

### **Binomial distribution**

Data of 100 policyholders. Each was asked if they filed a claim in the last year (1 = Yes, 0 = No).

Question:

- Calculate the probability of filing a claim ( $p$ ) from the dataset.
- Assume each policyholder is an independent trial. Plot a binomial distribution showing the probability of  $k$  claims out of 100 policyholders.
- Overlay actual data on the same plot (bar chart of actual claim counts).