Plotting Practice

Sarah Thiesen

February 25, 2017

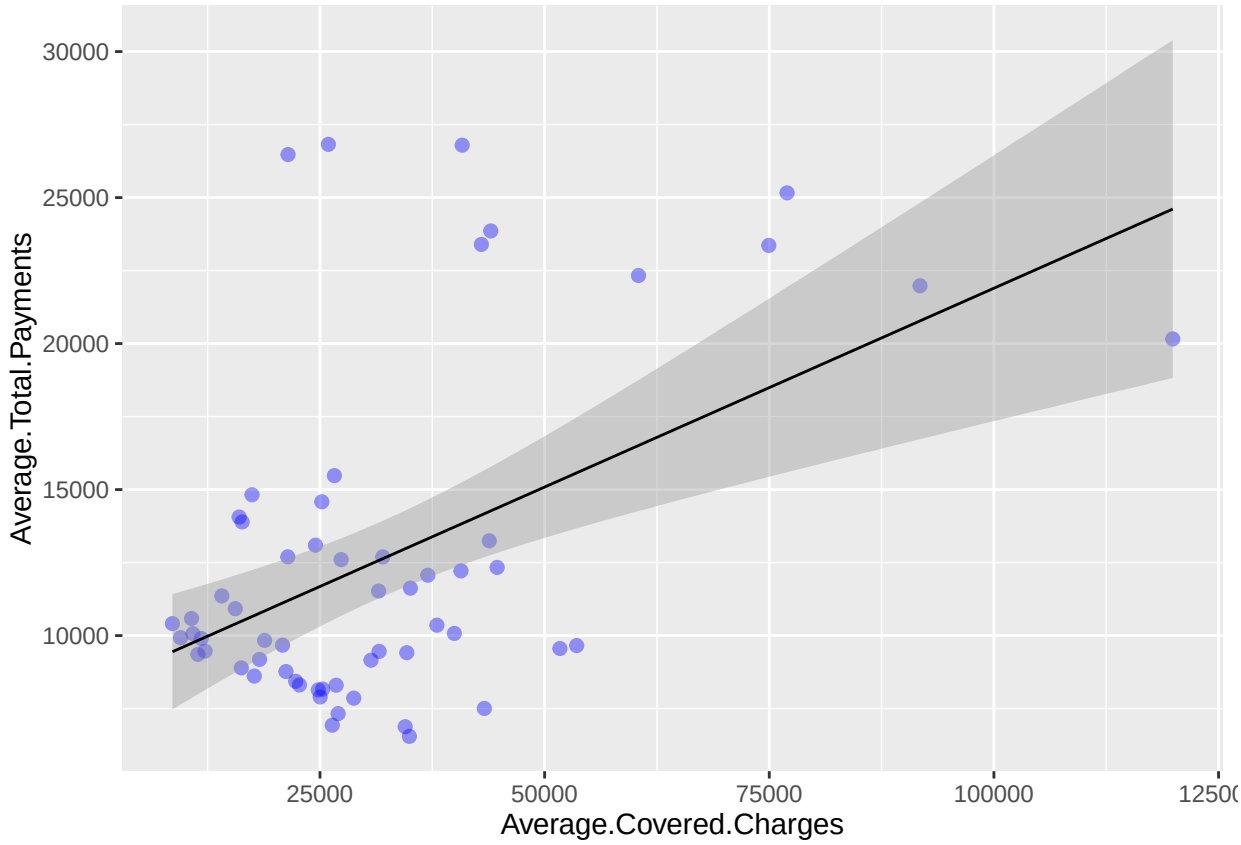
Read data

```
payments <- read.csv("/home/sarah/Uni/R/RepResearch/payments.csv")
```

Question 1:

Make a plot that answers the question: What is the relationship between mean covered charges (Average.Covered.Charges) and mean total payments (Average.Total.Payments) in New York?

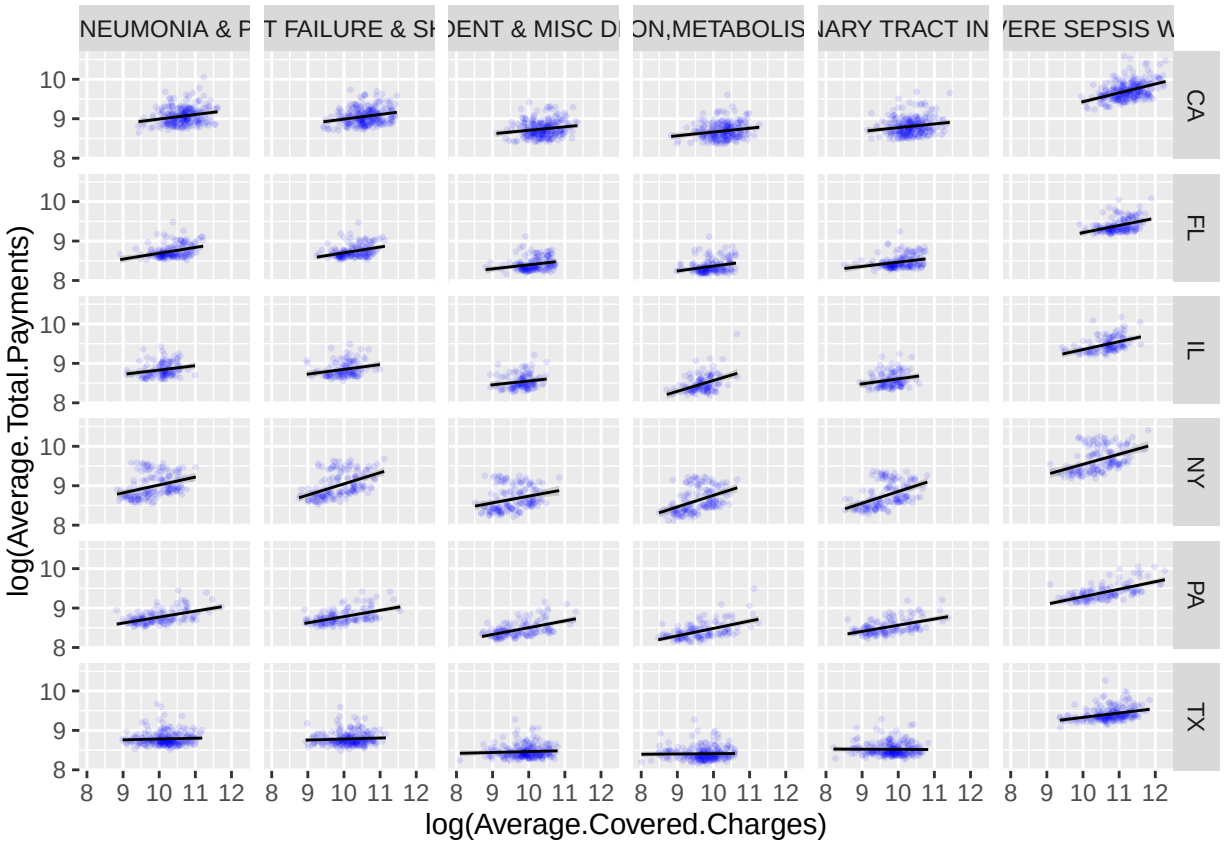
```
require(dplyr)
paymentsNY <- filter(payments, Provider.City == "NEW YORK")

require(ggplot2)
p <- ggplot(paymentsNY, aes(Average.Covered.Charges, Average.Total.Payments))
p + geom_point(alpha = 0.4, colour = "blue", size = 2) +
  geom_smooth(method = lm, colour = "black", size = 0.5)
```



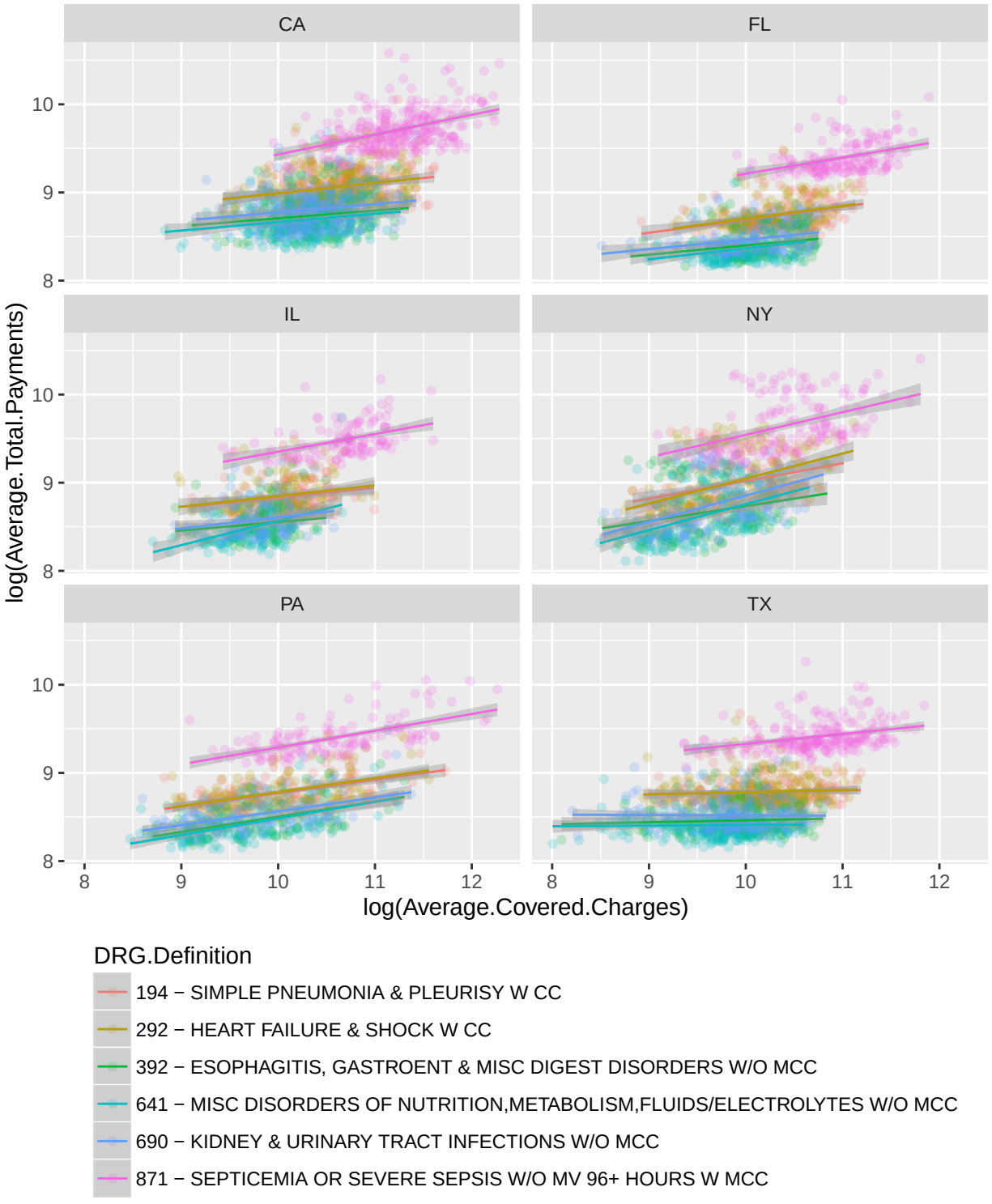
Question 2:

Make a plot (possibly multi-panel) that answers the question: How does the relationship between mean covered charges (Average.Covered.Charges) and mean total payments (Average.Total.Payments) vary by medical condition (DRG.Definition) and the state in which care was received (Provider.State)?

```
q <- ggplot(payments, aes(log(Average.Covered.Charges), log(Average.Total.Payments)))
q + geom_point(alpha = 0.1, colour = "blue", size = 0.5) +
  facet_grid(Provider.State ~ DRG.Definition) +
  geom_smooth(method = lm, colour = "black", size = 0.5)
```



```
q + geom_point(aes(colour = DRG.Definition), alpha = 0.2) + geom_smooth(aes(colour = DRG.Definition), m
  facet_wrap(~Provider.State, nrow = 3) + theme(legend.position = "bottom", legend.direction = "vertica
```



```
q + geom_point(aes(colour = Provider.State), alpha = 0.2) + geom_smooth(aes(colour = Provider.State), m
  facet_wrap(~DRG.Definition, nrow = 3) + theme(legend.position = "bottom")
```