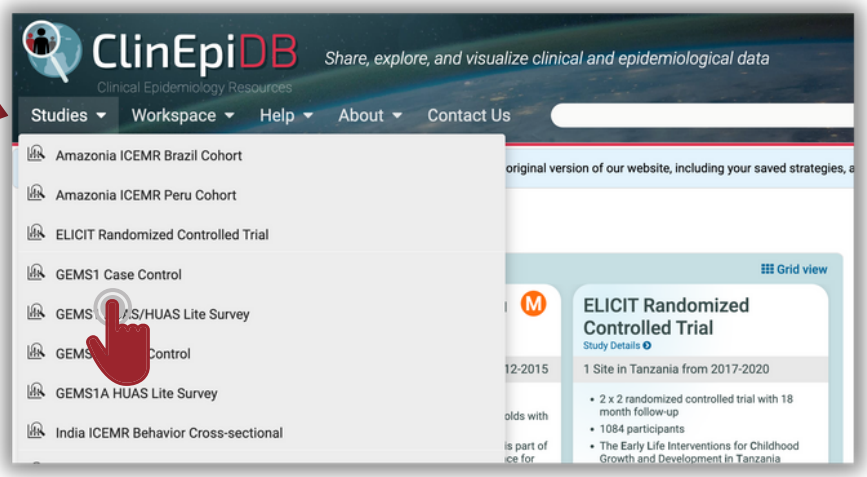
Exercise: Navigating the ClinEpiDB platform
Rotavirus in Kenya

In this exercise, we will explore the **GEMS1 Case Control study**. We will (a) navigate through the different features of the **ClinEpiDB** platform, and (b) ask the question: **Is rotavirus infection associated with diarrhea in infants in Kenya?**
Write your responses in the space provided. Answers are given on the last page.

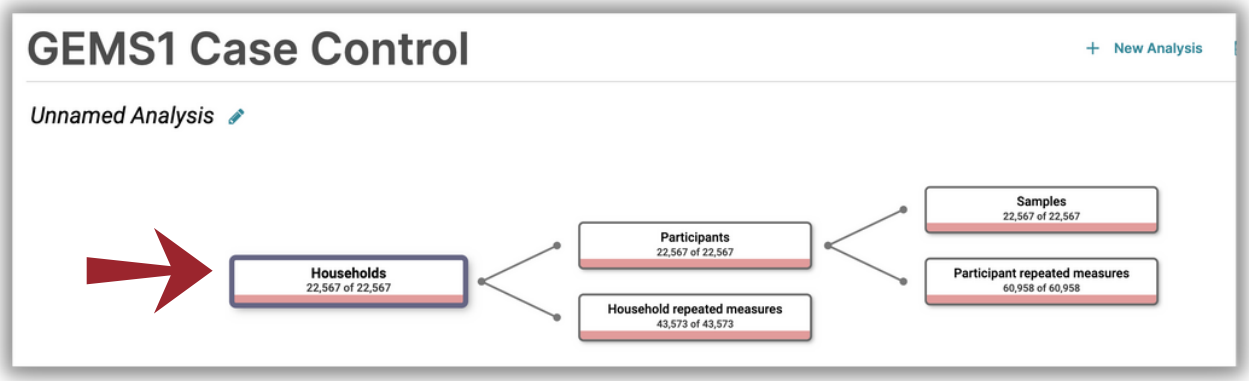
Start at the home page: **ClinEpiDB.org**

In the **Studies** drop down menu at the top left, scroll down to **GEMS1 Case Control**.

Click on the title of the study to open a new analysis and start exploring this dataset.



1. Look at the **Dataset diagram** at the top of the page and examine the shape of the data.

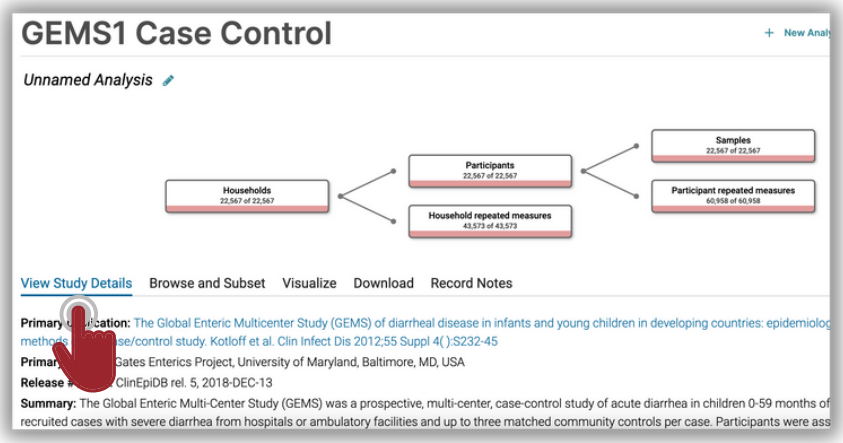


a. There are _____ participants in this study.

b. There are _____ participant repeated measures (observations) in this study.

c. What does it mean to have more than 1 repeated measure per participant?
_____

2. Click the **View study details** tab, scroll through the page, and answer the following:

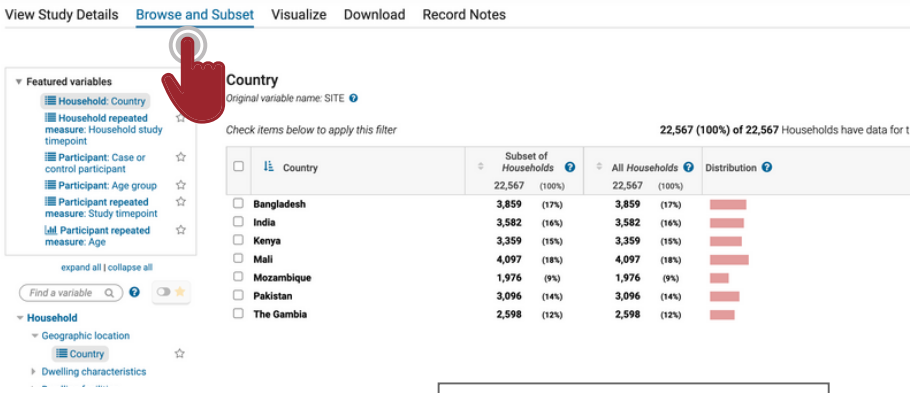


a. In this study, cases were children with _____

b. In how many sites was this study conducted? _____

c. What type of sample was collected from the participants? _____

3. Click the **Browse and subset** tab and scroll through the variable tree on the left.



a. Name one of the **featured variables**: _____

b. What was the mean ***Age*** of the participants? _____

c. What proportion of households have a cow on the property? _____

Hint: Search in the "find a variable" box in the left sidebar

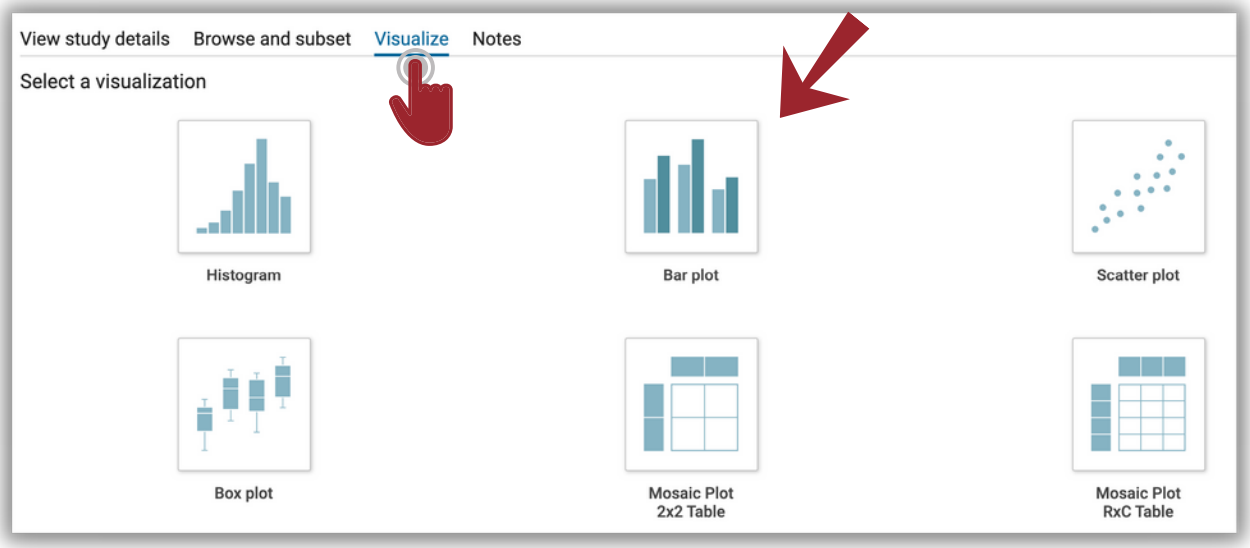
Creating a subset for exploration: We want to look at the association between rotavirus and diarrhea in infants in Kenya.

- Click on the variable ***Country*** and select *Kenya*
- Click on the variable ***Age group*** and select *0-11 months*

d. Look at the dataset diagram at the top of the page. Of the total sample size of 22,567 participants, how many participants are present in your subset of children in Kenya aged 0-11 months? _____

4. Let's plot the association between rotavirus and diarrhea cases.

Click the **Visualize** tab -> New visualization, and choose the **Bar plot** tool



- For the main axis variable, choose ***Rotavirus, by ELISA***.
- For overlay, choose ***Case or Control participant***.
- Below, in **Plot mode**, choose proportion instead of count.

a. What proportion of diarrhea cases have rotavirus? _____

b. What proportion of controls have rotavirus? _____

c. Does rotavirus appear to be associated with diarrhea in this study? _____

5. **Site search:** ClinEpiDB features a site-wide search functionality which can be used to look for variables and studies. To find other studies that collected data on rotavirus infection, type in ***"Rotavirus, by ELISA"*** (including the quotation marks to search for the exact term) in the **search bar** at the top of the page.

a. How many studies collected data on the variable ***Rotavirus, by ELISA***? ____

b. In the **PROVIDE Randomized Controlled Trial**, what proportion of participants were positive for ***Rotavirus, by ELISA***? ____

Turn to the next page for answers to this exercise!

ANSWERS

1. **Dataset diagram**
    a. There are **22,567** participants in this study.
    b. There are **60,958** participant repeated measures (observations) in this study.
    c. What does it mean to have >1 repeated measure per participant? **It means that participants were observed more than once. In other words, this study has a longitudinal component.**
2. **View study details** tab
    a. In this study, cases were children with **acute moderate-to-severe diarrhea (MDS)**
    b. In how many sites was this study conducted? **7 (Seven)**
    c. What sort of sample was collected from the participants? **Stool sample**
3. **Browse and subset** tab
    a. Name one of the featured variables: **Country, Household study timepoint, Case or control participant, Age group, Study timepoint, or Age**
    b. What was the mean age of the participants? **18.8 months**
    c. What proportion of households owned a cow? **23%**
    d. How many participants are present in your subset of children in Kenya aged 0-11 months? **1,346**
4. **Visualize** tab
    a. What proportion of diarrhea cases have rotavirus? **0.2036 or 20.3%**
    b. What proportion of controls have rotavirus? **0.0238 or 2.4%**
    c. Does rotavirus appear to be associated with diarrhea in this study? **Yes, ~10 times higher in cases**
5. **Site search**
    a. How many studies collected data on the variable *Rotavirus, by ELISA*? **3 studies**
    b. In the PROVIDE Randomized Controlled Trial, what proportion of participants were positive for *Rotavirus, by ELISA*? **5%**

Thank you for completing this exercise on navigating the ClinEpiDB platform!