

Problem Set #9 Solutions

Your Name

11/5/2020

For this problem set we will use data from **New York City** that tested children under 6 years old for elevated blood lead levels (BLL). [You can read more about the data on their website].

About the data:

All NYC children are required to be tested for lead poisoning at around age 1 and age 2, and to be screened for risk of lead poisoning, and tested if at risk, up until age 6. These data are an indicator of children younger than 6 years of age tested in NYC in a given year with blood lead levels of 5 mcg/dL or greater. In 2012, CDC established that a blood lead level of 5 mcg/dL is the reference level for exposure to lead in children. This level is used to identify children who have blood lead levels higher than most children's levels. The reference level is determined by measuring the NHANES blood lead distribution in US children ages 1 to 5 years, and is reviewed every 4 years.

Before we start visualizing data, we want to calculate each BLL level (5, 10, 15) per 1,000 tested.

```
bll_nyc <- read_csv("data/Children_Under_6_yrs_with_Elevated_Blood_Lead_Levels__BLL_.csv")
```

```
## Warning: Missing column names filled in: 'X12' [12]
```

```
## Parsed with column specification:
```

```
## cols(
```

```
##   geo_type = col_character(),
```

```
##   geo_area_name = col_character(),
```

```
##   borough_id = col_double(),
```

```
##   time_period = col_double(),
```

```
##   'Children under 6 years with elevated blood lead levels (BLL) Number BLL >=5 µg/dL' = col_double(),
```

```
##   'Children under 6 years with elevated blood lead levels (BLL) Number BLL>=10 µg/dL' = col_double(),
```

```
##   'Children under 6 years with elevated blood lead levels (BLL) Number BLL>=15 µg/dL' = col_double(),
```

```
##   'Children under 6 years with elevated blood lead levels (BLL) Number Tested' = col_double(),
```

```
##   'Children under 6 years with elevated blood lead levels (BLL) Rate BLL>=5 µg/dL per 1,000 tested',
```

```
##   'Children under 6 years with elevated blood lead levels (BLL) Rate BLL>=10 µg/dL per 1,000 tested',
```

```
##   'Children under 6 years with elevated blood lead levels (BLL) Rate BLL>=15 µg/dL per 1,000 tested',
```

```
##   X12 = col_double()
```

```
## )
```