Data visualization

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```
install.packages("tidyverse")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.1'
## (as 'lib' is unspecified)
```

```
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --
```

```
## v ggplot2 3.3.5     v purrr   0.3.4
## v tibble  3.1.5     v dplyr   1.0.7
## v tidyr   1.1.4     v stringr 1.4.0
## v readr   2.0.2     v forcats 0.5.1
```

```
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(readr)
mmsa_icu_beds <- read_csv("/cloud/project/mmsa-icu-beds.csv")
```

```
## Rows: 136 Columns: 7
```

```
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (2): MMSA, total_percent_at_risk
## dbl (5): high_risk_per_ICU_bed, high_risk_per_hospital, icu_beds, hospitals,...
```

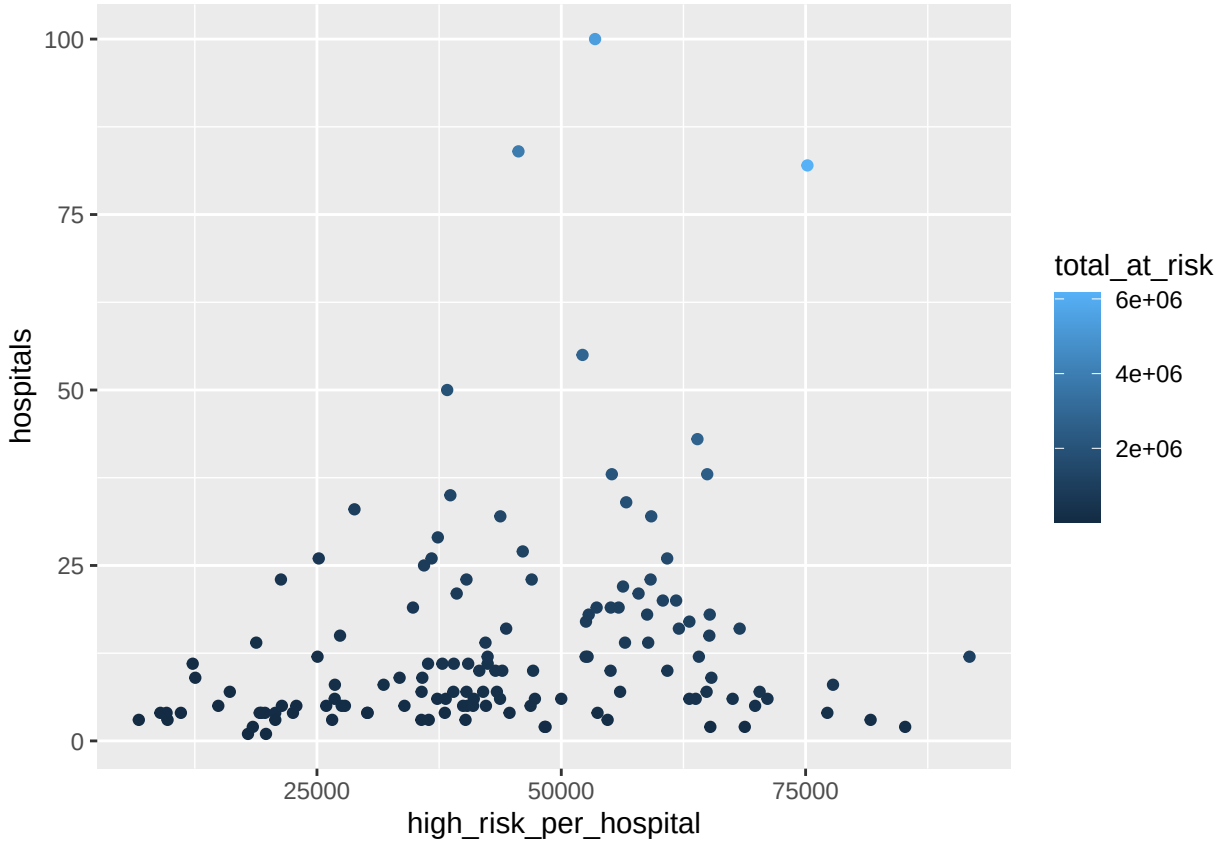
```
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
head(mmsa_icu_beds)
```

```
## # A tibble: 6 x 7
##   MMSA     total_percent_a~ high_risk_per_I~ high_risk_per_h~ icu_beds hospitals
##   <chr>    <chr>                       <dbl>            <dbl>    <dbl>     <dbl>
## 1 San Jua~ 52.88%                         NA               NA       NA        NA
## 2 Manhatt~ 47.29%                       4490.            8980.       8         4
## 3 Hilton ~ 62.72%                       3904.           36439.      28         3
## 4 Kahului~ 59.13%                       3861.           19303.      20         4
## 5 Spartan~ 66.12%                       3786.           85188.      45         2
## 6 Baton R~ 66.60%                       3460.           39001.     124        11
## # ... with 1 more variable: total_at_risk <dbl>
```

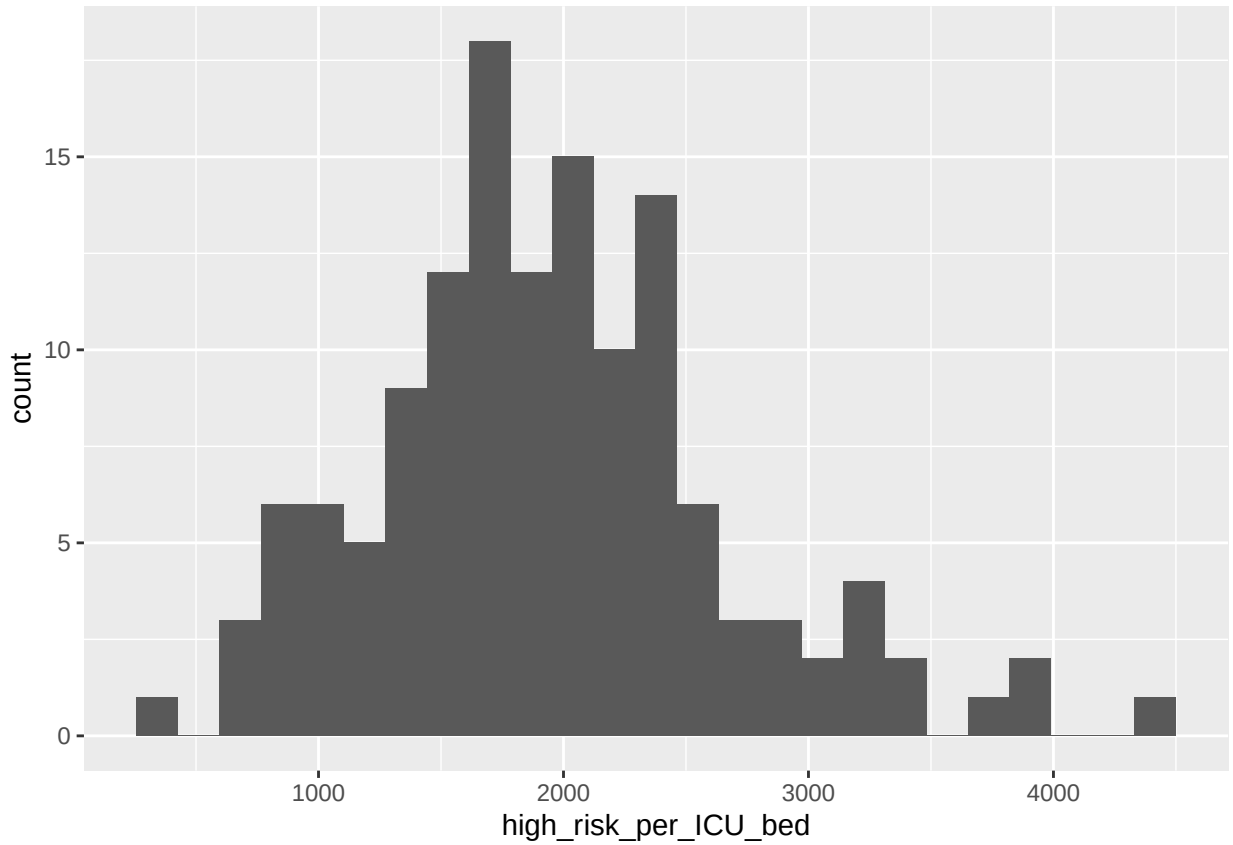
```
library(tidyverse)
ggplot(data= mmsa_icu_beds) + geom_point(mapping = aes(x= high_risk_per_hospital , y= hospitals , color=
```

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




```
# Compute a histogram of `Patients per ICU bed`
ggplot( mmsa_icu_beds, aes(high_risk_per_ICU_bed)) +
  geom_histogram(bins = 25)
```

```
## Warning: Removed 1 rows containing non-finite values (stat_bin).
```


15
10
5
0
count
1000
2000
3000
4000
high_risk_per_ICU_bed

“‘