Scenario: Poll is taken to determine what proportion of U.S. population would get a covid vaccine: 70% say yes (Pew, Feb.16-21)

The confidence interval based on this is 69% to 71%.

\[ \hat{p} = \text{true population proportion} = ??? \]

\[ \hat{p} = \text{sample proportion} = 70\% \]

True or false?

1. We are 95% confident \( \hat{p} \) is between 69% and 71%
2. \( p \) is between 69% and 71%
3. For 95% of people in the population, their chance of getting vaccinated is between 69% and 71%
4. If we repeatedly sample and redo the poll, the confidence intervals we produce will contain \( p \) 95% of time
5. The 99% CI is wider than the 95% CI