

ICA 3.1 univariate plots

Attach the tidyverse and medicaldata packages here:

```
library(tidyverse)
library(medicaldata)
```

Task 1 - Histograms

1. Create a histogram of patient BMI in the laryngoscope data set.

```
# 🧠
# your code here
```

2. Note the visual output as well as the additional messages (one will be about bins). Modify your code from step 1 to add a binwidth argument with a value. Experiment until finding a good bin width for the data.

```
# 🧠
# your code here
```

💡 Answer - Histograms

```
# 1
ggplot(laryngoscope) +
  geom_histogram(aes(x=BMI))
```

```
# 2
ggplot(laryngoscope) +
  geom_histogram(aes(x=BMI), binwidth=1.5)
```

The warning about non-finite values is OK. These are missing observations which we could filter from our data prior to visualizing.

Task 2 - Labels

1. Write the code for a histogram of laryngoscope\$total_intubation_time below.
2. Now we want to modify the default axis and title labels. Run ?labs to read about the labs() function. Jump down to the Examples to see how it is used.
3. Use labs() to customize the x label to read "Total intubation time (seconds)", and y to read "Count" (capitalized).

```
# 🧠
# your code here
```

💡 Answer - Labels

```
?labs
ggplot(laryngoscope) +
  geom_histogram(aes(x=total_intubation_time), binwidth=4) +
  labs(x="Total intubation time (seconds)",
       y="Count")
```

Task 3 - Explore variables via histogram

Use `names()` and `geom_histogram()` to explore the distribution of other numeric variables in `laryngoscope` and `polyps`.

💡 Answer - Explore variables via histogram

```
names(laryngoscope)
lp <- ggplot(laryngoscope)
lp + geom_histogram(aes(age))
```

```
lp + geom_histogram(aes(BMI))
```

```
lp + geom_histogram(aes(ease))
```

```
names(polyps)
pp <- ggplot(polyps)
pp + geom_histogram(aes(age))
```

```
# etc.
```