

Covid19_Impact_on_Hospitals_visualization.R

corn

2022-01-23

```
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(ggplot2)
```

```
library(scales)
```

```
library(ggrepel)
```

```
setwd("C:/Users/dongj/Desktop/Covid_Cal/The_impact_on_hospitals_in_the_CA")
```

```
data <- read.csv("./dataset/covid19hospitalbycounty_012322.csv")
```

```
data_v1 <- read.csv("./dataset/covid19hospitalbycounty_012322.csv")
```

```
positive_patients_by_county<- aggregate(hospitalized_covid_confirmed_patients ~ county,  
                                         data_v1,sum)
```

```
positive_patients_by_date<- aggregate(hospitalized_covid_confirmed_patients ~ todays_date,  
                                       data_v1,sum)
```

```
suspected_patients_by_county<- aggregate(hospitalized_suspected_covid_patients ~ county,  
                                          data_v1,sum)
```

```
suspected_patients_by_date<- aggregate(hospitalized_suspected_covid_patients ~ todays_date,  
                                         data_v1,sum)
```

```
icu_positive_patients_by_county<- aggregate(icu_covid_confirmed_patients ~ county,  
                                             data_v1,sum)
```

```
icu_positive_patients_by_date<- aggregate(icu_covid_confirmed_patients ~ todays_date,  
                                           data_v1,sum)
```

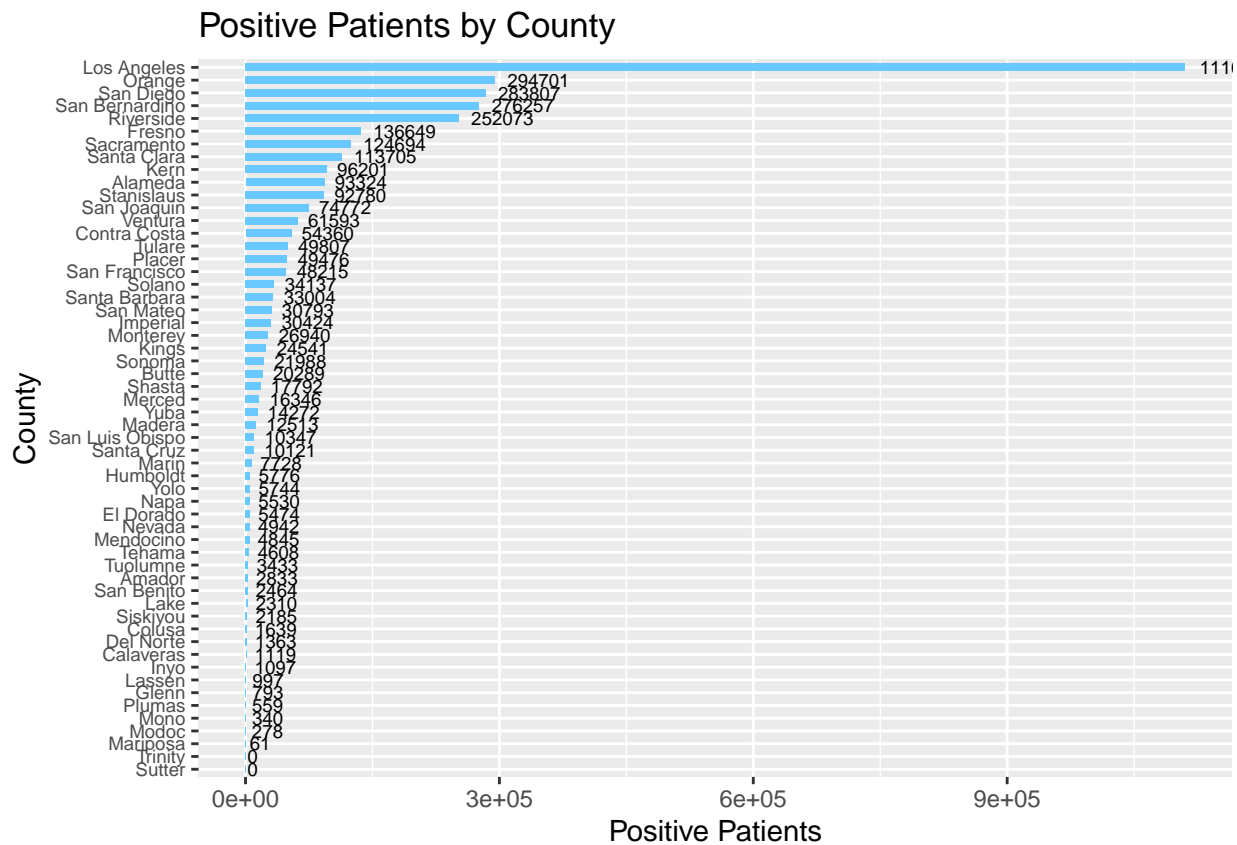
```
icu_suspected_patients_by_county<- aggregate(icu_suspected_covid_patients ~ county,
                                             data_v1,sum)

icu_suspected_patients_by_date<- aggregate(icu_suspected_covid_patients ~ todays_date,
                                             data_v1,sum)

icu_available_beds_by_county<- aggregate(icu_available_beds ~ county,
                                          data_v1,sum)

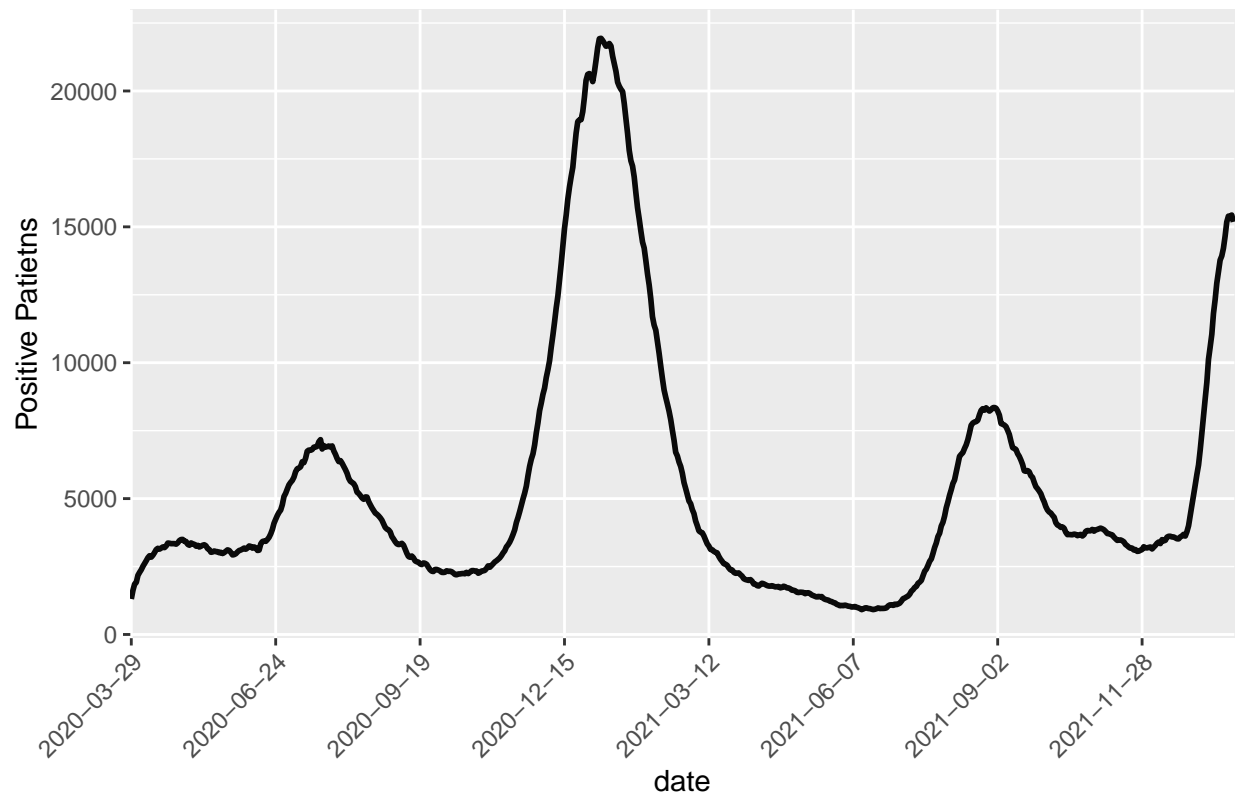
icu_available_beds_by_date<- aggregate(icu_available_beds ~ todays_date,
                                       data_v1,sum)
```

```
positive_patients_by_county_graph <- ggplot(data=positive_patients_by_county,
      aes(x = hospitalized_covid_confirmed_patients,
          y = reorder(county,
                      hospitalized_covid_confirmed_patients,
                      sum))
      )+
  geom_bar(stat = "identity",
          width=.6,
          position = position_dodge(width = 0.5),
          fill = "#69c8ff")+
  labs(
    title="Positive Patients by County",
    x = "Positive Patients",
    y = "County"
  )+
  theme(axis.text.y = element_text(size = 7)) +
  geom_text(aes(label= hospitalized_covid_confirmed_patients),
            hjust = -0.2,
            size = 2.5,
            position = position_dodge(width = 1),
            inherit.aes = TRUE)
options(repr.plot.width = 14, repr.plot.height = 8)
positive_patients_by_county_graph
```



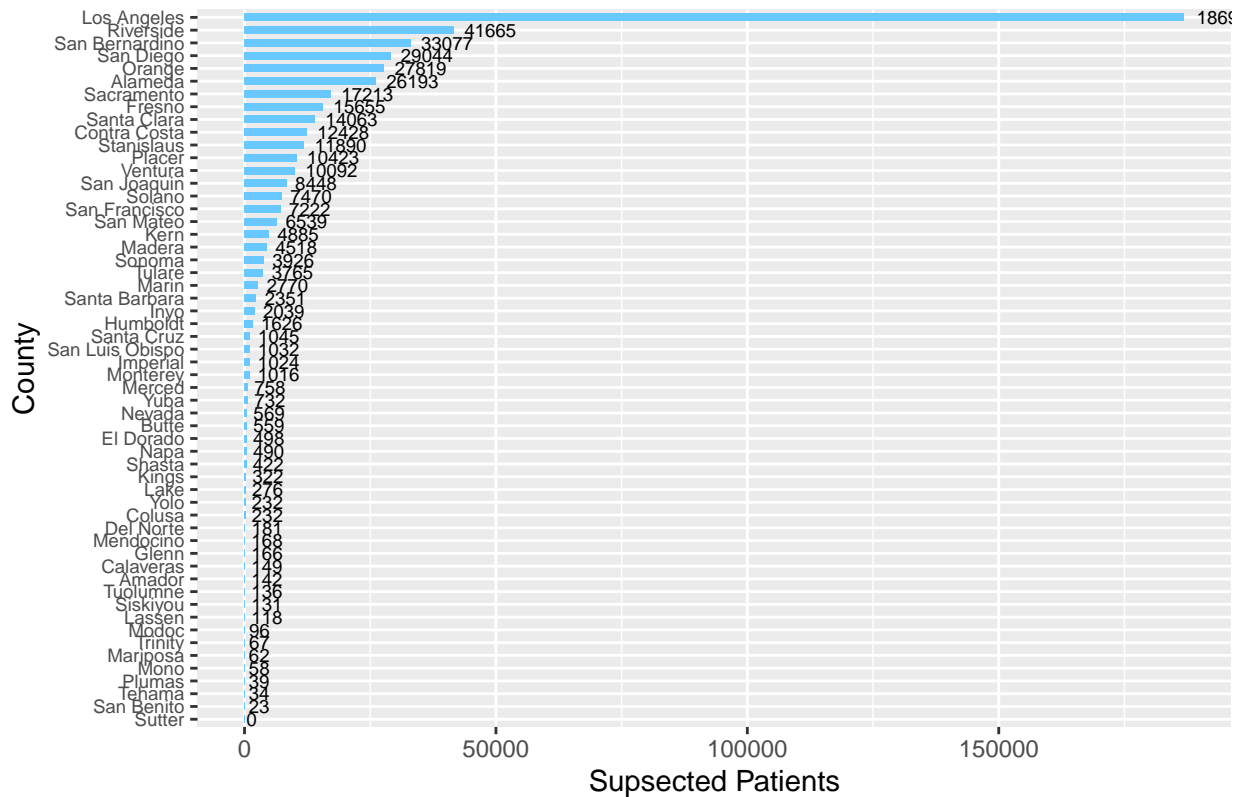
```
positive_patients_by_date_graph <-ggplot(data =positive_patients_by_date)+
  geom_line(aes(x=todays_date,
                y=hospitalized_covid_confirmed_patients,
                group= 1),
            col = "#0a0a0a",
            size =1)+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)])
labs(
  title="Positive Patients by Date",
  x = "date",
  y = "Positive Patietns"
)+
theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
positive_patients_by_date_graph
```

Positive Patients by Date



```
suspected_patients_by_county_graph <- ggplot(data=suspected_patients_by_county,
      aes(x = hospitalized_suspected_covid_patients,
        y = reorder(county,
          hospitalized_suspected_covid_patients,
            sum))
    )+
  geom_bar(stat = "identity",
    width=.6,
    position = position_dodge(width = 0.5),
    fill = "#69c8ff")+
  labs(
    title="Suspected Patients by County",
    x = "Suspected Patients",
    y = "County"
  )+
  theme(axis.text.y = element_text(size = 7)) +
  geom_text(aes(label= hospitalized_suspected_covid_patients),
    hjust = -0.2,
    size = 2.5,
    position = position_dodge(width = 1),
    inherit.aes = TRUE)
options(repr.plot.width = 14, repr.plot.height = 8)
suspected_patients_by_county_graph
```

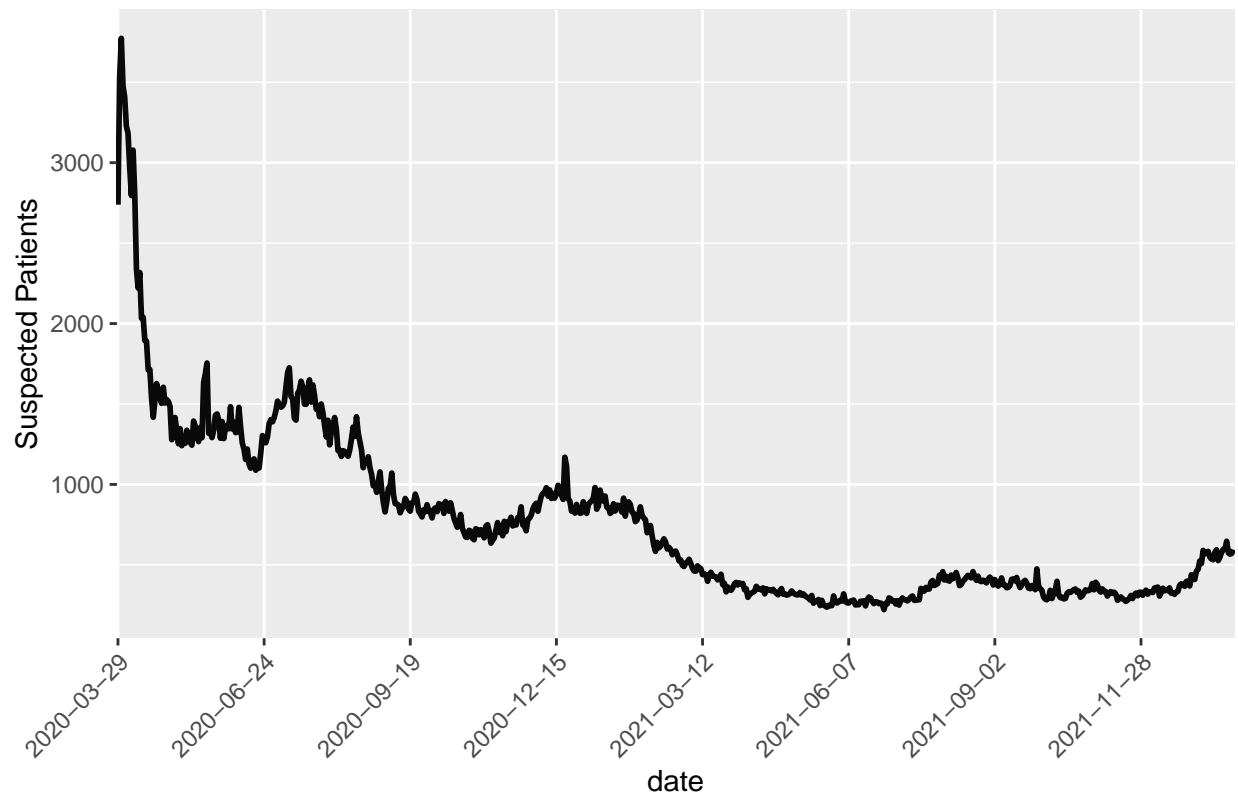
Suspected Patients by County



```
suspected_patients_by_date_graph <-ggplot(data =suspected_patients_by_date)+
  geom_line(aes(x=todays_date,
                y=hospitalized_suspected_covid_patients,
                group= 1),
            col = "#0a0a0a",
            size =1)+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)]
  labs(
    title="Suspected Patients by Date",
    x = "date",
    y = "Suspected Patients"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))

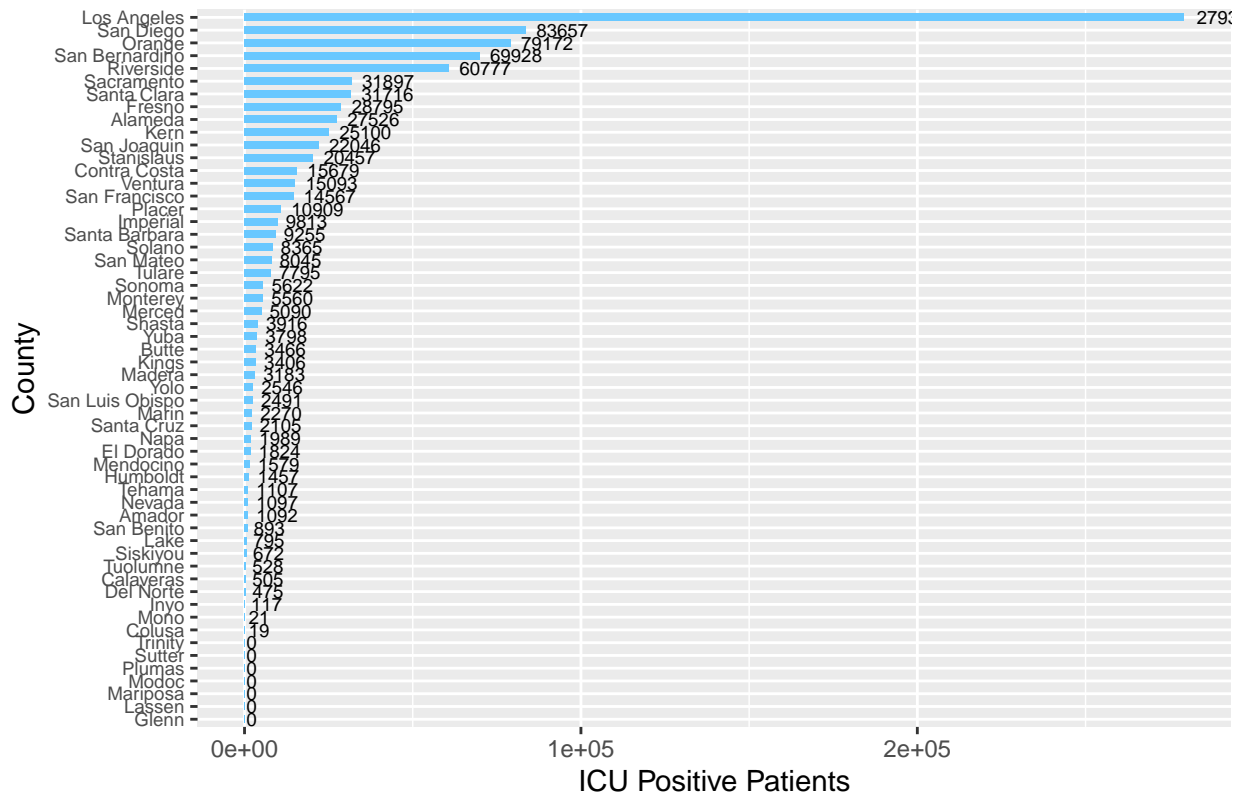
suspected_patients_by_date_graph
```

Suspected Patients by Date



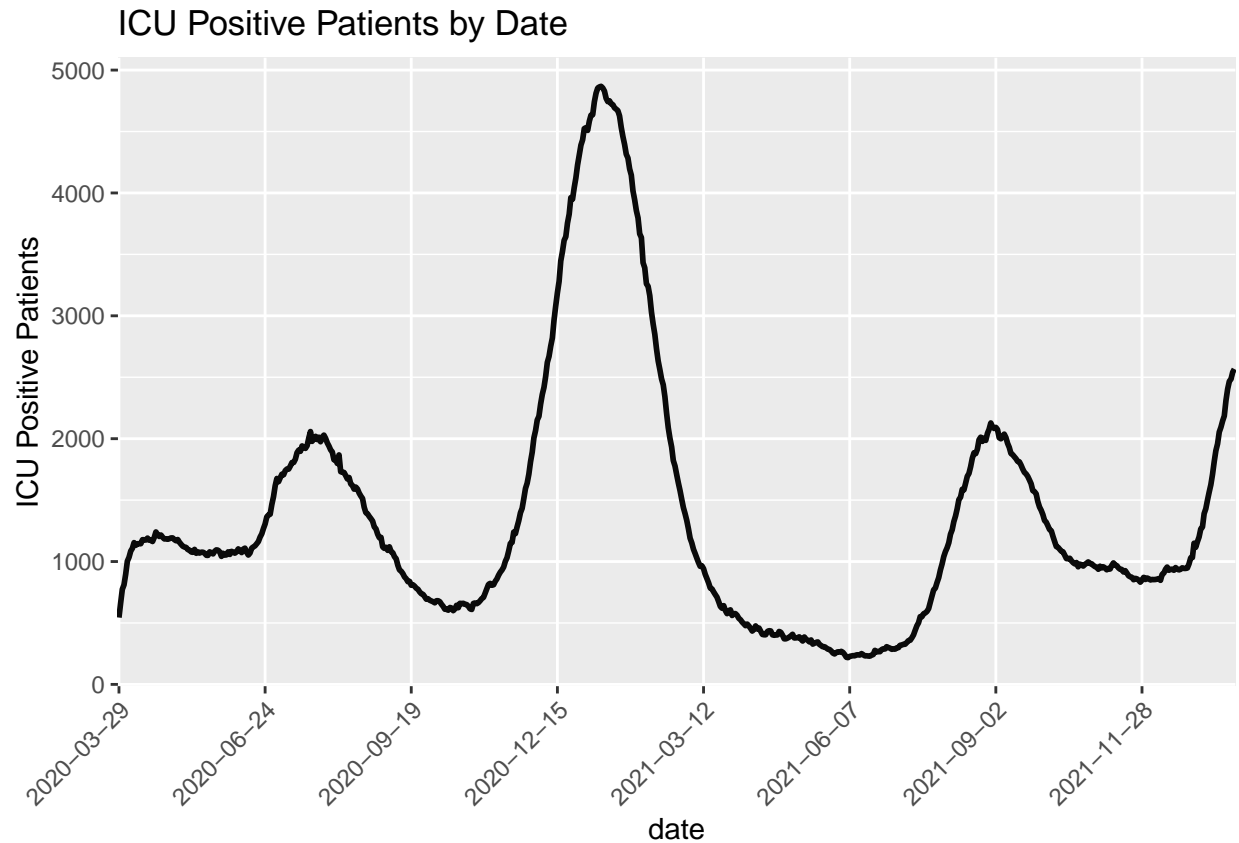
```
icu_positive_patients_by_county_graph <- ggplot(data=icu_positive_patients_by_county,
  aes(x = icu_covid_confirmed_patients,
    y = reorder(county,
      icu_covid_confirmed_patients,
      sum))
)+
geom_bar(stat = "identity",
  width=.6,
  position = position_dodge(width = 0.5),
  fill = "#69c8ff")+
labs(
  title="ICU Positive Patients by County",
  x = "ICU Positive Patients",
  y = "County"
)+
theme(axis.text.y = element_text(size = 7)) +
geom_text(aes(label= icu_covid_confirmed_patients),
  hjust = -0.2,
  size = 2.5,
  position = position_dodge(width = 1),
  inherit.aes = TRUE)
options(repr.plot.width = 14, repr.plot.height = 8)
icu_positive_patients_by_county_graph
```

ICU Positive Patients by County



```
icu_positive_patients_by_date_graph <-ggplot(data =icu_positive_patients_by_date)+
  geom_line(aes(x=todays_date,
                y=icu_covid_confirmed_patients,
                group= 1),
            col = "#0a0a0a",
            size =1)+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*)]
  labs(
    title="ICU Positive Patients by Date",
    x = "date",
    y = "ICU Positive Patients"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))

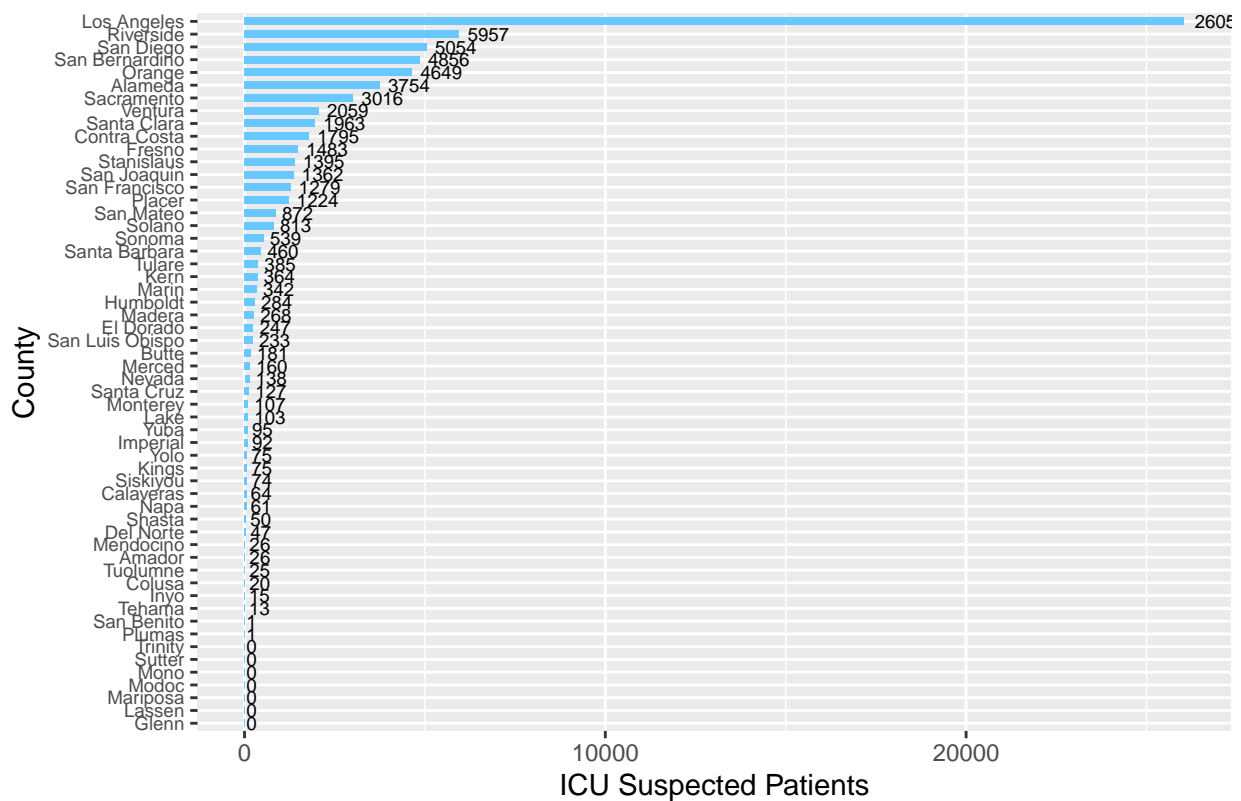
icu_positive_patients_by_date_graph
```



```
icu_suspected_patients_by_county_graph <- ggplot(data=icu_suspected_patients_by_county,
  aes(x = icu_suspected_covid_patients,
    y = reorder(county,
      icu_suspected_covid_patients,
      sum))
  )+
  geom_bar(stat = "identity",
    width=.6,
    position = position_dodge(width = 0.5),
    fill = "#69c8ff")+
  labs(
    title="ICU Suspected Patients by County",
    x = "ICU Suspected Patients",
    y = "County"
  )+
  theme(axis.text.y = element_text(size = 7)) +
  geom_text(aes(label= icu_suspected_covid_patients),
    hjust = -0.2,
    size = 2.5,
    position = position_dodge(width = 1),
    inherit.aes = TRUE)

options(repr.plot.width = 14, repr.plot.height = 8)
icu_suspected_patients_by_county_graph
```

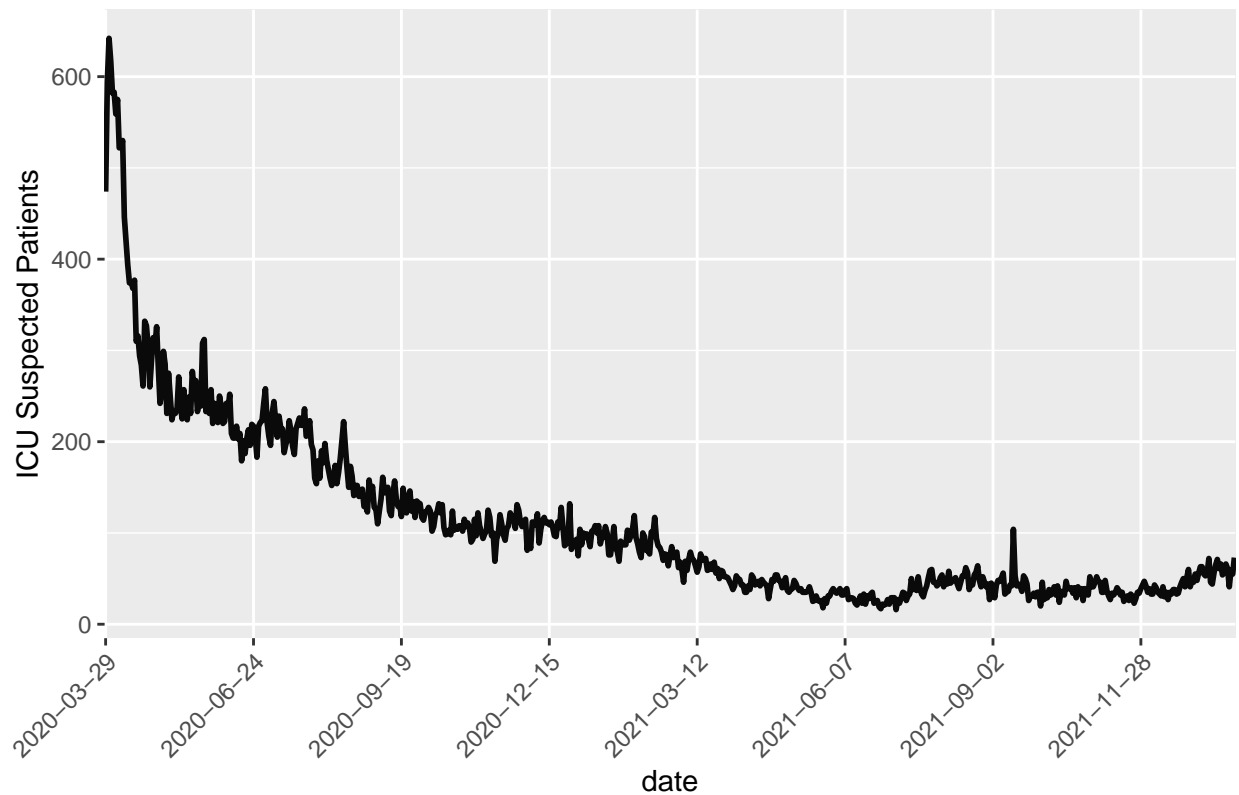

ICU Suspected Patients by County



```
icu_suspected_patients_by_date_graph <-ggplot(data =icu_suspected_patients_by_date)+
  geom_line(aes(x=todays_date,
                y=icu_suspected_covid_patients,
                group= 1),
            col = "#0a0a0a",
            size =1)+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*)
  labs(
    title="ICU Suspected Patients by Date",
    x = "date",
    y = "ICU Suspected Patients"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1)

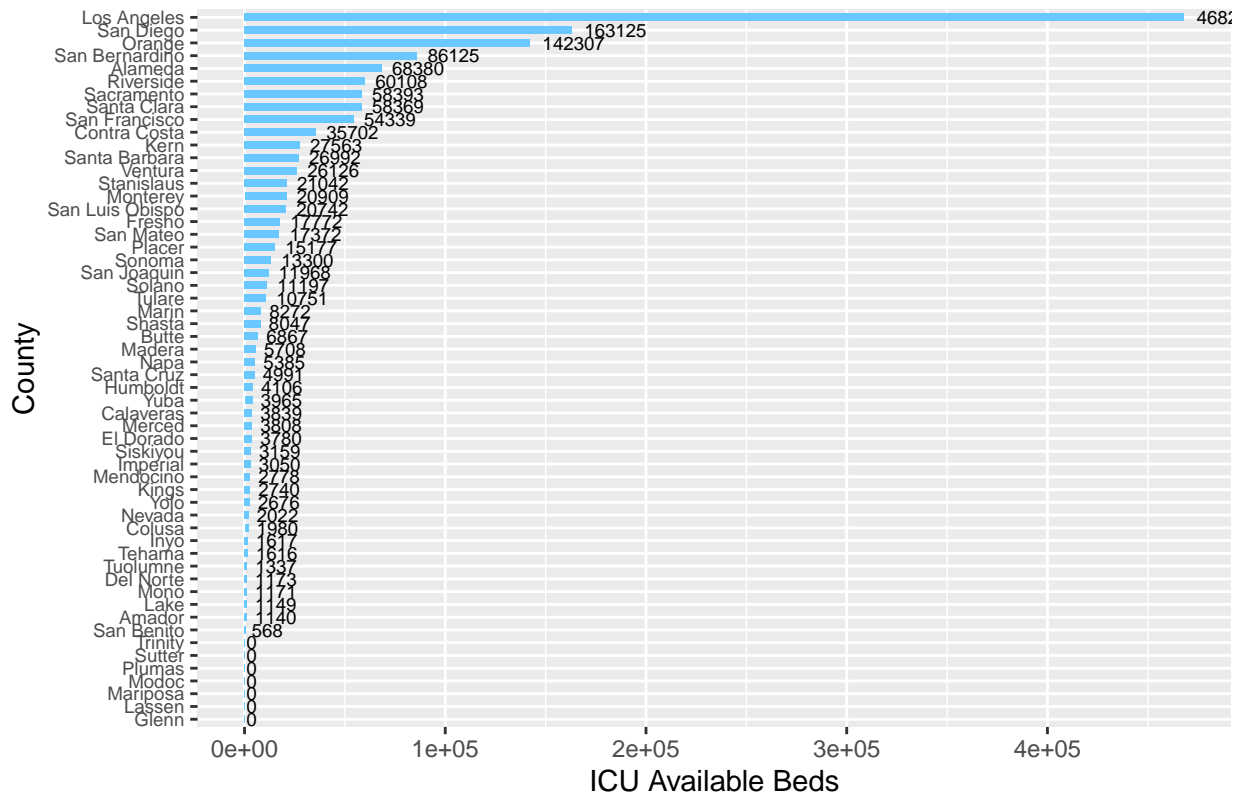
icu_suspected_patients_by_date_graph
```

ICU Suspected Patients by Date



```
icu_available_beds_by_county_graph <- ggplot(data=icu_available_beds_by_county,
      aes(x = icu_available_beds,
          y = reorder(county,
                      icu_available_beds,
                      sum)))
  )+
  geom_bar(stat = "identity",
           width=.6,
           position = position_dodge(width = 0.5),
           fill = "#69c8ff")+
  labs(
    title="ICU Available Beds by County",
    x = "ICU Available Beds",
    y = "County"
  )+
  theme(axis.text.y = element_text(size = 7)) +
  geom_text(aes(label= icu_available_beds),
            hjust = -0.2,
            size = 2.5,
            position = position_dodge(width = 1),
            inherit.aes = TRUE)
options(repr.plot.width = 14, repr.plot.height = 8)
icu_available_beds_by_county_graph
```

ICU Available Beds by County



```
icu_available_beds_by_date_graph <-ggplot(data =icu_available_beds_by_date)+
  geom_line(aes(x=todays_date,
                y=icu_available_beds,
                group= 1),
            col = "#0a0a0a",
            size =1)+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)]
  labs(
    title="ICU Available Beds by Date",
    x = "date",
    y = "ICU Available Beds"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))

icu_available_beds_by_date_graph
```

ICU Available Beds by Date

