ph1861_hw2_ygu5

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Meta-Analysis Problem #1 (50 points) The following paper reviewed and meta-analyzed the proportion of Campylobacter cases that develop chronic sequelae, based on studies published prior to July 2011. (Keithlin 2014, "Systematic review and meta-analysis of the proportion of Campylobacter cases that develop chronic sequelae"). Import the number of cases that developed reactive arthritis (ReA) from page 7 of the article and follow the steps below to conduct a meta-analysis of the proportion/prevalence.

Please input data in the exact order from the paper. Calculate the proportion of people with Campylobacter who developed a ReA for each study. Add a count of 0.5 both to those reporting ReA outcome of 0% and to those totals. Calculate the logit of the outcome and logit of the standard error using the equation from Lipsey & Wilson. [Eq 3.5, p40].

```
# read data
keith_data = read.csv("./data/Keithlin2014_ReA.csv") %>%
  janitor::clean_names() %>%
  mutate(prop_seq = round(number_developing_sequelae/number_of_people_with_campylobacter,4)) %>%
  mutate(number_of_people_with_campylobacter_add = ifelse(prop_seq==0.0000, number_of_people_with_campyl
         number_developing_sequelae_add = ifelse(prop_seq==0.0000, number_developing_sequelae+0.5, numbe
  mutate(prop_seq_add = number_developing_sequelae_add/number_of_people_with_campylobacter_add)
```