# How can we reduce Health Insurance Charges?

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# Who cares about this?

# Big Idea

We need to reduce smoking habits and adopt better lifestyle choices because this can significantly reduce health insurance charges when seeking healthcare.

# How did I come to that conclusion?

# Dataset Snapshot

Health insurance charges dataset sourced from Kaggle containing over 1300 rows of data with columns such as age, smoker indicator, bmi, region, sex, number of children and charges accrued.

|   | age | sex | bmi | children | smoker | region | charges |
|---|-----|-----|-----|----------|--------|--------|---------|
| 0 | 19 | female | 27.900 | 0 | yes | southwest | 16884.92400 |
| 1 | 18 | male | 33.770 | 1 | no | southeast | 1725.55230 |
| 2 | 28 | male | 33.000 | 3 | no | southeast | 4449.46200 |
| 3 | 33 | male | 22.705 | 0 | no | northwest | 21984.47061 |
| 4 | 32 | male | 28.880 | 0 | no | northwest | 3866.85520 |

# Why focus on smoking habits?

Health insurance charges increases steadily as people get older
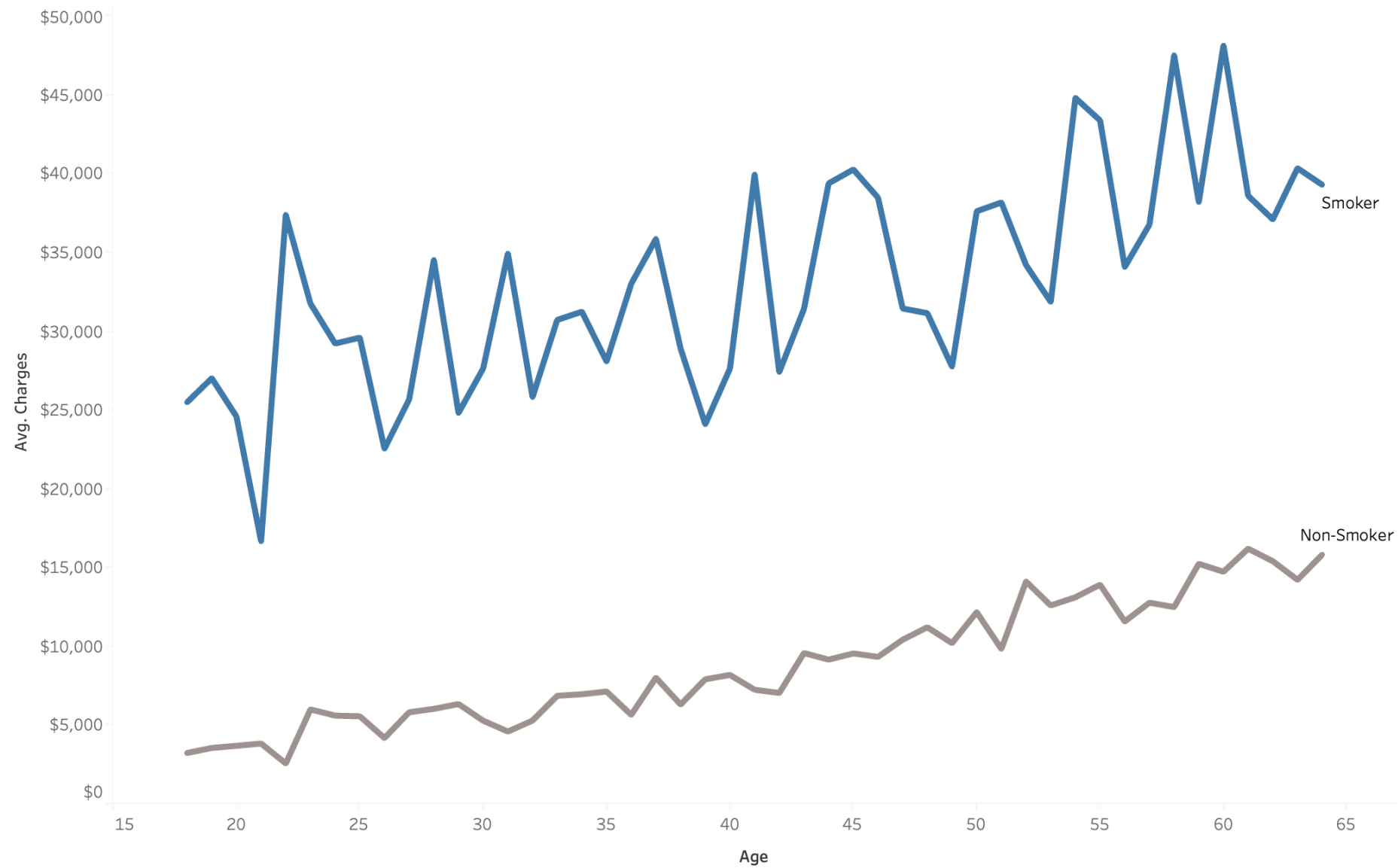
# Was the data skewed against smokers?
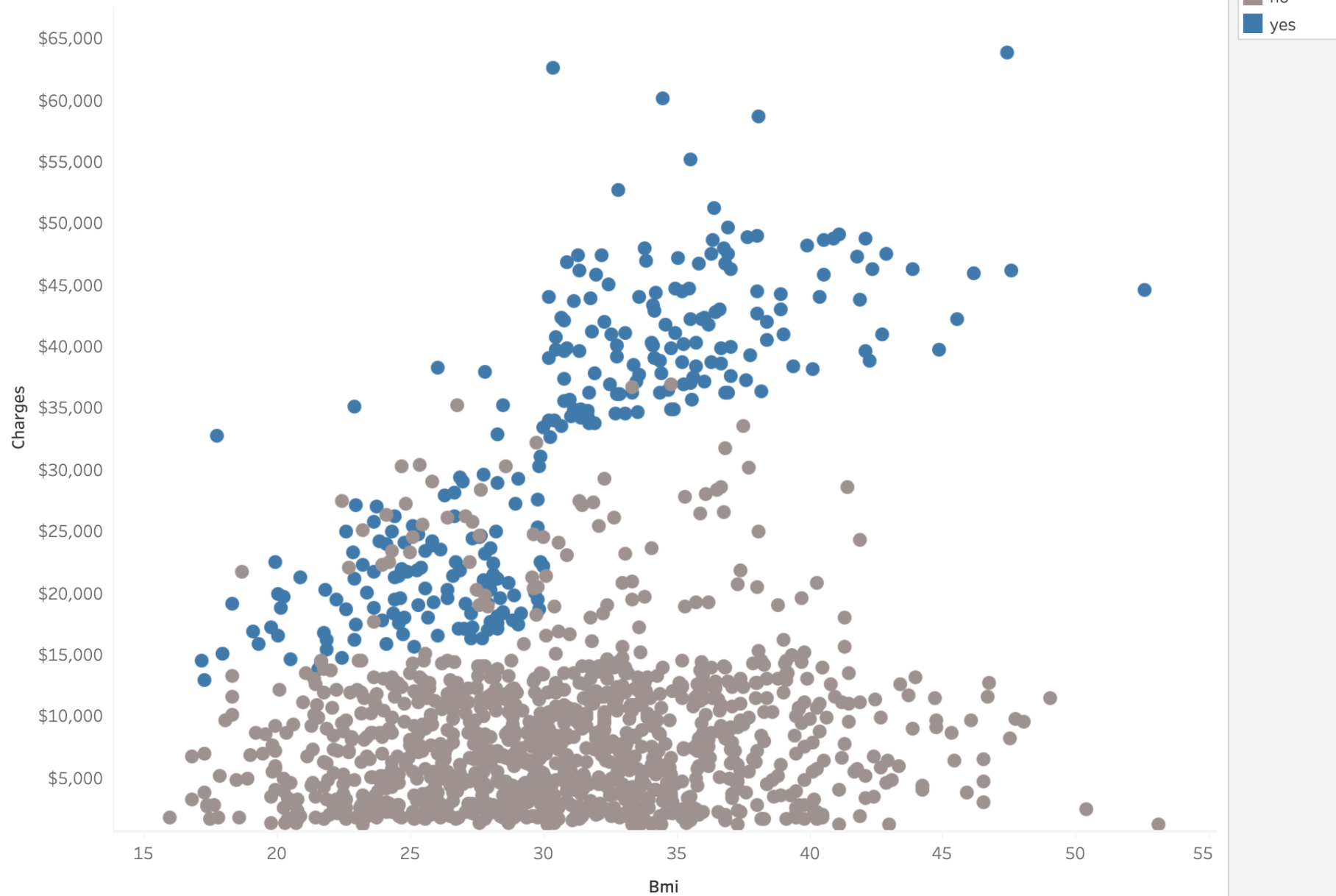
There are more non-smokers in the dataset

| | |
|---|---|
| Non-Smoker | 1,064 |
| Smoker | 274 |

# Smoking Impact on health insurance charges



Smokers have higher health insurance charges on average

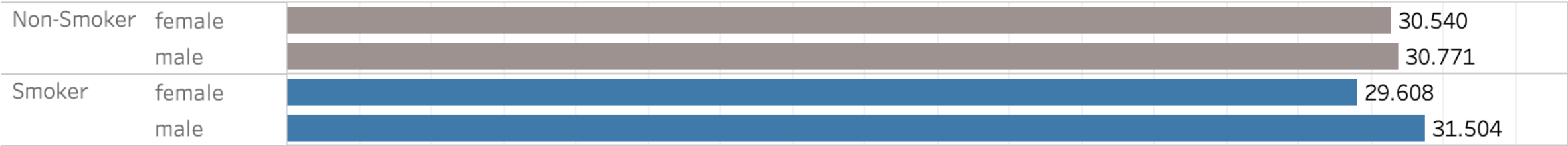| | |
|---|---|
| Smoker | $32,050 |
| Non-Smoker | $8,434 |

What about body mass index?

Smokers have higher insurance charges regardless of BMI

# Furthermore…

Average BMI between Smokers and Non-Smokers does not vary significantly by Sex

| | | |
|---|---|---|
| Non-Smoker | female | 30.540 |
| | male | 30.771 |
| Smoker | female | 29.608 |
| | male | 31.504 |

# Take Action!

1. **Benefit**: Improving lifestyle habits and reducing smoking habits will improve

   health and reduce the need to frequently visit the hospital or incur higher

   charges.

2. **Risk:** One might incur higher health insurance expenses with unchanged

   behavior.