

final_project

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R Markdown

```
library(tidyverse)
library(leaflet)
library(RColorBrewer)
library(socviz)
library(usmap)
library(maps)
library(cowplot)
```

```
facetCardio <- mycardio %>%
  select(Gender, Smoke:Cardio) %>%
  gather("Lifestyle", "Occurance", -Gender) %>%
  group_by(Gender, Lifestyle, Occurance) %>%
  count()
```

```
actFe <- facetCardio %>%
  filter(Gender == "Female" & Lifestyle == "Active" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

Adding missing grouping variables: `Occurance`

```
alcFe <- facetCardio %>%
  filter(Gender == "Female" & Lifestyle == "Alcohol" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

Adding missing grouping variables: `Occurance`

```
cardFe <- facetCardio %>%
  filter(Gender == "Female" & Lifestyle == "Cardio" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

Adding missing grouping variables: `Occurance`

```
smoFe <- facetCardio %>%
  filter(Gender == "Female" & Lifestyle == "Smoke" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

Adding missing grouping variables: `Occurance`

```
actMa <- facetCardio %>%
  filter(Gender == "Male" & Lifestyle == "Active" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

Adding missing grouping variables: `Occurance`

```
alcMa <- facetCardio %>%
  filter(Gender == "Male" & Lifestyle == "Alcohol" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

Adding missing grouping variables: `Occurance`

```
cardMa <- facetCardio %>%
  filter(Gender == "Male" & Lifestyle == "Cardio" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

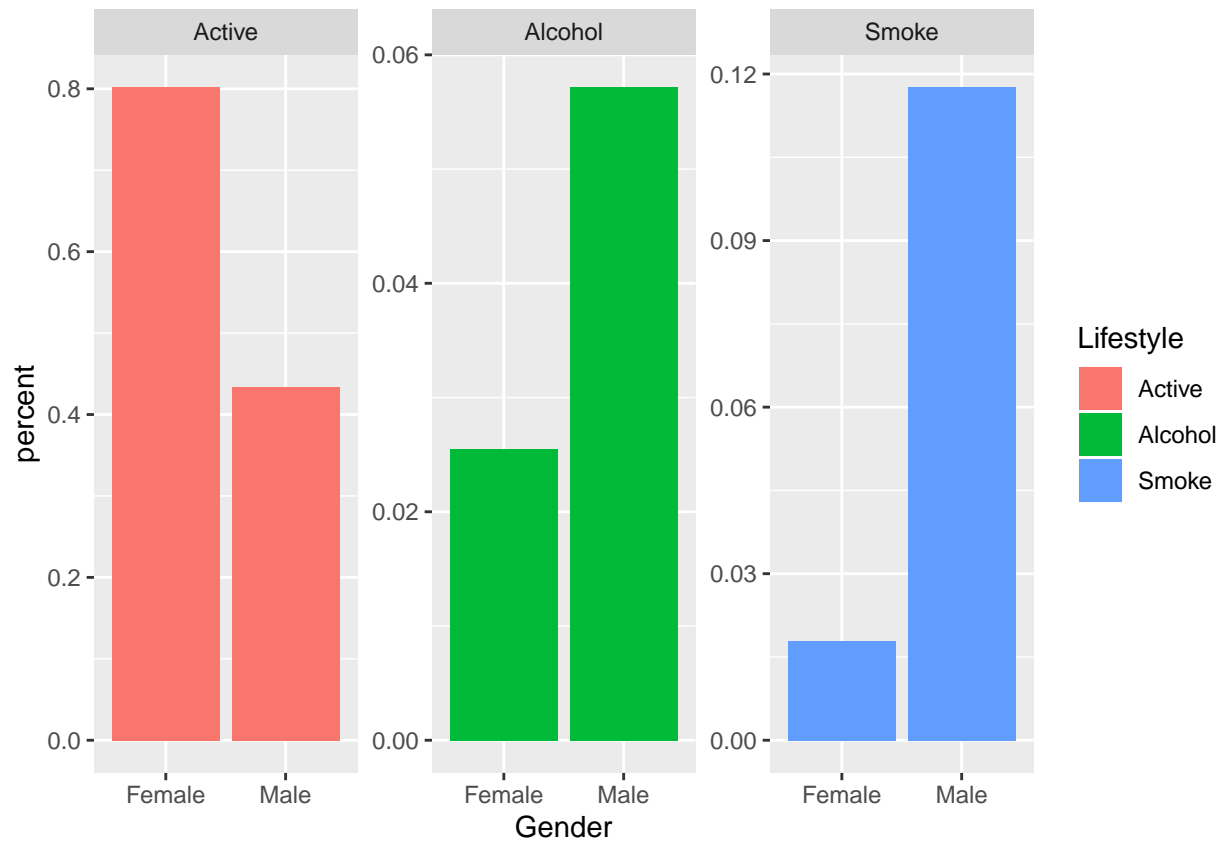
Adding missing grouping variables: `Occurance`

```
smoMa <- facetCardio %>%
  filter(Gender == "Male" & Lifestyle == "Smoke" & Occurance == "Yes") %>%
  mutate(percent = n/45530) %>%
  select(Gender, Lifestyle, percent)
```

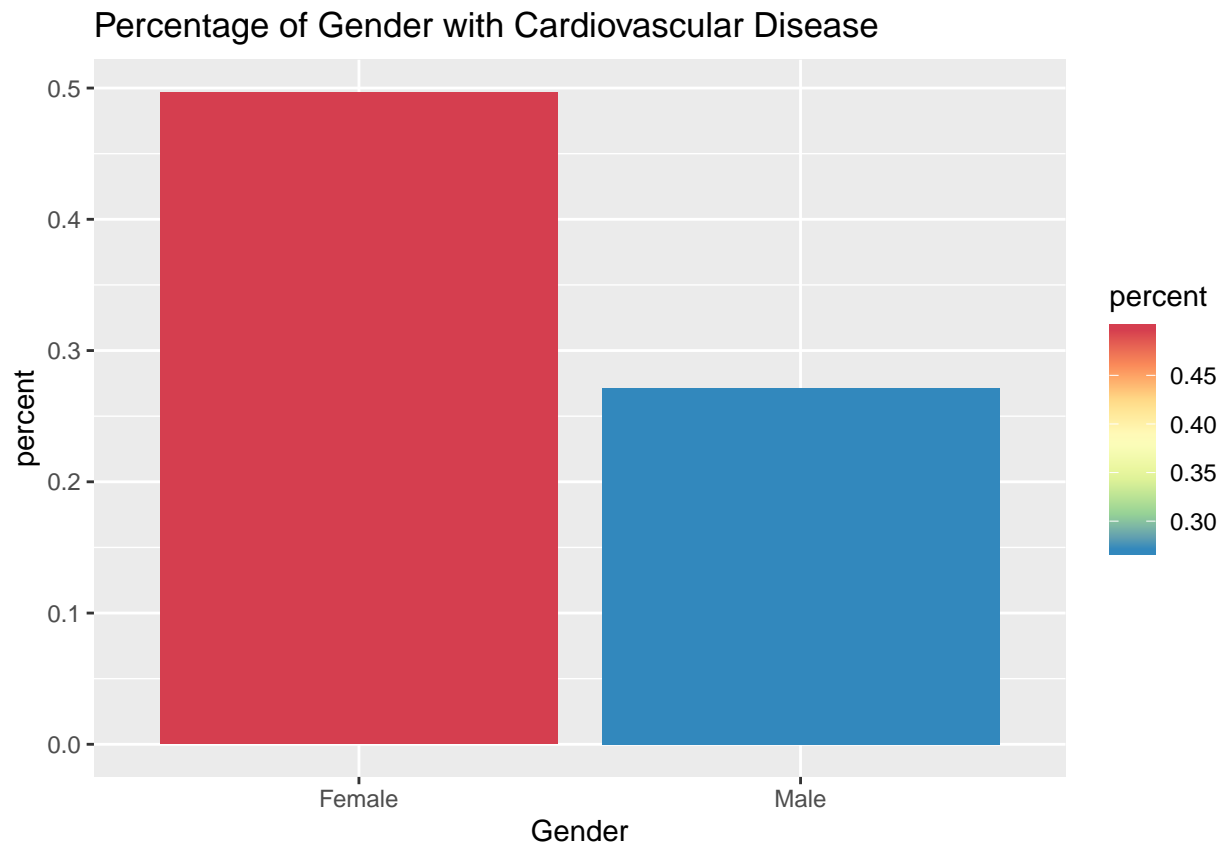
Adding missing grouping variables: `Occurance`

```
percentLife <- bind_rows(actFe, actMa, alcFe, alcMa, cardFe, cardMa, smoFe, smoMa)
percentLife$Occurance <- NULL
```

```
percentLife %>%
  filter(Lifestyle == "Active" | Lifestyle == "Alcohol" | Lifestyle == "Smoke") %>%
  ggplot() +
  geom_bar(mapping = aes(x = Gender, y = percent, fill = Lifestyle), stat = "identity") +
  facet_wrap(~Lifestyle, scales = "free_y")
```



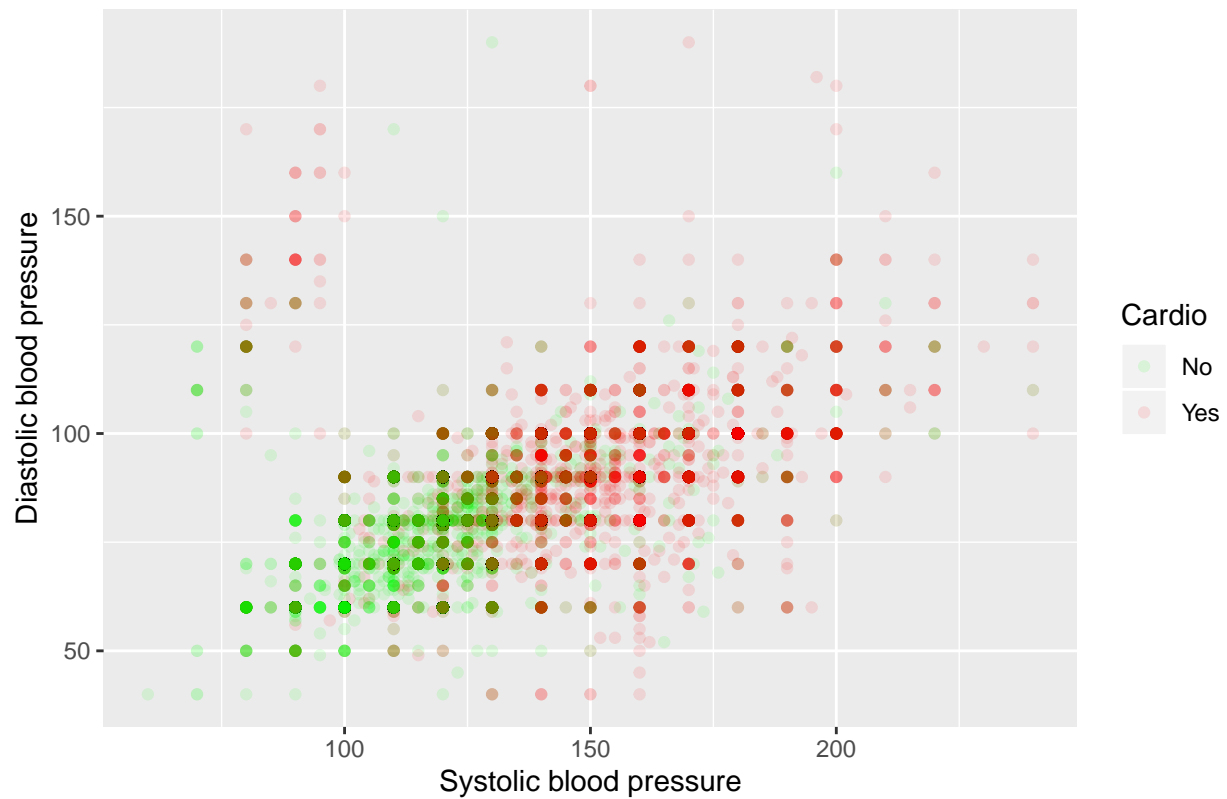
```
percentLife %>%
  filter(Lifestyle == "Cardio") %>%
  ggplot() +
  geom_bar(mapping = aes(x = Gender, y = percent, fill = percent), stat = "identity") +
  scale_fill_distiller(palette = "Spectral") +
  labs(title = "Percentage of Gender with Cardiovascular Disease")
```



```
mycolors <- c("green", "red")

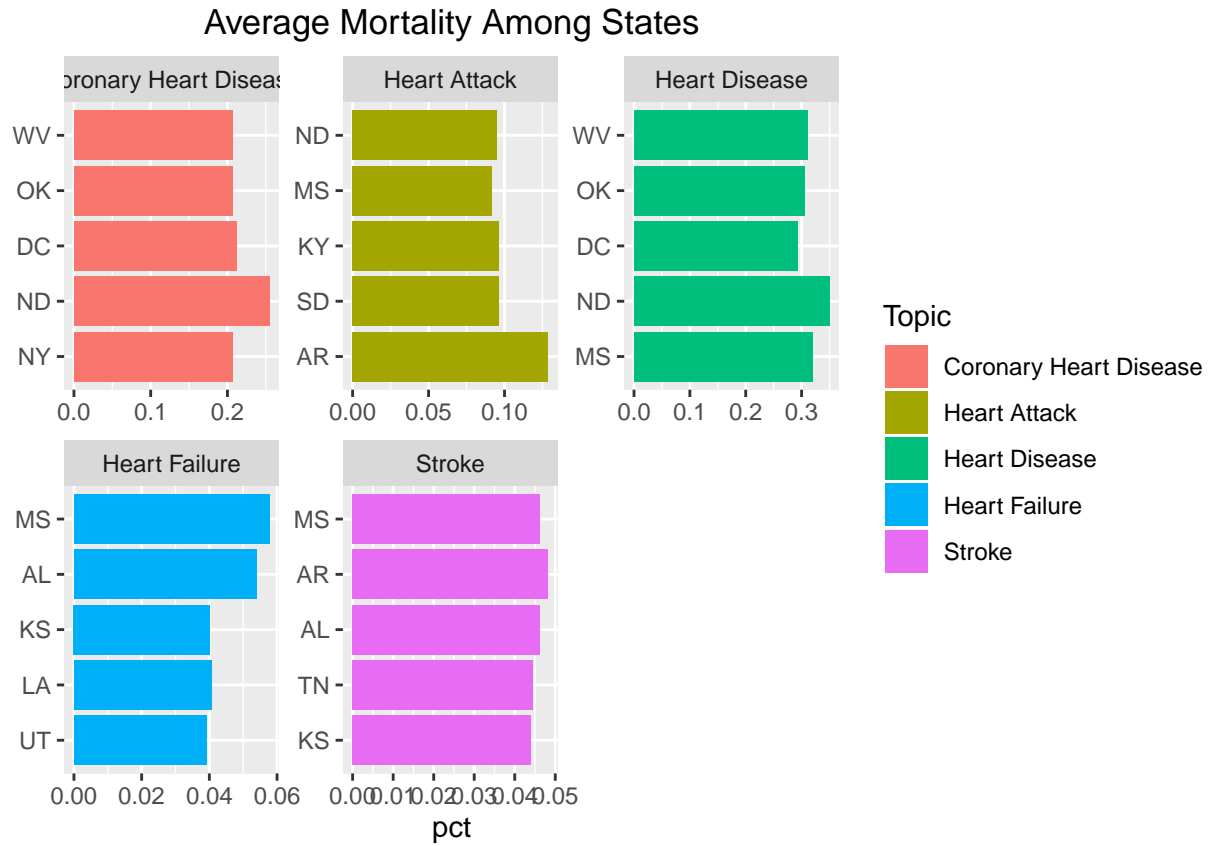
mycardio %>%
  filter(`Diastolic blood pressure` < 200 & `Systolic blood pressure` < 300 & `Diastolic blood pressure` < 100) %>%
  filter(Weight < 500) %>%
  ggplot() +
    geom_point(mapping = aes(x = `Systolic blood pressure`,
                           y = `Diastolic blood pressure`,
                           color = Cardio),
              alpha = 0.1) +
    scale_color_manual(values = mycolors) +
    labs(title = "Blood Pressure with Cardiovascular Disease")
```

Blood Pressure with Cardiovascular Disease

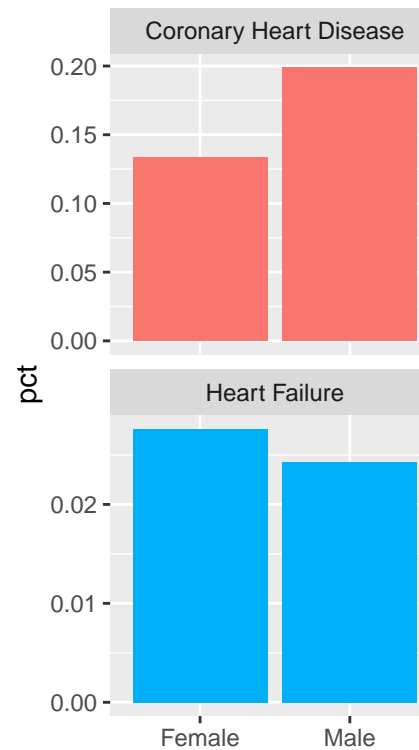


```
# mycardio %>%
#   filter(Cholesterol == "1" & Glucose == "1" & `Diastolic blood pressure` < 200 & `Systolic blood pressure` < 200) %>%
#   filter(Weight < 500) %>%
#   ggplot() +
#     geom_point(mapping = aes(x = `Systolic blood pressure`,
#                             y = `Diastolic blood pressure`,
#                             color = Cardio),
#               alpha = 0.1) +
#     scale_color_manual(values = mycolors) +
#     labs(title = "Blood Pressure with Cardiovascular Disease")
```

Which states have the highest average mortality from various cardiovascular diseases?



Average

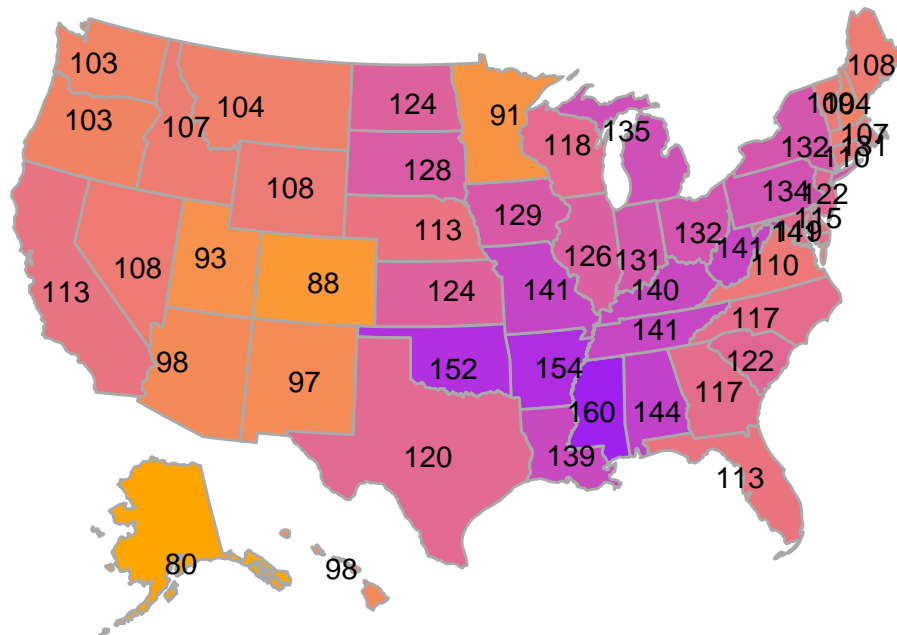


Which gender has the highest average mortality from various cardiovascular diseases?

map of the US for stroke avg death rate (heat map)

Joining, by = "state"

Average Death Rate – Age standardized



Rate per 100,000 100 120 140

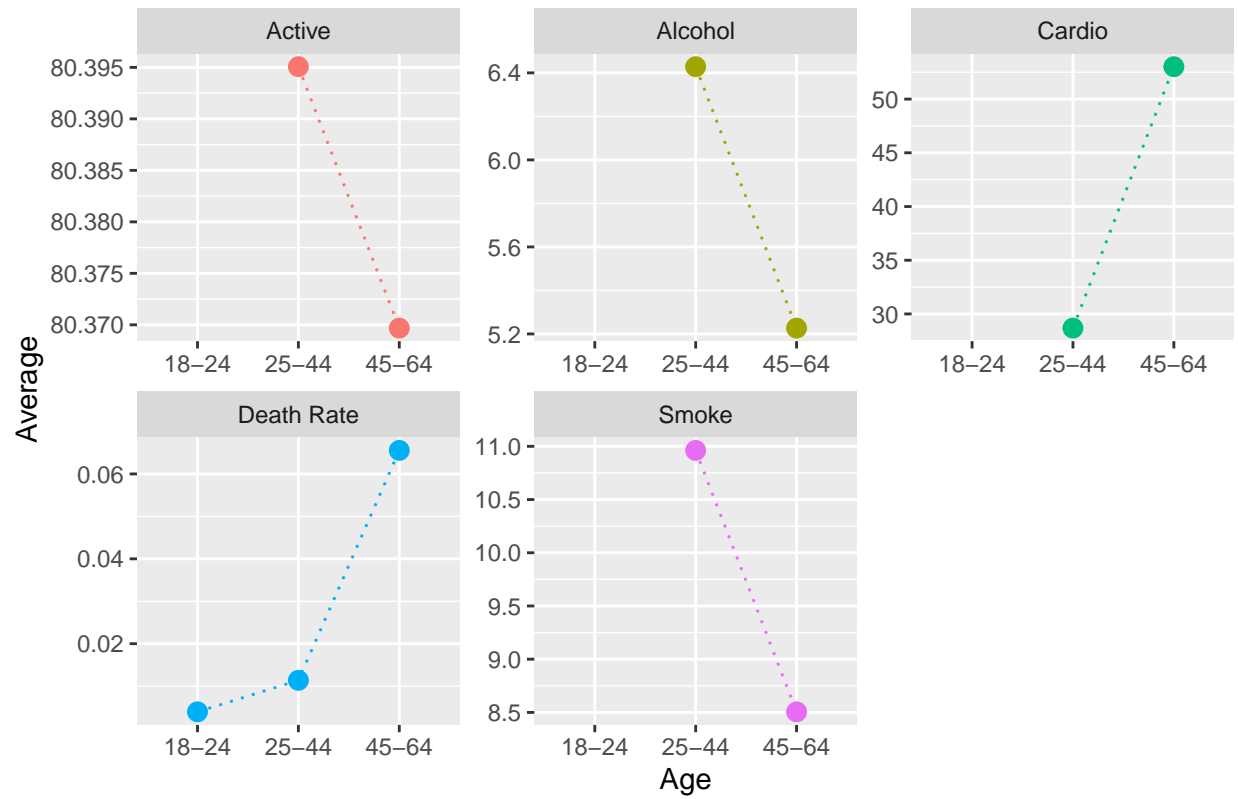
Relation between age groups, life styles, cardiovascular disease and death rates

```
## Joining, by = "Age"
```

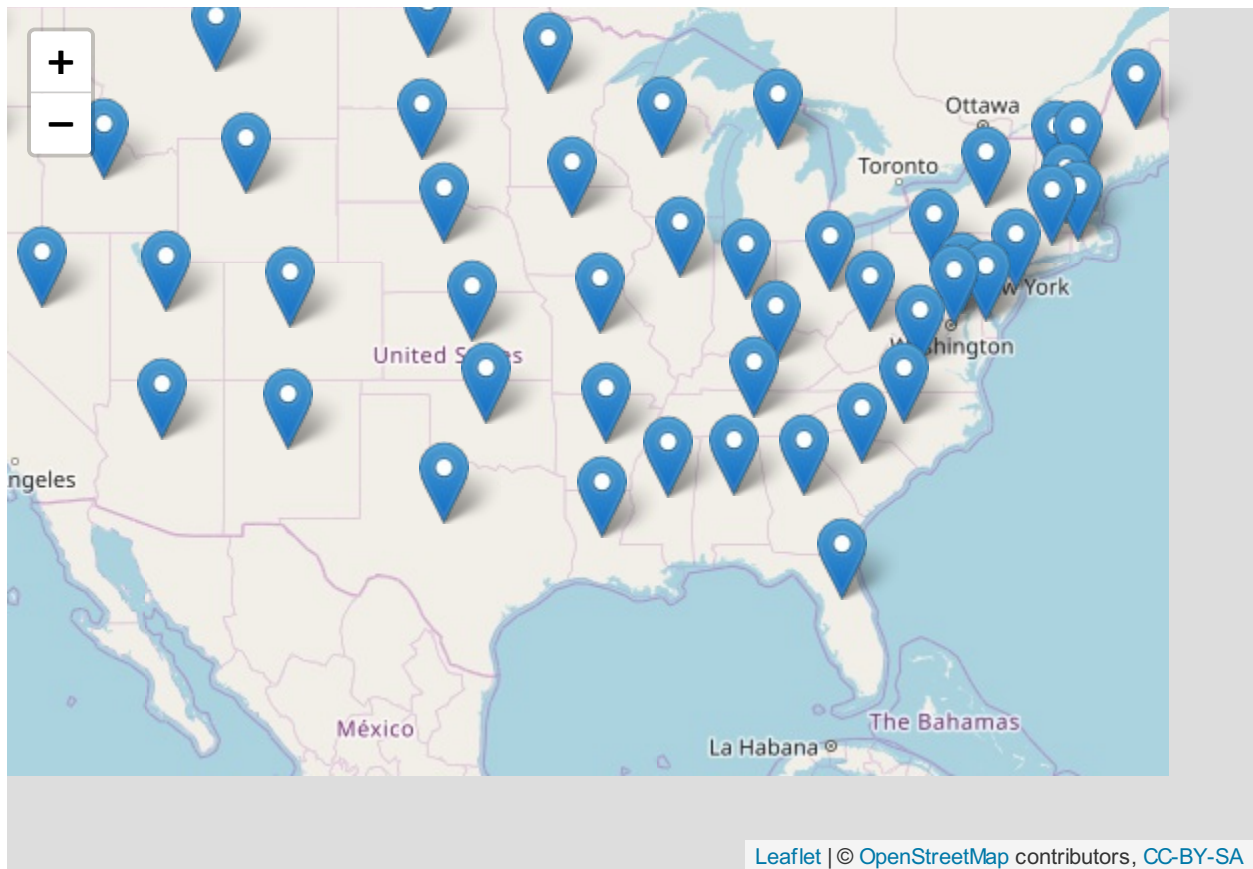
```
## Warning: Removed 4 rows containing missing values (geom_point).
```

```
## Warning: Removed 1 rows containing missing values (geom_path).
```


Comparison of lifestyles with average death rates



What is the average mortality by state leaflet map



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.