.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Max
## distance	46.9596
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	100.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	100.0000
## 'Race:'Black	100.0000
## 'Race:'Native Hawaiian/Pacific Isle	100.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000

```

## 'Does the patient have a history of cancer?'1          0.0000
## 'Please specify: (choice=Hypertension)'1              0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1   0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1  0.0000
## 'Please specify: (choice=Asthma)'1                    0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 100.0000
## 'Please specify: (choice=Cirrhosis)'1                 100.0000
## 'Did the patient receive hemodialysis during this admission?'1 0.0000
## 'Was plasma given to the patient during this admission?'1 0.0000
## 'Was the patient placed in a prone position during their admission?'1 0.0000
## 'Age at Admission'                                   0.0000
## Per_Capita                                           0.0000
## 'SIRS RR'                                             0.0000
## SIRS_WBC                                              0.0000
## SIRS...110                                           0.0000
## 'Creatinine (if 0 = N/A)'                             -47.8261
## 'Admission Date:'                                    55.8824
## 'Please specify: (choice=Diabetes)'1                  0.0000
## 'SIRS TEMP'                                           0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1     0.0000
##
## Sample sizes:
##           Control Treated
## All           365    232
## Matched       232    232
## Unmatched     133     0
## Discarded      0     0

```

```
matched.cohort.hcq.2.sirs.2.no.labs = get_matches(my.full.match.hcq.sirs.2.no.labs, hcq.select.no.labs)
```

```

# is there any differene between the groups
binary.variables.hcq.2.sirs.2.no.labs = matched.cohort.hcq.2.sirs.2.no.labs %>%
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history)

chi.p.exit.3.hcq.2.sirs.2.no.labs = vector()
chi.variable.name.3.hcq.2.sirs.2.no.labs = vector()

for ( i in c(1:8,10:11, 13:14)) { # cirrhosis , hep c
  variable.1 = binary.variables.hcq.2.sirs.2.no.labs[[i]][binary.variables.hcq.2.sirs.2.no.labs$COVID.1]
  variable.0 = binary.variables.hcq.2.sirs.2.no.labs[[i]][binary.variables.hcq.2.sirs.2.no.labs$COVID.0]
  chisquare.test = chisq.test(variable.1, variable.0)
  chisquare.test.p.value = chisquare.test$p.value
  chi.p.exit.3.hcq.2.sirs.2.no.labs[i] = chisquare.test.p.value
  chi.variable.name.3.hcq.2.sirs.2.no.labs[i] = colnames(binary.variables.hcq.2.sirs.2.no.labs)[i]
}

```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect
```

```
## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
```



```

## incorrect

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## incorrect

chi.df.3.hcq.2.sirs.2.no.labs = data.frame(chi.variable.name.3.hcq.2.sirs.2.no.labs, chi.p.exit.3.hcq.2
numerical.variables.hcq.2.sirs.2.no.labs = matched.cohort.hcq.2.sirs.2.no.labs %>%
  dplyr::select(COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission., Age.at
p.value.exit.3.hcq.2.sirs.2.no.labs = vector()
variable.name.exit.3.hcq.2.sirs.2.no.labs = vector()

for ( i in c(2:7, 9:ncol(numerical.variables.hcq.2.sirs.2.no.labs))) { # first column is hcq # skip dat
  variable.1 = numerical.variables.hcq.2.sirs.2.no.labs[[i]][numerical.variables.hcq.2.sirs.2.no.labs$C
  variable.0 = numerical.variables.hcq.2.sirs.2.no.labs[[i]][numerical.variables.hcq.2.sirs.2.no.labs$C
  middle.t.test = t.test(variable.1, variable.0)
  t.test.p.value = middle.t.test$p.value
  p.value.exit.3.hcq.2.sirs.2.no.labs[i] = t.test.p.value
  variable.name.exit.3.hcq.2.sirs.2.no.labs[i] = colnames(numerical.variables.hcq.2.sirs.2.no.labs)[i]
}

t.test.df.hcq.3.sirs.2.no.labs = data.frame(variable.name.exit.3.hcq.2.sirs.2.no.labs, p.value.exit.3.h
match.hcq.2.glm.sirs.2.no.labs = glm(death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the
match.hcq.2.summary.sirs.2.no.labs = summary(match.hcq.2.glm.sirs.2.no.labs) # p 0.0507 ss = 464
match.hcq.2.conf.intervals.sirs.2.no.labs = exp(cbind(coef(match.hcq.2.glm.sirs.2.no.labs), confint(mat

## Waiting for profiling to be done...

# HCQ matching for those with SIRS of 0 or 1
hcq.data.sirs.1 = hcq.data %>%
  filter(SIRS...110 <= 1)
hcq.simple.glm.sirs.1 = glm(death ~ 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient
hcq.simple.summary.sirs.1 = summary(hcq.simple.glm.sirs.1) #p = 3.15e-09
hcq.simple.conf.intervals.sirs.1 = exp(cbind(coef(hcq.simple.glm.sirs.1), confint(hcq.simple.glm.sirs.1

## Waiting for profiling to be done...

```

```

hcq.select.sirs.1 = hcq.data.sirs.1 %>%
  dplyr::select('REDCap Record ID', 'Insurance Class', 'Race:', 'Does the patient have a history of cancer?')

hcq.select.na.sirs.1.na = na.omit(hcq.select.sirs.1) # 114 labs sirs under 2

hcq.select.no.labs.sirs.1 = subset(hcq.select.sirs.1, select = - c(Ferritin, CRP, 'D-Domer'))
hcq.select.no.labs.na.sirs.1 = na.omit(hcq.select.no.labs.sirs.1) # 395 no labs sirs under 2

# sirs less than 2 smaller sample size with labs
row.names(hcq.select.na.sirs.1.na) <- 1:nrow(hcq.select.na.sirs.1.na)

my.hcq.match.sirs.1 = matchit('COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
summary(my.hcq.match.sirs.1)

```

```

##
## Call:
## matchit(formula = 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
##   'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)' +
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this admission?' +
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'Was plasma given to the patient during this admission?' +
##   'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##   SIRS...110 + 'Creatinine (if 0 = N/A)' + Ferritin + CRP +
##   'D-Domer' + 'Admission Date:' + 'Please specify: (choice=Diabetes)' +
##   'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepatitis C)',
##   data = hcq.select.na.sirs.1.na, method = "nearest")
##
## Summary of balance for all data:
##
##                                     Means Treated
## distance                                     0.7179
## 'Insurance Class'COMM                                     0.2979
## 'Insurance Class'MEDICAID                               0.2128
## 'Insurance Class'MEDICARE                               0.4894
## 'Insurance Class'OTHER                                   0.0000
## 'Insurance Class'SP                                     0.0000
## 'Race:'American Indian/Alaskan Native                   0.0000
## 'Race:'Asian                                             0.0000
## 'Race:'Black                                             0.1915
## 'Race:'Native Hawaiian/Pacific Isle                     0.0000
## 'Race:'Other                                             0.0851
## 'Race:'Unknown                                           0.0638
## 'Does the patient have a history of cancer?'1           0.1489
## 'Please specify: (choice=Hypertension)'1                 0.6383
## 'Please specify: (choice=Coronary Artery Disease)'1     0.1702
## 'Please specify: (choice=Congestive Heart Failure)'1    0.0213
## 'Please specify: (choice=Asthma)'1                       0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0426
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 0.0638

```

## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0851
## 'Was plasma given to the patient during this admission?'1	0.1489
## 'Was the patient placed in a prone position during their admission?'1	0.2766
## 'Age at Admission'	67.5957
## Per_Capita	46837.0638
## 'SIRS RR'	0.5745
## SIRS_WBC	0.1064
## SIRS...110	0.8511
## 'Creatinine (if 0 = N/A)'	1.0128
## Ferritin	778.3404
## CRP	131.2681
## 'D-Domer'	6221.0851
## 'Admission Date:'	18358.1064
## 'Please specify: (choice=Diabetes)'1	0.4043
## 'SIRS TEMP'	0.0213
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Means Control
## distance	0.1979
## 'Insurance Class'COMM	0.1194
## 'Insurance Class'MEDICAID	0.1045
## 'Insurance Class'MEDICARE	0.7761
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0149
## 'Race:'Asian	0.0000
## 'Race:'Black	0.1642
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0597
## 'Race:'Unknown	0.2090
## 'Does the patient have a history of cancer?'1	0.1791
## 'Please specify: (choice=Hypertension)'1	0.6418
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1493
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0448
## 'Please specify: (choice=Asthma)'1	0.0448
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0746
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.1194
## 'Please specify: (choice=Cirrhosis)'1	0.0149
## 'Did the patient receive hemodialysis during this admission?'1	0.0597
## 'Was plasma given to the patient during this admission?'1	0.1493
## 'Was the patient placed in a prone position during their admission?'1	0.0597
## 'Age at Admission'	76.4328
## Per_Capita	50971.4478
## 'SIRS RR'	0.3881
## SIRS_WBC	0.2090
## SIRS...110	0.6716
## 'Creatinine (if 0 = N/A)'	1.3299
## Ferritin	2125.6224
## CRP	105.4612
## 'D-Domer'	5993.7164
## 'Admission Date:'	18370.7313
## 'Please specify: (choice=Diabetes)'1	0.3284
## 'SIRS TEMP'	0.0149
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0149

	SD Control
## distance	0.2516
## 'Insurance Class'COMM	0.3267
## 'Insurance Class'MEDICAID	0.3082
## 'Insurance Class'MEDICARE	0.4200
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.1222
## 'Race:'Asian	0.0000
## 'Race:'Black	0.3732
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2387
## 'Race:'Unknown	0.4096
## 'Does the patient have a history of cancer?'1	0.3863
## 'Please specify: (choice=Hypertension)'1	0.4831
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3590
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2084
## 'Please specify: (choice=Asthma)'1	0.2084
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2648
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.3267
## 'Please specify: (choice=Cirrhosis)'1	0.1222
## 'Did the patient receive hemodialysis during this admission?'1	0.2387
## 'Was plasma given to the patient during this admission?'1	0.3590
## 'Was the patient placed in a prone position during their admission?'1	0.2387
## 'Age at Admission'	13.7876
## Per_Capita	23665.6119
## 'SIRS RR'	0.4910
## SIRS_WBC	0.4096
## SIRS...110	0.4732
## 'Creatinine (if 0 = N/A)'	1.1590
## Ferritin	13344.0588
## CRP	83.7802
## 'D-Domer'	14124.1249
## 'Admission Date:'	15.2966
## 'Please specify: (choice=Diabetes)'1	0.4732
## 'SIRS TEMP'	0.1222
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.1222
##	Mean Diff
## distance	0.5200
## 'Insurance Class'COMM	0.1785
## 'Insurance Class'MEDICAID	0.1083
## 'Insurance Class'MEDICARE	-0.2868
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	-0.0149
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0273
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0254
## 'Race:'Unknown	-0.1451
## 'Does the patient have a history of cancer?'1	-0.0302
## 'Please specify: (choice=Hypertension)'1	-0.0035
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0210
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0235

## 'Please specify: (choice=Asthma)'1	-0.0448
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0321
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	-0.0556
## 'Please specify: (choice=Cirrhosis)'1	-0.0149
## 'Did the patient receive hemodialysis during this admission?'1	0.0254
## 'Was plasma given to the patient during this admission?'1	-0.0003
## 'Was the patient placed in a prone position during their admission?'1	0.2169
## 'Age at Admission'	-8.8371
## Per_Capita	-4134.3839
## 'SIRS RR'	0.1864
## SIRS_WBC	-0.1026
## SIRS...110	0.1794
## 'Creatinine (if 0 = N/A)'	-0.3171
## Ferritin	-1347.2820
## CRP	25.8069
## 'D-Domer'	227.3687
## 'Admission Date:'	-12.6250
## 'Please specify: (choice=Diabetes)'1	0.0759
## 'SIRS TEMP'	0.0064
## 'Please specify: (choice=Chronic- Hepatitis C)'1	-0.0149
##	eQQ Med
## distance	0.5943
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	9.0000
## Per_Capita	2174.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	285.0000
## CRP	24.6000
## 'D-Domer'	752.0000
## 'Admission Date:'	11.0000

## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.5237
## 'Insurance Class'COMM	0.1915
## 'Insurance Class'MEDICAID	0.1064
## 'Insurance Class'MEDICARE	0.2766
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0213
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0426
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0213
## 'Race:'Unknown	0.1489
## 'Does the patient have a history of cancer?'1	0.0213
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0213
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0213
## 'Please specify: (choice=Asthma)'1	0.0426
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0213
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0426
## 'Please specify: (choice=Cirrhosis)'1	0.0213
## 'Did the patient receive hemodialysis during this admission?'1	0.0213
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.2128
## 'Age at Admission'	8.3830
## Per_Capita	5107.4043
## 'SIRS RR'	0.1915
## SIRS_WBC	0.1064
## SIRS...110	0.1915
## 'Creatinine (if 0 = N/A)'	0.3362
## Ferritin	2573.9723
## CRP	27.8745
## 'D-Domer'	1747.2979
## 'Admission Date:'	12.2766
## 'Please specify: (choice=Diabetes)'1	0.0851
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0213
##	eQQ Max
## distance	0.7134
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	1.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000

## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	1.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	15.0000
## Per_Capita	42630.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	2.7000
## Ferritin	108079.7000
## CRP	94.9000
## 'D-Domer'	14997.0000
## 'Admission Date:'	29.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.0000
##	
##	
## Summary of balance for matched data:	
##	Means Treated
## distance	0.7179
## 'Insurance Class'COMM	0.2979
## 'Insurance Class'MEDICAID	0.2128
## 'Insurance Class'MEDICARE	0.4894
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.1915
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0851
## 'Race:'Unknown	0.0638
## 'Does the patient have a history of cancer?'1	0.1489
## 'Please specify: (choice=Hypertension)'1	0.6383
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1702
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0213
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0426
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0638
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0851
## 'Was plasma given to the patient during this admission?'1	0.1489
## 'Was the patient placed in a prone position during their admission?'1	0.2766
## 'Age at Admission'	67.5957
## Per_Capita	46837.0638
## 'SIRS RR'	0.5745
## SIRS_WBC	0.1064

## SIRS...110	0.8511
## 'Creatinine (if 0 = N/A)'	1.0128
## Ferritin	778.3404
## CRP	131.2681
## 'D-Domer'	6221.0851
## 'Admission Date:'	18358.1064
## 'Please specify: (choice=Diabetes)'1	0.4043
## 'SIRS TEMP'	0.0213
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Means Control
## distance	0.2816
## 'Insurance Class'COMM	0.1489
## 'Insurance Class'MEDICAID	0.1277
## 'Insurance Class'MEDICARE	0.7234
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.1489
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0851
## 'Race:'Unknown	0.1489
## 'Does the patient have a history of cancer?'1	0.1702
## 'Please specify: (choice=Hypertension)'1	0.6170
## 'Please specify: (choice=Coronary Artery Disease)'1	0.2128
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0426
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0426
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.1064
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0426
## 'Was plasma given to the patient during this admission?'1	0.1277
## 'Was the patient placed in a prone position during their admission?'1	0.0851
## 'Age at Admission'	75.2553
## Per_Capita	54522.8298
## 'SIRS RR'	0.4468
## SIRS_WBC	0.1915
## SIRS...110	0.7234
## 'Creatinine (if 0 = N/A)'	1.1851
## Ferritin	2827.6532
## CRP	113.9617
## 'D-Domer'	5434.9787
## 'Admission Date:'	18366.7234
## 'Please specify: (choice=Diabetes)'1	0.4043
## 'SIRS TEMP'	0.0213
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	SD Control
## distance	0.2585
## 'Insurance Class'COMM	0.3599
## 'Insurance Class'MEDICAID	0.3373
## 'Insurance Class'MEDICARE	0.4522
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000

## 'Race:'Asian	0.0000
## 'Race:'Black	0.3599
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2821
## 'Race:'Unknown	0.3599
## 'Does the patient have a history of cancer?'1	0.3799
## 'Please specify: (choice=Hypertension)'1	0.4914
## 'Please specify: (choice=Coronary Artery Disease)'1	0.4137
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2040
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2040
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.3117
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2040
## 'Was plasma given to the patient during this admission?'1	0.3373
## 'Was the patient placed in a prone position during their admission?'1	0.2821
## 'Age at Admission'	14.6991
## Per_Capita	25827.9842
## 'SIRS RR'	0.5025
## SIRS_WBC	0.3977
## SIRS...110	0.4522
## 'Creatinine (if 0 = N/A)'	0.9215
## Ferritin	15929.3616
## CRP	81.6706
## 'D-Domer'	10686.6349
## 'Admission Date:'	14.0862
## 'Please specify: (choice=Diabetes)'1	0.4961
## 'SIRS TEMP'	0.1459
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Mean Diff
## distance	0.4363
## 'Insurance Class'COMM	0.1489
## 'Insurance Class'MEDICAID	0.0851
## 'Insurance Class'MEDICARE	-0.2340
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0426
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	-0.0851
## 'Does the patient have a history of cancer?'1	-0.0213
## 'Please specify: (choice=Hypertension)'1	0.0213
## 'Please specify: (choice=Coronary Artery Disease)'1	-0.0426
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0213
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	-0.0426
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0426
## 'Was plasma given to the patient during this admission?'1	0.0213
## 'Was the patient placed in a prone position during their admission?'1	0.1915
## 'Age at Admission'	-7.6596

## Per_Capita	-7685.7660
## 'SIRS RR'	0.1277
## SIRS_WBC	-0.0851
## SIRS...110	0.1277
## 'Creatinine (if 0 = N/A)'	-0.1723
## Ferritin	-2049.3128
## CRP	17.3064
## 'D-Domer'	786.1064
## 'Admission Date:'	-8.6170
## 'Please specify: (choice=Diabetes)'	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'	0.0000
##	eQQ Med
## distance	0.4812
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'	0.0000
## 'Please specify: (choice=Hypertension)'	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'	0.0000
## 'Please specify: (choice=Asthma)'	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'	0.0000
## 'Please specify: (choice=Cirrhosis)'	0.0000
## 'Did the patient receive hemodialysis during this admission?'	0.0000
## 'Was plasma given to the patient during this admission?'	0.0000
## 'Was the patient placed in a prone position during their admission?'	0.0000
## 'Age at Admission'	8.0000
## Per_Capita	3718.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## Ferritin	284.0000
## CRP	17.7000
## 'D-Domer'	1023.0000
## 'Admission Date:'	7.0000
## 'Please specify: (choice=Diabetes)'	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'	0.0000
##	eQQ Mean
## distance	0.4363
## 'Insurance Class'COMM	0.1489
## 'Insurance Class'MEDICAID	0.0851
## 'Insurance Class'MEDICARE	0.2340

## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0426
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0851
## 'Does the patient have a history of cancer?'1	0.0213
## 'Please specify: (choice=Hypertension)'1	0.0213
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0426
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0213
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0426
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0426
## 'Was plasma given to the patient during this admission?'1	0.0213
## 'Was the patient placed in a prone position during their admission?'1	0.1915
## 'Age at Admission'	7.6596
## Per_Capita	8337.4681
## 'SIRS RR'	0.1277
## SIRS_WBC	0.0851
## SIRS...110	0.1277
## 'Creatinine (if 0 = N/A)'	0.2106
## Ferritin	2549.8234
## CRP	19.7617
## 'D-Domer'	2380.4894
## 'Admission Date:'	8.6170
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Max
## distance	0.6025
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	1.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000

## 'Was plasma given to the patient during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	16.0000
## Per_Capita	42630.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	2.4000
## Ferritin	108079.7000
## CRP	93.9000
## 'D-Domer'	38497.0000
## 'Admission Date:'	23.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	
## Percent Balance Improvement:	
##	Mean Diff.
## distance	16.0920
## 'Insurance Class'COMM	16.5480
## 'Insurance Class'MEDICAID	21.4076
## 'Insurance Class'MEDICARE	18.3832
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	-55.8140
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	100.0000
## 'Race:'Unknown	41.3567
## 'Does the patient have a history of cancer?'1	29.4737
## 'Please specify: (choice=Hypertension)'1	-509.0909
## 'Please specify: (choice=Coronary Artery Disease)'1	-103.0303
## 'Please specify: (choice=Congestive Heart Failure)'1	9.4595
## 'Please specify: (choice=Asthma)'1	100.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	100.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	23.4286
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	-67.5000
## 'Was plasma given to the patient during this admission?'1	-6600.0000
## 'Was the patient placed in a prone position during their admission?'1	11.7130
## 'Age at Admission'	13.3247
## Per_Capita	-85.8987
## 'SIRS RR'	31.5162
## SIRS_WBC	17.0279
## SIRS...110	28.8496
## 'Creatinine (if 0 = N/A)'	45.6485
## Ferritin	-52.1072
## CRP	32.9389
## 'D-Domer'	-245.7408
## 'Admission Date:'	31.7462
## 'Please specify: (choice=Diabetes)'1	100.0000
## 'SIRS TEMP'	100.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	100.0000

##	eQQ Med
## distance	19.0233
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	11.1111
## Per_Capita	-71.0212
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.0000
## Ferritin	0.3509
## CRP	28.0488
## 'D-Domer'	-36.0372
## 'Admission Date:'	36.3636
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	16.6810
## 'Insurance Class'COMM	22.2222
## 'Insurance Class'MEDICAID	20.0000
## 'Insurance Class'MEDICARE	15.3846
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	100.0000
## 'Race:'Unknown	42.8571
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	-Inf
## 'Please specify: (choice=Coronary Artery Disease)'1	-100.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000

## 'Please specify: (choice=Asthma)'1	100.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	100.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	-100.0000
## 'Was plasma given to the patient during this admission?'1	-Inf
## 'Was the patient placed in a prone position during their admission?'1	10.0000
## 'Age at Admission'	8.6294
## Per_Capita	-63.2428
## 'SIRS RR'	33.3333
## SIRS_WBC	20.0000
## SIRS...110	33.3333
## 'Creatinine (if 0 = N/A)'	37.3418
## Ferritin	0.9382
## CRP	29.1046
## 'D-Domer'	-36.2383
## 'Admission Date:'	29.8094
## 'Please specify: (choice=Diabetes)'1	100.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	100.0000
##	eQQ Max
## distance	15.5447
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	100.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	100.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	-Inf
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	100.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	100.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	-Inf
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	-6.6667
## Per_Capita	0.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	11.1111
## Ferritin	0.0000
## CRP	1.0537
## 'D-Domer'	-156.6980
## 'Admission Date:'	20.6897

```

## 'Please specify: (choice=Diabetes)'1 100.0000
## 'SIRS TEMP' 0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1 100.0000
##
## Sample sizes:
## Control Treated
## All 67 47
## Matched 47 47
## Unmatched 20 0
## Discarded 0 0

```

```

matched.cohort.hcq.sirs.1 = get_matches(my.hcq.match.sirs.1, hcq.select.na.sirs.1.na, id_cols = NULL, n
# is there any differene between the groups
binary.variables.hcq.sirs.1 = matched.cohort.hcq.sirs.1 %>%
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history
chi.p.exit.hcq.sirs.1 = vector()
chi.variable.name.hcq.sirs.1 = vector()

for ( i in c(1:5, 7, 8, 10:11, 13,14,15)) { # cirrhosis hep c nitric oxide, asthma
  variable.1 = binary.variables.hcq.sirs.1[[i]][binary.variables.hcq.sirs.1$COVID..Was.hydroxychloroquin
  variable.0 = binary.variables.hcq.sirs.1[[i]][binary.variables.hcq.sirs.1$COVID..Was.hydroxychloroquin
  chisquare.test = chisq.test(variable.1, variable.0)
  chisquare.test.p.value = chisquare.test$p.value
  chi.p.exit.hcq.sirs.1[i] = chisquare.test.p.value
  chi.variable.name.hcq.sirs.1[i] = colnames(binary.variables.hcq.sirs.1)[i]
}

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
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```

```

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## incorrect

```

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## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be

```

```

## incorrect

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

chi.df.hcq.1 = data.frame(chi.variable.name.hcq.sirs.1, chi.p.exit.hcq.sirs.1) # sig diff: insurance
numerical.variables.hcq.sirs.1 = matched.cohort.hcq.sirs.1 %>%
  dplyr::select(COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission., Age.at
p.value.exit.hcq.sirs.1 = vector()
variable.name.exit.hcq.sirs.1 = vector()

for ( i in c(2:10,12) ) { # hcq 1 # skip date
  variable.1 = numerical.variables.hcq.sirs.1[[i]] [numerical.variables.hcq.sirs.1$COVID..Was.hydroxychl
  variable.0 = numerical.variables.hcq.sirs.1[[i]] [numerical.variables.hcq.sirs.1$COVID..Was.hydroxychl
  middle.t.test = t.test(variable.1, variable.0)
  t.test.p.value = middle.t.test$p.value
  p.value.exit.hcq.sirs.1[i] = t.test.p.value
  variable.name.exit.hcq.sirs.1[i] = colnames(numerical.variables.hcq)[i]
}

t.test.df.hcq = data.frame(variable.name.exit.hcq.sirs.1, p.value.exit.hcq.sirs.1) # Sig different: age

## only significant different one in matching is length of stay
match.hcq.glm.sirs.1 = glm(death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s
match.hcq.summary.sirs.1 = summary(match.hcq.glm.sirs.1) #0.00426
match.hcq.conf.intervals.sirs.1 = exp(cbind(coef(match.hcq.glm.sirs.1), confint(match.hcq.glm.sirs.1)))

## Waiting for profiling to be done...

## sirs less than 2 with larger sample size and no labs
row.names(hcq.select.no.labs.na.sirs.1) <- 1:nrow(hcq.select.no.labs.na.sirs.1)

my.full.match.hcq.sirs.1.no.labs = matchit('COVID- Was hydroxychloroquine (Plaquenil) given during the p

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

summary(my.full.match.hcq.sirs.1.no.labs)

##
## Call:
## matchit(formula = 'COVID- Was hydroxychloroquine (Plaquenil) given during the patient's admission?' +
##   'Insurance Class' + 'Race:' + 'Does the patient have a history of cancer?' +
##   'Please specify: (choice=Hypertension)' + 'Please specify: (choice=Coronary Artery Disease)' +
##   'Please specify: (choice=Congestive Heart Failure)' +
##   'Please specify: (choice=Asthma)' + 'Please specify: (choice=Chronic Obstructive Pulmonary D
##   'Please specify: (choice=Chronic Renal Insufficiency)' +
##   'Please specify: (choice=Cirrhosis)' + 'Did the patient receive hemodialysis during this adm
##   'Was plasma given to the patient during this admission?' +
##   'Was the patient placed in a prone position during their admission?' +
##   'Was plasma given to the patient during this admission?' +

```



```

##      'Age at Admission' + Per_Capita + 'SIRS RR' + SIRS_WBC +
##      SIRS...110 + 'Creatinine (if 0 = N/A)' + 'Admission Date:' +
##      'Please specify: (choice=Diabetes)' + 'SIRS TEMP' + 'Please specify: (choice=Chronic- Hepati
##      data = hcq.select.no.labs.na.sirs.1, method = "nearest")
##
## Summary of balance for all data:
##
##                                     Means Treated
## distance                                     0.5131
## 'Insurance Class'COMM                                     0.2586
## 'Insurance Class'MEDICAID                               0.1983
## 'Insurance Class'MEDICARE                               0.5259
## 'Insurance Class'OTHER                                   0.0000
## 'Insurance Class'SP                                     0.0172
## 'Race:'American Indian/Alaskan Native                   0.0086
## 'Race:'Asian                                             0.0172
## 'Race:'Black                                             0.1810
## 'Race:'Native Hawaiian/Pacific Isle                     0.0000
## 'Race:'Other                                             0.0776
## 'Race:'Unknown                                           0.0948
## 'Does the patient have a history of cancer?'1           0.1638
## 'Please specify: (choice=Hypertension)'1                 0.5431
## 'Please specify: (choice=Coronary Artery Disease)'1      0.1552
## 'Please specify: (choice=Congestive Heart Failure)'1     0.0345
## 'Please specify: (choice=Asthma)'1                       0.0345
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0603
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 0.1034
## 'Please specify: (choice=Cirrhosis)'1                   0.0000
## 'Did the patient receive hemodialysis during this admission?'1 0.0776
## 'Was plasma given to the patient during this admission?'1 0.0948
## 'Was the patient placed in a prone position during their admission?'1 0.2586
## 'Age at Admission'                                     68.3534
## Per_Capita                                             51788.6724
## 'SIRS RR'                                              0.5603
## SIRS_WBC                                               0.1810
## SIRS...110                                             0.8190
## 'Creatinine (if 0 = N/A)'                               1.1612
## 'Admission Date:'                                     18356.0086
## 'Please specify: (choice=Diabetes)'1                   0.3017
## 'SIRS TEMP'                                            0.0431
## 'Please specify: (choice=Chronic- Hepatitis C)'1        0.0000
##
##                                     Means Control
## distance                                     0.2024
## 'Insurance Class'COMM                                     0.2079
## 'Insurance Class'MEDICAID                               0.1505
## 'Insurance Class'MEDICARE                               0.6380
## 'Insurance Class'OTHER                                   0.0000
## 'Insurance Class'SP                                     0.0036
## 'Race:'American Indian/Alaskan Native                   0.0036
## 'Race:'Asian                                             0.0143
## 'Race:'Black                                             0.1935
## 'Race:'Native Hawaiian/Pacific Isle                     0.0000
## 'Race:'Other                                             0.0430
## 'Race:'Unknown                                           0.1470
## 'Does the patient have a history of cancer?'1           0.1470

```

## 'Please specify: (choice=Hypertension)'1	0.6272
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1756
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0896
## 'Please specify: (choice=Asthma)'1	0.0430
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0824
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.1004
## 'Please specify: (choice=Cirrhosis)'1	0.0215
## 'Did the patient receive hemodialysis during this admission?'1	0.0645
## 'Was plasma given to the patient during this admission?'1	0.0573
## 'Was the patient placed in a prone position during their admission?'1	0.0430
## 'Age at Admission'	70.7885
## Per_Capita	52164.3262
## 'SIRS RR'	0.3584
## SIRS_WBC	0.2043
## SIRS...110	0.7133
## 'Creatinine (if 0 = N/A)'	1.5731
## 'Admission Date:'	18366.9606
## 'Please specify: (choice=Diabetes)'1	0.2903
## 'SIRS TEMP'	0.0430
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0143
##	SD Control
## distance	0.1842
## 'Insurance Class'COMM	0.4065
## 'Insurance Class'MEDICAID	0.3582
## 'Insurance Class'MEDICARE	0.4814
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0599
## 'Race:'American Indian/Alaskan Native	0.0599
## 'Race:'Asian	0.1191
## 'Race:'Black	0.3958
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2032
## 'Race:'Unknown	0.3547
## 'Does the patient have a history of cancer?'1	0.3547
## 'Please specify: (choice=Hypertension)'1	0.4844
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3812
## 'Please specify: (choice=Congestive Heart Failure)'1	0.2861
## 'Please specify: (choice=Asthma)'1	0.2032
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2755
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.3010
## 'Please specify: (choice=Cirrhosis)'1	0.1453
## 'Did the patient receive hemodialysis during this admission?'1	0.2461
## 'Was plasma given to the patient during this admission?'1	0.2329
## 'Was the patient placed in a prone position during their admission?'1	0.2032
## 'Age at Admission'	18.0356
## Per_Capita	28507.4544
## 'SIRS RR'	0.4804
## SIRS_WBC	0.4039
## SIRS...110	0.4531
## 'Creatinine (if 0 = N/A)'	2.0882
## 'Admission Date:'	18.1045
## 'Please specify: (choice=Diabetes)'1	0.4547
## 'SIRS TEMP'	0.2032
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.1191

	Mean Diff
##	
## distance	0.3106
## 'Insurance Class'COMM	0.0507
## 'Insurance Class'MEDICAID	0.0477
## 'Insurance Class'MEDICARE	-0.1121
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0137
## 'Race:'American Indian/Alaskan Native	0.0050
## 'Race:'Asian	0.0029
## 'Race:'Black	-0.0125
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0346
## 'Race:'Unknown	-0.0521
## 'Does the patient have a history of cancer?'1	0.0168
## 'Please specify: (choice=Hypertension)'1	-0.0841
## 'Please specify: (choice=Coronary Artery Disease)'1	-0.0205
## 'Please specify: (choice=Congestive Heart Failure)'1	-0.0551
## 'Please specify: (choice=Asthma)'1	-0.0085
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0221
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0031
## 'Please specify: (choice=Cirrhosis)'1	-0.0215
## 'Did the patient receive hemodialysis during this admission?'1	0.0131
## 'Was plasma given to the patient during this admission?'1	0.0375
## 'Was the patient placed in a prone position during their admission?'1	0.2156
## 'Age at Admission'	-2.4351
## Per_Capita	-375.6538
## 'SIRS RR'	0.2019
## SIRS_WBC	-0.0233
## SIRS...110	0.1057
## 'Creatinine (if 0 = N/A)'	-0.4119
## 'Admission Date:'	-10.9520
## 'Please specify: (choice=Diabetes)'1	0.0114
## 'SIRS TEMP'	0.0001
## 'Please specify: (choice=Chronic- Hepatitis C)'1	-0.0143
##	eQQ Med
## distance	0.3473
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000

## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	4.0000
## Per_Capita	1858.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## 'Admission Date:'	8.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.3102
## 'Insurance Class'COMM	0.0517
## 'Insurance Class'MEDICAID	0.0517
## 'Insurance Class'MEDICARE	0.1121
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0086
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0086
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0345
## 'Race:'Unknown	0.0517
## 'Does the patient have a history of cancer?'1	0.0172
## 'Please specify: (choice=Hypertension)'1	0.0776
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0172
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0517
## 'Please specify: (choice=Asthma)'1	0.0086
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0259
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0259
## 'Did the patient receive hemodialysis during this admission?'1	0.0086
## 'Was plasma given to the patient during this admission?'1	0.0345
## 'Was the patient placed in a prone position during their admission?'1	0.2155
## 'Age at Admission'	4.0603
## Per_Capita	6463.0517
## 'SIRS RR'	0.2069
## SIRS_WBC	0.0259
## SIRS...110	0.1121
## 'Creatinine (if 0 = N/A)'	0.4690
## 'Admission Date:'	10.8707
## 'Please specify: (choice=Diabetes)'1	0.0086
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0172
##	eQQ Max
## distance	0.4424
## 'Insurance Class'COMM	1.0000
## 'Insurance Class'MEDICAID	1.0000
## 'Insurance Class'MEDICARE	1.0000
## 'Insurance Class'OTHER	0.0000

## 'Insurance Class'SP	1.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	1.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	1.0000
## 'Race:'Unknown	1.0000
## 'Does the patient have a history of cancer?'1	1.0000
## 'Please specify: (choice=Hypertension)'1	1.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	1.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	1.0000
## 'Please specify: (choice=Asthma)'1	1.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	1.0000
## 'Did the patient receive hemodialysis during this admission?'1	1.0000
## 'Was plasma given to the patient during this admission?'1	1.0000
## 'Was the patient placed in a prone position during their admission?'1	1.0000
## 'Age at Admission'	9.0000
## Per_Capita	263789.0000
## 'SIRS RR'	1.0000
## SIRS_WBC	1.0000
## SIRS...110	1.0000
## 'Creatinine (if 0 = N/A)'	11.8000
## 'Admission Date:'	37.0000
## 'Please specify: (choice=Diabetes)'1	1.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	1.0000
##	
##	
## Summary of balance for matched data:	
##	Means Treated
## distance	0.5131
## 'Insurance Class'COMM	0.2586
## 'Insurance Class'MEDICAID	0.1983
## 'Insurance Class'MEDICARE	0.5259
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0172
## 'Race:'American Indian/Alaskan Native	0.0086
## 'Race:'Asian	0.0172
## 'Race:'Black	0.1810
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0776
## 'Race:'Unknown	0.0948
## 'Does the patient have a history of cancer?'1	0.1638
## 'Please specify: (choice=Hypertension)'1	0.5431
## 'Please specify: (choice=Coronary Artery Disease)'1	0.1552
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0345
## 'Please specify: (choice=Asthma)'1	0.0345
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0603
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.1034
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0776
## 'Was plasma given to the patient during this admission?'1	0.0948

## 'Was the patient placed in a prone position during their admission?'	1	0.2586
## 'Age at Admission'		68.3534
## Per_Capita		51788.6724
## 'SIRS RR'		0.5603
## SIRS_WBC		0.1810
## SIRS...110		0.8190
## 'Creatinine (if 0 = N/A)'		1.1612
## 'Admission Date:'		18356.0086
## 'Please specify: (choice=Diabetes)'	1	0.3017
## 'SIRS TEMP'		0.0431
## 'Please specify: (choice=Chronic- Hepatitis C)'	1	0.0000
##		Means Control
## distance		0.3707
## 'Insurance Class'COMM		0.2500
## 'Insurance Class'MEDICAID		0.1724
## 'Insurance Class'MEDICARE		0.5776
## 'Insurance Class'OTHER		0.0000
## 'Insurance Class'SP		0.0000
## 'Race:'American Indian/Alaskan Native		0.0000
## 'Race:'Asian		0.0172
## 'Race:'Black		0.1724
## 'Race:'Native Hawaiian/Pacific Isle		0.0000
## 'Race:'Other		0.0517
## 'Race:'Unknown		0.0603
## 'Does the patient have a history of cancer?'	1	0.1466
## 'Please specify: (choice=Hypertension)'	1	0.6034
## 'Please specify: (choice=Coronary Artery Disease)'	1	0.1724
## 'Please specify: (choice=Congestive Heart Failure)'	1	0.0259
## 'Please specify: (choice=Asthma)'	1	0.0259
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'	1	0.0862
## 'Please specify: (choice=Chronic Renal Insufficiency)'	1	0.1034
## 'Please specify: (choice=Cirrhosis)'	1	0.0000
## 'Did the patient receive hemodialysis during this admission?'	1	0.0603
## 'Was plasma given to the patient during this admission?'	1	0.0948
## 'Was the patient placed in a prone position during their admission?'	1	0.0862
## 'Age at Admission'		69.9914
## Per_Capita		51060.0948
## 'SIRS RR'		0.5000
## SIRS_WBC		0.2241
## SIRS...110		0.7931
## 'Creatinine (if 0 = N/A)'		1.2664
## 'Admission Date:'		18357.3362
## 'Please specify: (choice=Diabetes)'	1	0.3103
## 'SIRS TEMP'		0.0690
## 'Please specify: (choice=Chronic- Hepatitis C)'	1	0.0000
##		SD Control
## distance		0.1600
## 'Insurance Class'COMM		0.4349
## 'Insurance Class'MEDICAID		0.3794
## 'Insurance Class'MEDICARE		0.4961
## 'Insurance Class'OTHER		0.0000
## 'Insurance Class'SP		0.0000
## 'Race:'American Indian/Alaskan Native		0.0000
## 'Race:'Asian		0.1307

## 'Race:'Black	0.3794
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.2224
## 'Race:'Unknown	0.2392
## 'Does the patient have a history of cancer?'1	0.3552
## 'Please specify: (choice=Hypertension)'1	0.4913
## 'Please specify: (choice=Coronary Artery Disease)'1	0.3794
## 'Please specify: (choice=Congestive Heart Failure)'1	0.1594
## 'Please specify: (choice=Asthma)'1	0.1594
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.2819
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.3059
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.2392
## 'Was plasma given to the patient during this admission?'1	0.2942
## 'Was the patient placed in a prone position during their admission?'1	0.2819
## 'Age at Admission'	18.2664
## Per_Capita	22421.4400
## 'SIRS RR'	0.5022
## SIRS_WBC	0.4188
## SIRS...110	0.4068
## 'Creatinine (if 0 = N/A)'	1.0803
## 'Admission Date:'	13.6394
## 'Please specify: (choice=Diabetes)'1	0.4646
## 'SIRS TEMP'	0.2545
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	Mean Diff
## distance	0.1424
## 'Insurance Class'COMM	0.0086
## 'Insurance Class'MEDICAID	0.0259
## 'Insurance Class'MEDICARE	-0.0517
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0172
## 'Race:'American Indian/Alaskan Native	0.0086
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0086
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0259
## 'Race:'Unknown	0.0345
## 'Does the patient have a history of cancer?'1	0.0172
## 'Please specify: (choice=Hypertension)'1	-0.0603
## 'Please specify: (choice=Coronary Artery Disease)'1	-0.0172
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0086
## 'Please specify: (choice=Asthma)'1	0.0086
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	-0.0259
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0172
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.1724
## 'Age at Admission'	-1.6379
## Per_Capita	728.5776
## 'SIRS RR'	0.0603
## SIRS_WBC	-0.0431
## SIRS...110	0.0259

## 'Creatinine (if 0 = N/A)'	-0.1052
## 'Admission Date:'	-1.3276
## 'Please specify: (choice=Diabetes)'1	-0.0086
## 'SIRS TEMP'	-0.0259
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Med
## distance	0.1365
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0000
## 'Race:'American Indian/Alaskan Native	0.0000
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0000
## 'Race:'Unknown	0.0000
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0000
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0000
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.0000
## 'Age at Admission'	4.0000
## Per_Capita	1858.0000
## 'SIRS RR'	0.0000
## SIRS_WBC	0.0000
## SIRS...110	0.0000
## 'Creatinine (if 0 = N/A)'	0.1000
## 'Admission Date:'	3.0000
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	0.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Mean
## distance	0.1426
## 'Insurance Class'COMM	0.0086
## 'Insurance Class'MEDICAID	0.0259
## 'Insurance Class'MEDICARE	0.0517
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	0.0172
## 'Race:'American Indian/Alaskan Native	0.0086
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0086
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	0.0259
## 'Race:'Unknown	0.0345
## 'Does the patient have a history of cancer?'1	0.0172
## 'Please specify: (choice=Hypertension)'1	0.0603

## 'Please specify: (choice=Coronary Artery Disease)'1	0.0172
## 'Please specify: (choice=Congestive Heart Failure)'1	0.0086
## 'Please specify: (choice=Asthma)'1	0.0086
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0259
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	0.0000
## 'Did the patient receive hemodialysis during this admission?'1	0.0172
## 'Was plasma given to the patient during this admission?'1	0.0000
## 'Was the patient placed in a prone position during their admission?'1	0.1724
## 'Age at Admission'	3.8103
## Per_Capita	3971.4052
## 'SIRS RR'	0.0603
## SIRS_WBC	0.0431
## SIRS...110	0.0259
## 'Creatinine (if 0 = N/A)'	0.1431
## 'Admission Date:'	3.9655
## 'Please specify: (choice=Diabetes)'1	0.0086
## 'SIRS TEMP'	0.0259
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.0000
##	eQQ Max
## distance	3.301e-01
## 'Insurance Class'COMM	1.000e+00
## 'Insurance Class'MEDICAID	1.000e+00
## 'Insurance Class'MEDICARE	1.000e+00
## 'Insurance Class'OTHER	0.000e+00
## 'Insurance Class'SP	1.000e+00
## 'Race:'American Indian/Alaskan Native	1.000e+00
## 'Race:'Asian	0.000e+00
## 'Race:'Black	1.000e+00
## 'Race:'Native Hawaiian/Pacific Isle	0.000e+00
## 'Race:'Other	1.000e+00
## 'Race:'Unknown	1.000e+00
## 'Does the patient have a history of cancer?'1	1.000e+00
## 'Please specify: (choice=Hypertension)'1	1.000e+00
## 'Please specify: (choice=Coronary Artery Disease)'1	1.000e+00
## 'Please specify: (choice=Congestive Heart Failure)'1	1.000e+00
## 'Please specify: (choice=Asthma)'1	1.000e+00
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	1.000e+00
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.000e+00
## 'Please specify: (choice=Cirrhosis)'1	0.000e+00
## 'Did the patient receive hemodialysis during this admission?'1	1.000e+00
## 'Was plasma given to the patient during this admission?'1	0.000e+00
## 'Was the patient placed in a prone position during their admission?'1	1.000e+00
## 'Age at Admission'	9.000e+00
## Per_Capita	3.161e+04
## 'SIRS RR'	1.000e+00
## SIRS_WBC	1.000e+00
## SIRS...110	1.000e+00
## 'Creatinine (if 0 = N/A)'	1.500e+00
## 'Admission Date:'	1.300e+01
## 'Please specify: (choice=Diabetes)'1	1.000e+00
## 'SIRS TEMP'	1.000e+00
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.000e+00
##	

```

## Percent Balance Improvement:
##
## distance 54.1653
## 'Insurance Class'COMM 83.0085
## 'Insurance Class'MEDICAID 45.8252
## 'Insurance Class'MEDICARE 53.8716
## 'Insurance Class'OTHER 0.0000
## 'Insurance Class'SP -26.2443
## 'Race:'American Indian/Alaskan Native -71.1656
## 'Race:'Asian 100.0000
## 'Race:'Black 31.1111
## 'Race:'Native Hawaiian/Pacific Isle 0.0000
## 'Race:'Other 25.2011
## 'Race:'Unknown 33.8471
## 'Does the patient have a history of cancer?'1 -2.3853
## 'Please specify: (choice=Hypertension)'1 28.2776
## 'Please specify: (choice=Coronary Artery Disease)'1 15.7100
## 'Please specify: (choice=Congestive Heart Failure)'1 84.3610
## 'Please specify: (choice=Asthma)'1 -1.0870
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 -17.0629
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 100.0000
## 'Please specify: (choice=Cirrhosis)'1 100.0000
## 'Did the patient receive hemodialysis during this admission?'1 -31.9149
## 'Was plasma given to the patient during this admission?'1 100.0000
## 'Was the patient placed in a prone position during their admission?'1 20.0344
## 'Age at Admission' 32.7361
## Per_Capita -93.9492
## 'SIRS RR' 70.1148
## SIRS_WBC -85.2590
## SIRS...110 75.5335
## 'Creatinine (if 0 = N/A)' 74.4672
## 'Admission Date:' 87.8781
## 'Please specify: (choice=Diabetes)'1 24.3902
## 'SIRS TEMP' -27800.0000
## 'Please specify: (choice=Chronic- Hepatitis C)'1 100.0000
##
## eQQ Med
## distance 60.702
## 'Insurance Class'COMM 0.000
## 'Insurance Class'MEDICAID 0.000
## 'Insurance Class'MEDICARE 0.000
## 'Insurance Class'OTHER 0.000
## 'Insurance Class'SP 0.000
## 'Race:'American Indian/Alaskan Native 0.000
## 'Race:'Asian 0.000
## 'Race:'Black 0.000
## 'Race:'Native Hawaiian/Pacific Isle 0.000
## 'Race:'Other 0.000
## 'Race:'Unknown 0.000
## 'Does the patient have a history of cancer?'1 0.000
## 'Please specify: (choice=Hypertension)'1 0.000
## 'Please specify: (choice=Coronary Artery Disease)'1 0.000
## 'Please specify: (choice=Congestive Heart Failure)'1 0.000
## 'Please specify: (choice=Asthma)'1 0.000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.000

```

## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.000
## 'Please specify: (choice=Cirrhosis)'1	0.000
## 'Did the patient receive hemodialysis during this admission?'1	0.000
## 'Was plasma given to the patient during this admission?'1	0.000
## 'Was the patient placed in a prone position during their admission?'1	0.000
## 'Age at Admission'	0.000
## Per_Capita	0.000
## 'SIRS RR'	0.000
## SIRS_WBC	0.000
## SIRS...110	0.000
## 'Creatinine (if 0 = N/A)'	0.000
## 'Admission Date:'	62.500
## 'Please specify: (choice=Diabetes)'1	0.000
## 'SIRS TEMP'	0.000
## 'Please specify: (choice=Chronic- Hepatitis C)'1	0.000
##	eQQ Mean
## distance	54.0474
## 'Insurance Class'COMM	83.3333
## 'Insurance Class'MEDICAID	50.0000
## 'Insurance Class'MEDICARE	53.8462
## 'Insurance Class'OTHER	0.0000
## 'Insurance Class'SP	-100.0000
## 'Race:'American Indian/Alaskan Native	-Inf
## 'Race:'Asian	0.0000
## 'Race:'Black	0.0000
## 'Race:'Native Hawaiian/Pacific Isle	0.0000
## 'Race:'Other	25.0000
## 'Race:'Unknown	33.3333
## 'Does the patient have a history of cancer?'1	0.0000
## 'Please specify: (choice=Hypertension)'1	22.2222
## 'Please specify: (choice=Coronary Artery Disease)'1	0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1	83.3333
## 'Please specify: (choice=Asthma)'1	0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1	0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1	0.0000
## 'Please specify: (choice=Cirrhosis)'1	100.0000
## 'Did the patient receive hemodialysis during this admission?'1	-100.0000
## 'Was plasma given to the patient during this admission?'1	100.0000
## 'Was the patient placed in a prone position during their admission?'1	20.0000
## 'Age at Admission'	6.1571
## Per_Capita	38.5522
## 'SIRS RR'	70.8333
## SIRS_WBC	-66.6667
## SIRS...110	76.9231
## 'Creatinine (if 0 = N/A)'	69.4853
## 'Admission Date:'	63.5210
## 'Please specify: (choice=Diabetes)'1	0.0000
## 'SIRS TEMP'	-Inf
## 'Please specify: (choice=Chronic- Hepatitis C)'1	100.0000
##	eQQ Max
## distance	25.3764
## 'Insurance Class'COMM	0.0000
## 'Insurance Class'MEDICAID	0.0000
## 'Insurance Class'MEDICARE	0.0000

```

## 'Insurance Class'OTHER                                0.0000
## 'Insurance Class'SP                                  0.0000
## 'Race:'American Indian/Alaskan Native                -Inf
## 'Race:'Asian                                          0.0000
## 'Race:'Black                                          0.0000
## 'Race:'Native Hawaiian/Pacific Isle                  0.0000
## 'Race:'Other                                          0.0000
## 'Race:'Unknown                                        0.0000
## 'Does the patient have a history of cancer?'1        0.0000
## 'Please specify: (choice=Hypertension)'1              0.0000
## 'Please specify: (choice=Coronary Artery Disease)'1   0.0000
## 'Please specify: (choice=Congestive Heart Failure)'1  0.0000
## 'Please specify: (choice=Asthma)'1                    0.0000
## 'Please specify: (choice=Chronic Obstructive Pulmonary Disease)'1 0.0000
## 'Please specify: (choice=Chronic Renal Insufficiency)'1 0.0000
## 'Please specify: (choice=Cirrhosis)'1                 100.0000
## 'Did the patient receive hemodialysis during this admission?'1 0.0000
## 'Was plasma given to the patient during this admission?'1 100.0000
## 'Was the patient placed in a prone position during their admission?'1 0.0000
## 'Age at Admission'                                   0.0000
## Per_Capita                                           88.0169
## 'SIRS RR'                                            0.0000
## SIRS_WBC                                             0.0000
## SIRS...110                                           0.0000
## 'Creatinine (if 0 = N/A)'                            87.2881
## 'Admission Date:'                                    64.8649
## 'Please specify: (choice=Diabetes)'1                  0.0000
## 'SIRS TEMP'                                          -Inf
## 'Please specify: (choice=Chronic- Hepatitis C)'1     100.0000
##
## Sample sizes:
##           Control Treated
## All           279    116
## Matched       116    116
## Unmatched     163     0
## Discarded      0     0

```

```

matched.cohort.hcq.2.sirs.1.no.labs = get_matches(my.full.match.hcq.sirs.1.no.labs, hcq.select.no.labs)

# is there any differene between the groups
binary.variables.hcq.2.sirs.1.no.labs = matched.cohort.hcq.2.sirs.1.no.labs %>%
  dplyr::select(Was.plasma.given.to.the.patient.during.this.admission., Does.the.patient.have.a.history)

chi.p.exit.3.hcq.2.sirs.1.no.labs = vector()
chi.variable.name.3.hcq.2.sirs.1.no.labs = vector()

for ( i in c(1:8,10:11, 13:15)) { # cirrhosis , hep c
  variable.1 = binary.variables.hcq.2.sirs.1.no.labs[[i]][binary.variables.hcq.2.sirs.1.no.labs$COVID.1]
  variable.0 = binary.variables.hcq.2.sirs.1.no.labs[[i]][binary.variables.hcq.2.sirs.1.no.labs$COVID.0]
  chisquare.test = chisq.test(variable.1, variable.0)
  chisquare.test.p.value = chisquare.test$p.value
  chi.p.exit.3.hcq.2.sirs.1.no.labs[i] = chisquare.test.p.value
  chi.variable.name.3.hcq.2.sirs.1.no.labs[i] = colnames(binary.variables.hcq.2.sirs.1.no.labs)[i]
}

```

```

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
## incorrect

## Warning in chisq.test(variable.1, variable.0): Chi-squared approximation may be
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## incorrect

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## incorrect

```

```

chi.df.3.hcq.2.sirs.1.no.labs = data.frame(chi.variable.name.3.hcq.2.sirs.1.no.labs, chi.p.exit.3.hcq.2
numerical.variables.hcq.2.sirs.1.no.labs = matched.cohort.hcq.2.sirs.1.no.labs %>%
  dplyr::select(COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission., Age.at

p.value.exit.3.hcq.2.sirs.1.no.labs = vector()
variable.name.exit.3.hcq.2.sirs.1.no.labs = vector()

for ( i in c(2:7, 9:ncol(numerical.variables.hcq.2.sirs.1.no.labs))) { # first column is hcq # skip dat
  variable.1 = numerical.variables.hcq.2.sirs.1.no.labs[[i]][numerical.variables.hcq.2.sirs.1.no.labs$C
  variable.0 = numerical.variables.hcq.2.sirs.1.no.labs[[i]][numerical.variables.hcq.2.sirs.1.no.labs$C
  middle.t.test = t.test(variable.1, variable.0)
  t.test.p.value = middle.t.test$p.value
  p.value.exit.3.hcq.2.sirs.1.no.labs[i] = t.test.p.value
  variable.name.exit.3.hcq.2.sirs.1.no.labs[i] = colnames(numerical.variables.hcq.2.sirs.2.no.labs)[i]
}

t.test.df.hcq.3.sirs.1.no.labs = data.frame(variable.name.exit.3.hcq.2.sirs.1.no.labs, p.value.exit.3.h
match.hcq.2.glm.sirs.1.no.labs = glm(death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the

```

```
match.hcq.2.summary.sirs.1.no.labs = summary(match.hcq.2.glm.sirs.1.no.labs) # p 0.00067
match.hcq.2.conf.intervals.sirs.1.no.labs = exp(cbind(coef(match.hcq.2.glm.sirs.1.no.labs), confint(mat
```

```
## Waiting for profiling to be done...
```

```
# demographics
## for saturated logistic regression with labs
# data: saturated.log.reg.conf.intervals.df
# cohort; complete.df
model.1.reds = complete.df$`REDCap Record ID`
model.1.dems = merged.data[merged.data$`REDCap Record ID` %in% model.1.reds,]
model.1.dems = droplevels(model.1.dems)

dem.cat.vars = c(3:67, 102)
model.1.cat.vars = model.1.dems[dem.cat.vars]
model.1.cat.vars.table = sapply(model.1.cat.vars, table)
model.1.cat.vars.table.df = data.frame(unlist(model.1.cat.vars.table))

dem.cont.vars = c(68:93)
model.1.cont.vars = model.1.dems[dem.cont.vars]
model.1.cont.vars.table = sapply(model.1.cont.vars, summary)
model.1.cont.vars.means = data.frame(sapply(model.1.cont.vars.table, "[", 3))

## for saturated logistic regression with out labs
# data: saturated.log.reg.no.labs.conf.intervals.df
# cohort: no.labs.dems.na

model.2.reds = no.labs.dems.na$`REDCap Record ID`
model.2.dems = merged.data[merged.data$`REDCap Record ID` %in% model.2.reds,]
model.2.dems = droplevels(model.2.dems)

dem.cat.vars.2 = c(3:67, 102)
model.2.cat.vars = model.2.dems[dem.cat.vars.2]
model.2.cat.vars.table = sapply(model.2.cat.vars, table)
model.2.cat.vars.table.df = data.frame(unlist(model.2.cat.vars.table))

dem.cont.vars.2 = c(68:93)
model.2.cont.vars = model.2.dems[dem.cont.vars.2]
model.2.cont.vars.table = sapply(model.2.cont.vars, summary)
model.2.cont.vars.means = data.frame(sapply(model.2.cont.vars.table, "[", 3))

# for quick death data
## data: quick.death.conf.intervals.df
# cohort quick.dems.na

model.3.reds = quick.dems.na$`REDCap Record ID`
model.3.dems = merged.data[merged.data$`REDCap Record ID` %in% model.3.reds,]
model.3.dems = droplevels(model.3.dems)

dem.cat.vars.3 = c(3:67, 102)
model.3.cat.vars = model.3.dems[dem.cat.vars.3]
model.3.cat.vars.table = sapply(model.3.cat.vars, table)
model.3.cat.vars.table.df = data.frame(unlist(model.3.cat.vars.table))
```

```

dem.cont.vars.3 = c(68:93)
model.3.cont.vars = model.3.dems[dem.cont.vars.3]
model.3.cont.vars.table = sapply(model.3.cont.vars, summary)
model.3.cont.vars.means = data.frame(sapply(model.3.cont.vars.table, "[", 3))

# model 2 b
## data:
## cohort: quick.death.variables.selected.crp.dem.na

model.2b.reds = quick.death.variables.selected.crp.dem.na$`REDCap Record ID`
model.2b.dems = merged.data[merged.data$`REDCap Record ID` %in% model.2b.reds,]
model.2b.dems = droplevels(model.2b.dems)

dem.cat.vars.2b = c(3:67, 102)
model.2b.cat.vars = model.2b.dems[dem.cat.vars.2b]
model.2b.cat.vars.table = sapply(model.2b.cat.vars, table)
model.2b.cat.vars.table.df = data.frame(unlist(model.2b.cat.vars.table))

dem.cont.vars.2b = c(68:93)
model.2b.cont.vars = model.2b.dems[dem.cont.vars.2b]
model.2b.cont.vars.table = sapply(model.2b.cont.vars, summary)
model.2b.cont.vars.means = data.frame(sapply(model.2b.cont.vars.table, "[", 3))

# for hcq
#data: match.hcq.conf.intervals
#cohort: matched.cohort.hcq

model.4.reds = matched.cohort.hcq$`REDCap Record ID`
model.4.dems = merged.data[merged.data$`REDCap Record ID` %in% model.4.reds,]
model.4.dems = droplevels(model.4.dems)

dem.cat.vars.4 = c(3:67, 102)
model.4.cat.vars = model.4.dems[dem.cat.vars.4]
model.4.cat.vars.table = sapply(model.4.cat.vars, table)
model.4.cat.vars.table.df = data.frame(unlist(model.4.cat.vars.table))

dem.cont.vars.4 = c(68:93)
model.4.cont.vars = model.4.dems[dem.cont.vars.4]
model.4.cont.vars.table = sapply(model.4.cont.vars, summary)
model.4.cont.vars.means = data.frame(sapply(model.4.cont.vars.table, "[", 3))

# for matched plasma (with labs )
# data : simple output in section
# cohort : matched.cohort

model.5.reds = matched.cohort$REDCap.Record.ID
model.5.dems = merged.data[merged.data$`REDCap Record ID` %in% model.5.reds,]
model.5.dems = droplevels(model.5.dems)

dem.cat.vars.5 = c(3:67, 102)
model.5.cat.vars = model.5.dems[dem.cat.vars.5]
model.5.cat.vars.table = sapply(model.5.cat.vars, table)
model.5.cat.vars.table.df = data.frame(unlist(model.5.cat.vars.table))

```

```

dem.cont.vars.5 = c(68:93)
model.5.cont.vars = model.5.dems[dem.cont.vars.5]
model.5.cont.vars.table = sapply(model.5.cont.vars, summary)
model.5.cont.vars.means = data.frame(sapply(model.5.cont.vars.table, "[", 3))

## put together
library(plyr)
cat.1.2 = merge(model.1.cat.vars.table.df, model.2.cat.vars.table.df, by = 0, all = T)
rownames(cat.1.2) <- cat.1.2[,1]
cat.1.2 <- cat.1.2[,-1]
cat.3 = merge(cat.1.2, model.3.cat.vars.table.df, by = 0, all = T)
rownames(cat.3) <- cat.3[,1]
cat.3 <- cat.3[,-1]
cat.4 = merge(cat.3, model.4.cat.vars.table.df, by = 0, all = T)
rownames(cat.4) <- cat.4[,1]
cat.4 <- cat.4[,-1]
cat.5 = merge(cat.4, model.5.cat.vars.table.df, by = 0, all = T)
rownames(cat.5) <- cat.5[,1]
cat.5 <- cat.5[,-1]
cat.6 = cat.5

cat.7 = merge(cat.6, model.2b.cat.vars.table.df, by = 0, all = T)
rownames(cat.7) <- cat.7[,1]
cat.7 <- cat.7[,-1]

cont.1.2 = merge(model.1.cont.vars.means, model.2.cont.vars.means, by = 0, all = T)
rownames(cont.1.2) <- cont.1.2[,1]
cont.1.2 <- cont.1.2[,-1]
cont.3 = merge(cont.1.2, model.3.cont.vars.means, by = 0, all = T)
rownames(cont.3) <- cont.3[,1]
cont.3 <- cont.3[,-1]
cont.4 = merge(cont.3, model.4.cont.vars.means, by = 0, all = T)
rownames(cont.4) <- cont.4[,1]
cont.4 <- cont.4[,-1]
cont.5 = merge(cont.4, model.5.cont.vars.means, by = 0, all = T)
rownames(cont.5) <- cont.5[,1]
cont.5 <- cont.5[,-1]
cont.6 = cont.5

cont.7 = merge(cont.6, model.2b.cont.vars.means, by = 0, all = T)
rownames(cont.7) <- cont.7[,1]
cont.7 <- cont.7[,-1]

```

```

# demographics p matching
# hcq match with labs
# matched.cohort.hcq

```

```

## yes

```

```

model.3a.reds = matched.cohort.hcq$REDCap.Record.ID[matched.cohort.hcq$COVID..Was.hydroxychloroquine..P
model.3a.dems = merged.data[merged.data$'REDCap Record ID' %in% model.3a.reds,]

```



```

model.3a.dems = droplevels(model.3a.dems)

dem.cat.vars.3a = c(3:67, 102)
model.3a.cat.vars = model.3a.dems[dem.cat.vars.3a]
model.3a.cat.vars.table = sapply(model.3a.cat.vars, table)
model.3a.cat.vars.table.df = data.frame(unlist(model.3a.cat.vars.table))

dem.cont.vars.3a = c(68:93)
model.3a.cont.vars = model.3a.dems[dem.cont.vars.3a]
model.3a.cont.vars.table = sapply(model.3a.cont.vars, summary)
model.3a.cont.vars.means = data.frame(sapply(model.3a.cont.vars.table, "[", 4))

## no
model.3a.reds.0 = matched.cohort.hcq$REDCap.Record.ID[matched.cohort.hcq$COVID..Was.hydroxychloroquine.
model.3a.dems.0 = merged.data[merged.data$REDCap.Record.ID %in% model.3a.reds.0,]
model.3a.dems.0 = droplevels(model.3a.dems.0)

dem.cat.vars.3a.0 = c(3:67, 102)
model.3a.cat.vars.0 = model.3a.dems.0[dem.cat.vars.3a.0]
model.3a.cat.vars.table.0 = sapply(model.3a.cat.vars.0, table)
model.3a.cat.vars.table.df.0 = data.frame(unlist(model.3a.cat.vars.table.0))

dem.cont.vars.3a.0 = c(68:93)
model.3a.cont.vars.0 = model.3a.dems.0[dem.cont.vars.3a.0]
model.3a.cont.vars.table.0 = lapply(model.3a.cont.vars.0, summary)
model.3a.cont.vars.means.0 = data.frame(sapply(model.3a.cont.vars.table.0, "[", 4))

model.3a.cat = merge(model.3a.cat.vars.table.df, model.3a.cat.vars.table.df.0, by = 0, all = T)
rownames(model.3a.cat) <- model.3a.cat[,1]
model.3a.cat <- model.3a.cat[,-1]
model.3a.cont = merge(model.3a.cont.vars.means, model.3a.cont.vars.means.0, by = 0, all = T)
rownames(model.3a.cont) <- model.3a.cont[,1]
model.3a.cont <- model.3a.cont[,-1]

# hcq match no labs
#matched.cohort.hcq.2

model.3b.reds = matched.cohort.hcq.2$REDCap.Record.ID[matched.cohort.hcq.2$COVID..Was.hydroxychloroquine.
model.3b.dems = merged.data[merged.data$REDCap.Record.ID %in% model.3b.reds,]
model.3b.dems = droplevels(model.3b.dems)

dem.cat.vars.3b = c(3:67, 102)
model.3b.cat.vars = model.3b.dems[dem.cat.vars.3b]
model.3b.cat.vars.table = sapply(model.3b.cat.vars, table)
model.3b.cat.vars.table.df = data.frame(unlist(model.3b.cat.vars.table))

dem.cont.vars.3b = c(68:93)
model.3b.cont.vars = model.3b.dems[dem.cont.vars.3b]
model.3b.cont.vars.table = sapply(model.3b.cont.vars, summary)
model.3b.cont.vars.means = data.frame(sapply(model.3b.cont.vars.table, "[", 4))

model.3b.reds.0 = matched.cohort.hcq.2$REDCap.Record.ID[matched.cohort.hcq.2$COVID..Was.hydroxychloroquine.

```

```

model.3b.dems.0 = merged.data[merged.data$'REDCap Record ID' %in% model.3b.reds.0,]
model.3b.dems.0 = droplevels(model.3b.dems.0)

dem.cat.vars.3b.0 = c(3:67, 102)
model.3b.cat.vars.0 = model.3b.dems.0[dem.cat.vars.3b.0]
model.3b.cat.vars.table.0 = sapply(model.3b.cat.vars.0, table)
model.3b.cat.vars.table.df.0 = data.frame(unlist(model.3b.cat.vars.table.0))

dem.cont.vars.3b.0 = c(68:93)
model.3b.cont.vars.0 = model.3b.dems.0[dem.cont.vars.3b.0]
model.3b.cont.vars.table.0 = lapply(model.3b.cont.vars.0, summary)
model.3b.cont.vars.means.0 = data.frame(sapply(model.3b.cont.vars.table.0, "[", 4))

model.3b.cat = merge(model.3b.cat.vars.table.df, model.3b.cat.vars.table.df.0, by = 0, all = T)
rownames(model.3b.cat) <- model.3b.cat[,1]
model.3b.cat <- model.3b.cat[,-1]
model.3b.cont = merge(model.3b.cont.vars.means, model.3b.cont.vars.means.0, by = 0, all = T)
rownames(model.3b.cont) <- model.3b.cont[,1]
model.3b.cont <- model.3b.cont[,-1]

# plasma match with labs
#matched.cohort

model.4a.reds = matched.cohort$REDCap.Record.ID[matched.cohort$Was.plasma.given.to.the.patient.during.t
model.4a.dems = merged.data[merged.data$'REDCap Record ID' %in% model.4a.reds,]
model.4a.dems = droplevels(model.4a.dems)

dem.cat.vars.4a = c(3:67, 102)
model.4a.cat.vars = model.4a.dems[dem.cat.vars.4a]
model.4a.cat.vars.table = sapply(model.4a.cat.vars, table)
model.4a.cat.vars.table.df = data.frame(unlist(model.4a.cat.vars.table))

dem.cont.vars.4a = c(68:93)
model.4a.cont.vars = model.4a.dems[dem.cont.vars.4a]
model.4a.cont.vars.table = sapply(model.4a.cont.vars, summary)
model.4a.cont.vars.means = data.frame(sapply(model.4a.cont.vars.table, "[", 4))

model.4a.reds.0 = matched.cohort$REDCap.Record.ID[matched.cohort$Was.plasma.given.to.the.patient.during
model.4a.dems.0 = merged.data[merged.data$'REDCap Record ID' %in% model.4a.reds.0,]
model.4a.dems.0 = droplevels(model.4a.dems.0)

dem.cat.vars.4a.0 = c(3:67, 102)
model.4a.cat.vars.0 = model.4a.dems.0[dem.cat.vars.4a.0]
model.4a.cat.vars.table.0 = sapply(model.4a.cat.vars.0, table)
model.4a.cat.vars.table.df.0 = data.frame(unlist(model.4a.cat.vars.table.0))

dem.cont.vars.4a.0 = c(68:93)
model.4a.cont.vars.0 = model.4a.dems.0[dem.cont.vars.4a.0]
model.4a.cont.vars.table.0 = lapply(model.4a.cont.vars.0, summary)
model.4a.cont.vars.means.0 = data.frame(sapply(model.4a.cont.vars.table.0, "[", 4))

model.4a.cat = merge(model.4a.cat.vars.table.df, model.4a.cat.vars.table.df.0, by = 0, all = T)

```

```

rownames(model.4a.cat) <- model.4a.cat[,1]
model.4a.cat <- model.4a.cat[,-1]
model.4a.cont = merge(model.4a.cont.vars.means, model.4a.cont.vars.means.0, by = 0, all = T)
rownames(model.4a.cont) <- model.4a.cont[,1]
model.4a.cont <- model.4a.cont[,-1]

# plasma match without labs
# matched.cohort.3.dem
model.4b.reds = matched.cohort.3.dem$REDCap.Record.ID[matched.cohort.3.dem$Was.plasma.given.to.the.patien
model.4b.dems = merged.data[merged.data$'REDCap Record ID' %in% model.4b.reds,]
model.4b.dems = droplevels(model.4a.dems)

dem.cat.vars.4b = c(3:67, 102)
model.4b.cat.vars = model.4a.dems[dem.cat.vars.4b]
model.4b.cat.vars.table = sapply(model.4b.cat.vars, table)
model.4b.cat.vars.table.df = data.frame(unlist(model.4b.cat.vars.table))

dem.cont.vars.4b = c(68:93)
model.4b.cont.vars = model.4b.dems[dem.cont.vars.4b]
model.4b.cont.vars.table = sapply(model.4b.cont.vars, summary)
model.4b.cont.vars.means = data.frame(sapply(model.4b.cont.vars.table, "[", 4))

model.4b.reds.0 = matched.cohort.3.dem$REDCap.Record.ID[matched.cohort.3.dem$Was.plasma.given.to.the.patien
model.4b.dems.0 = merged.data[merged.data$'REDCap Record ID' %in% model.4b.reds.0,]
model.4b.dems.0 = droplevels(model.4b.dems.0)

dem.cat.vars.4b.0 = c(3:67, 102)
model.4b.cat.vars.0 = model.4b.dems.0[dem.cat.vars.4b.0]
model.4b.cat.vars.table.0 = sapply(model.4b.cat.vars.0, table)
model.4b.cat.vars.table.df.0 = data.frame(unlist(model.4b.cat.vars.table.0))

dem.cont.vars.4b.0 = c(68:93)
model.4b.cont.vars.0 = model.4a.dems.0[dem.cont.vars.4b.0]
model.4b.cont.vars.table.0 = lapply(model.4b.cont.vars.0, summary)
model.4b.cont.vars.means.0 = data.frame(sapply(model.4b.cont.vars.table.0, "[", 4))

model.4b.cat = merge(model.4b.cat.vars.table.df, model.4b.cat.vars.table.df.0, by = 0, all = T)
rownames(model.4b.cat) <- model.4b.cat[,1]
model.4b.cat <- model.4b.cat[,-1]
model.4b.cont = merge(model.4b.cont.vars.means, model.4b.cont.vars.means.0, by = 0, all = T)
rownames(model.4b.cont) <- model.4b.cont[,1]
model.4b.cont <- model.4b.cont[,-1]

model.3a.b.cat = merge(model.3a.cat, model.3b.cat, by = 0, all = T)
rownames(model.3a.b.cat) <- model.3a.b.cat[,1]
model.3a.b.cat <- model.3a.b.cat[,-1]

model.3.4a.cat = merge(model.3a.b.cat, model.4a.cat, by = 0, all = T)
rownames(model.3.4a.cat) <- model.3.4a.cat[,1]
model.3.4a.cat <- model.3.4a.cat[,-1]

```

```

model.3.4.cat = merge(model.3.4a.cat, model.4b.cat, by = 0 , all = T)
rownames(model.3.4.cat) <- model.3.4.cat[,1]
model.3.4.cat <- model.3.4.cat[,-1]

model.3a.b.cont = merge(model.3a.cont , model.3b.cont , by = 0 , all = T)
rownames(model.3a.b.cont ) <- model.3a.b.cont[,1]
model.3a.b.cont <- model.3a.b.cont[,-1]

model.3.4a.cont = merge(model.3a.b.cont , model.4a.cont , by = 0 , all = T)
rownames(model.3.4a.cont ) <- model.3.4a.cont[,1]
model.3.4a.cont <- model.3.4a.cont[,-1]

model.3.4.cont = merge(model.3.4a.cont , model.4b.cont , by = 0 , all = T)
rownames(model.3.4.cont ) <- model.3.4.cont[,1]
model.3.4.cont <- model.3.4.cont[,-1]

# need to get date
all.p.score.data = list(model.3a.dems, model.3a.dems.0, model.3b.dems, model.3b.dems.0, model.4a.dems, model.4a.dems.0)
for ( i in 1:length(all.p.score.data)){
  middle.frame = all.p.score.data[[i]]
  print(median(middle.frame$`Admission Date:`))
}

```

```

## [1] "2020-04-06"
## [1] "2020-04-12"
## [1] "2020-04-04"
## [1] "2020-04-05"
## [1] "2020-04-16"
## [1] "2020-04-21"
## [1] "2020-04-16"
## [1] "2020-04-13"

```

```

## data outputs

# model 1a (saturated with labs)
model.1a = saturated.log.reg.conf.intervals.df
# model 1b (saturated without labs)
model.1b = saturated.log.reg.no.labs.conf.intervals.df
# model 2a (saturated with labs)
model.2a = quick.death.conf.intervals.df
# model 2b (saturated with only CRP)
model.2b = quick.death.just.crp.conf.intervals.df
# model 3a (matched hcq with labs)
match.hcq.summary

```

```

##
## Call:
## glm(formula = death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission,
##      family = binomial, data = matched.cohort)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max

```

```

## -1.2968 -0.7892 -0.7892 1.0626 1.6237
##
## Coefficients:
##
## Estimate
## (Intercept) -1.0068
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 1.2831
## Std. Error
## (Intercept) 0.2681
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 0.3896
## z value
## (Intercept) -3.756
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 3.293
## Pr(>|z|)
## (Intercept) 0.000173
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 0.000991
##
## (Intercept) ***
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
## Null deviance: 163.54 on 121 degrees of freedom
## Residual deviance: 152.22 on 120 degrees of freedom
## AIC: 156.22
##
## Number of Fisher Scoring iterations: 4

```

match.hcq.conf.intervals

```

##
## (Intercept) 0.3653846
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 3.6076555
## 2.5 %
## (Intercept) 0.2107692
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 1.7001885
## 97.5 %
## (Intercept) 0.6067198
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 7.8706095

```

model 3b (matched hcq without labs)

match.hcq.2.conf.intervals.sirs.2.no.labs

```

##
## (Intercept) 0.3181818
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 1.5013649
## 2.5 %
## (Intercept) 0.2335689
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 1.0004583
## 97.5 %
## (Intercept) 0.4267188
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 2.2631101

```

```
match.hcq.2.summary.sirs.2.no.labs
```

```
##
## Call:
## glm(formula = death ~ COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission,
##       family = binomial, data = matched.cohort.hcq.2.sirs.2.no.labs)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -0.8837  -0.8837  -0.7433   1.5028   1.6861
##
## Coefficients:
##                                     Estimate
## (Intercept)                        -1.1451
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1  0.4064
##                                     Std. Error
## (Intercept)                          0.1534
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1  0.2079
##                                     z value
## (Intercept)                          -7.464
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1  1.954
##                                     Pr(>|z|)
## (Intercept)                           8.4e-14
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1  0.0507
##
## (Intercept)                            ***
## COVID..Was.hydroxychloroquine..Plaquenil..given.during.the.patient.s.admission.1 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##      Null deviance: 552.29  on 463  degrees of freedom
## Residual deviance: 548.44  on 462  degrees of freedom
## AIC: 552.44
##
## Number of Fisher Scoring iterations: 4
```

```
# model 4a (matched plasma with labs)
match.1.summary
```

```
##
## Call:
## glm(formula = death ~ Was.plasma.given.to.the.patient.during.this.admission.,
##       family = binomial, data = matched.cohort)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -1.219  -0.780  -0.780   1.136   1.636
##
## Coefficients:
##
##                                     Estimate Std. Error
```

```

## (Intercept) -1.0341 0.2911
## Was.plasma.given.to.the.patient.during.this.admission.1 1.1325 0.3879
## z value Pr(>|z|)
## (Intercept) -3.553 0.000381 ***
## Was.plasma.given.to.the.patient.during.this.admission.1 2.920 0.003504 **
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
## Null deviance: 163.54 on 121 degrees of freedom
## Residual deviance: 154.62 on 120 degrees of freedom
## AIC: 158.62
##
## Number of Fisher Scoring iterations: 4

```

```
match.1.conf.intervals
```

```

## 2.5 %
## (Intercept) 0.3555556 0.1950046
## Was.plasma.given.to.the.patient.during.this.admission.1 3.1034483 1.4695238
## 97.5 %
## (Intercept) 0.615440
## Was.plasma.given.to.the.patient.during.this.admission.1 6.761467

```

```
# model 4b (matched plasma without labs )
```

```
match.3.summary
```

```

##
## Call:
## glm(formula = death ~ Was.plasma.given.to.the.patient.during.this.admission.,
##      family = binomial, data = matched.cohort.3)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -1.1855  -0.9479  -0.9479   1.1693   1.4257
##
## Coefficients:
##                                Estimate Std. Error
## (Intercept)                   -0.5671    0.2031
## Was.plasma.given.to.the.patient.during.this.admission.1 0.5862    0.2817
## z value Pr(>|z|)
## (Intercept)                   -2.793 0.00523 **
## Was.plasma.given.to.the.patient.during.this.admission.1 2.081 0.03744 *
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
## Null deviance: 287.38 on 209 degrees of freedom
## Residual deviance: 283.00 on 208 degrees of freedom
## AIC: 287
##
## Number of Fisher Scoring iterations: 4

```

```
match.3.conf.intervals
```

```
##                                     2.5 %  
## (Intercept)                        0.5671642 0.3776381  
## Was.plasma.given.to.the.patient.during.this.admission.1 1.7970648 1.0377565  
##                                     97.5 %  
## (Intercept)                        0.8394094  
## Was.plasma.given.to.the.patient.during.this.admission.1 3.1364362
```

```
# model 5 (saturated of just plasma cohort )  
#model.5 = just.plasma.conf.intervals.df
```

```
model.1 = merge(model.1a, model.1b, by = 0, all = T)  
rownames(model.1) <- model.1[,1]  
model.1 <- model.1[,-1] # .x is model 1a .y is model 1b  
  
model.1.2.a = merge(model.1, model.2a, by = 0, all = T)  
rownames(model.1.2.a) <- model.1.2.a[,1]  
model.1.2.a <- model.1.2.a[,-1] # .x is model 1a .y is model 1b no ending is 2a  
  
model.1.2 = merge(model.1.2.a, model.2b, by = 0, all = T)
```

```
## Warning in merge.data.frame(model.1.2.a, model.2b, by = 0, all = T): column  
## names 'V1.x', 'X2.5...x', 'X97.5...x', 'p.values.x', 'V1.y', 'X2.5...y',  
## 'X97.5...y', 'p.values.y' are duplicated in the result
```

```
rownames(model.1.2) <- model.1.2[,1]  
model.1.2 <- model.1.2[,-1] # .x is model 1a .y is model 1b .x.1 is model 2a .y.1 is model 2b
```