**Key points**

* An extremely large poll would theoretically be able to predict election results almost perfectly.
* These sample sizes are not practical. In addition to cost concerns, polling doesn't reach everyone in the population (eventual voters) with equal probability, and it also may include data from outside our population (people who will not end up voting).
* These systematic errors in polling are called *bias*. We will learn more about bias in the future.

**Code: Plotting margin of error in an extremely large poll over a range of values of p**

library(tidyverse)

N <- 100000

p <- seq(0.35, 0.65, length = 100)

SE <- sapply(p, function(x) 2\*sqrt(x\*(1-x)/N))

data.frame(p = p, SE = SE) %>%

ggplot(aes(p, SE)) +

geom\_line()