

## 270 Individual Project

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We first load the necessary libraries and the data provided by the instructor

```
#both data sets are needed at different stages of the project  
uscounties=read.csv("us-counties.csv")  
allofit=read_csv("all-states-history.csv")
```

Figure 1 is quite easily reproducible after a few steps of data manipulation

```
# first figure  
new=uscounties%>%group_by(date)%>%summarise(total=sum(cases))  
  
new$new_cases=new$total-lag(new$total)  
new$avg7=rollmean(new$new_cases,k=7,fill=NA)  
plot(new$avg7, ylab = "Number of Cases", xlab = "Days Since Beginning of  
Pandemic")
```

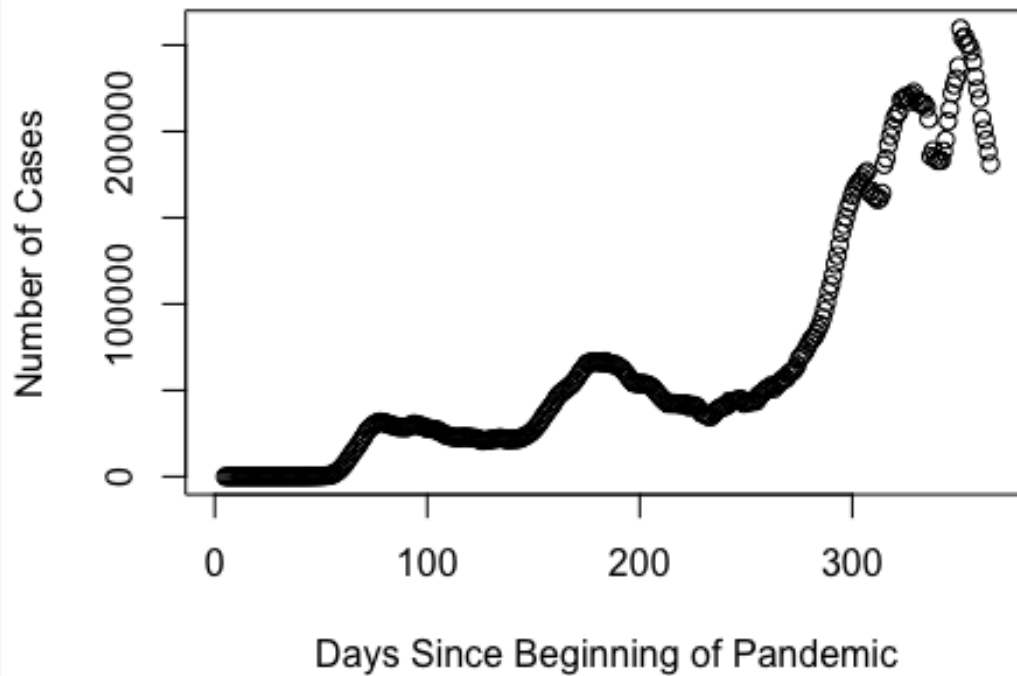
We here generate the first table row by row

```
#second figure/ first table  
#cases  
newanko=new%>%filter(date=="2021-01-17")  
totalcase_reported=sum(newanko$total,na.rm = TRUE)  
case_reported17=sum(newanko$new_cases,na.rm = TRUE)  
case_14daychange=(201117-195042)/201117  
  
#deaths  
newi=uscounties%>%group_by(date)%>%summarise(lanmo=sum(deaths,na.rm=T))  
  
totaldeath_reported=newi%>%filter(date=="2021-01-17")%>%select(lanmo)  
newi$new_deaths=newi$lanmo-lag(newi$lanmo)  
death_reported17=newi%>%filter(date=="2021-01-17")%>%select(new_deaths)  
newi$avg7=rollmean(newi$new_deaths,k=7,align="right",fill=NA)  
  
#hospitalization  
allofit1=allofit%>%select(date,state,hospitalized,hospitalizedCumulative,hosp  
italizedCurrently)  
hh=allofit1%>%group_by(date)%>%summarise(h=sum(hospitalizedCurrently,na.rm=T)  
)  
  
hospitalization_reported17=hh%>%filter(date=="2021-01-17")%>%select(h)  
hh$avg7=rollmean(hh$h,k=7,align="right",fill=NA)
```

```
# fourth and last figure/last table
#total cases
casestate=uscounties%>%group_by(state,date)
upto_17data=uscounties%>%filter(date=="2021-01-17")
oo=upto_17data%>%group_by(state)%>%summarise(tout=sum(cases))

#avg cases in last 7 days
neww=uscounties%>%group_by(state,date)%>%summarise(total=sum(cases))

neww$new_cases=neww$total-lag(neww$total)
neww$avg7=rollmean(neww$new_cases,k=7,align = "right",fill=NA)
avg7_eachstate=neww%>%filter(date=="2021-01-17")
```



	Total reported	On Jan 17	14-Day Change
Cases	23.9+ mil	169641	+3%
Deaths	397612	1730	+26%
Hospitalized		124387	+3%

#### Cases

	Total Cases	Daily Avg. in last 7 days
Alabama	422598	2957
Alaska	51630	242
Arizona	673882	7905