



Navigating the ClinEpiDB platform

An exercise

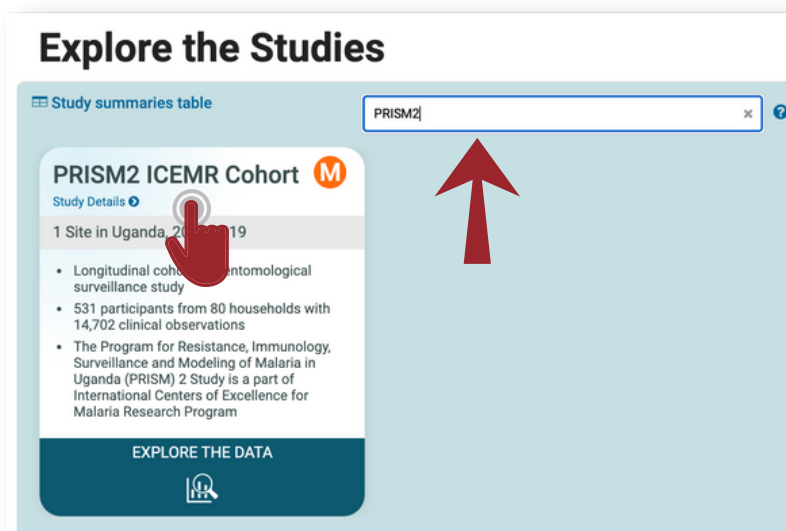


In this exercise, we will use the **PRISM2 ICEMR Cohort study** to navigate through the different features of the ClinEpiDB platform. Type your responses into the grey boxes. Scroll to the end of the exercise for answers.

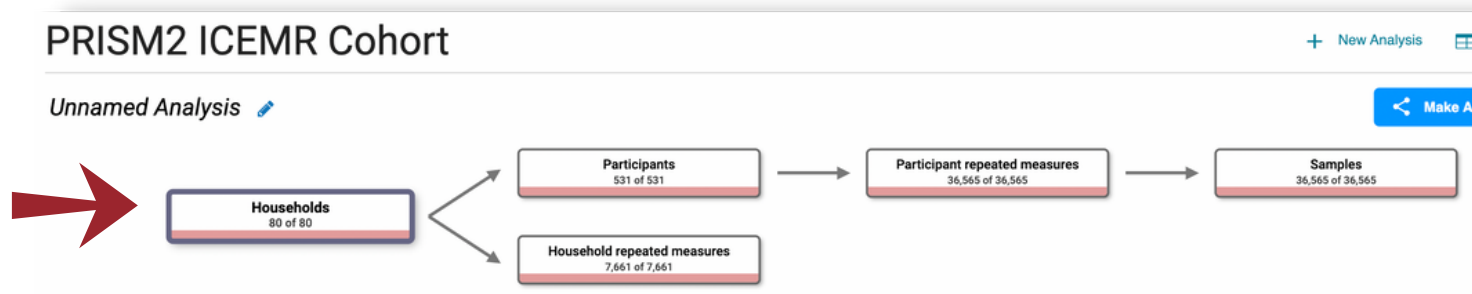
Start at the home page.

In the Find Studies box (red arrow), search for **PRISM2 ICEMR Cohort**.

Locate the **study card** and click on the title of the study to start exploring this dataset.



1. Look at the **Dataset diagram** (red arrow) at the top of the page and examine the shape of the data.



- There are participants in this study.
- There are participant repeated measures (observations) in this study.
- What does it mean to have >1 repeated measure per participant?

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

PRISM2 ICEMR Cohort

Unnamed Analysis

+ New Analysis My analyses

Make Analysis Public



View study details Browse and subset Visualize Notes

Primary publication: Impact of vector control interventions on malaria transmission intensity, outdoor vector biting rates and Anopheles mosquito species composition in Tororo, Uganda. Musiime et al. Malar J 2019 Dec 27;18(1):445

Primary center: Grant Dorsey, University of California, San Francisco, CA, USA

Release # / date: AllClinEpiDB rel. 16, 2021-MAR-16

Summary: The Program for Resistance, Immunology, Surveillance and Modeling of Malaria in Uganda 2 (PRISM2) is a longitudinal cohort study. Households were recruited for a dynamic cohort if they had at least 2 members under the age of 10, no more than 9 residents, and no plans to move in the next 2 years. Mosquito collections were performed every 2 weeks, routine clinic visits occurred every 4 weeks, and participants attended a study clinic any time they became ill.

a. What is the study design?

b. What was an objective of this study?

c. Where was this study conducted?

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

View study details Browse and subset Visualize Notes

- ▼ Featured variables
- Participant repeated measure: Malaria diagnosis and parasite status
 - Participant repeated measure: Observation date
 - Participant repeated measure: Observation type
 - Participant repeated measure: Age

expand all | collapse all

Find a variable

- Community
- Household
- Household repeated measure
- Participant
- Participant repeated measure
 - Observation details
 - Observation date
 - Observation type
 - Age
 - Age group
 - Time since enrollment
 - Clinical history
 - Visited other health facility
 - Treated with antimalarials

Age (years)

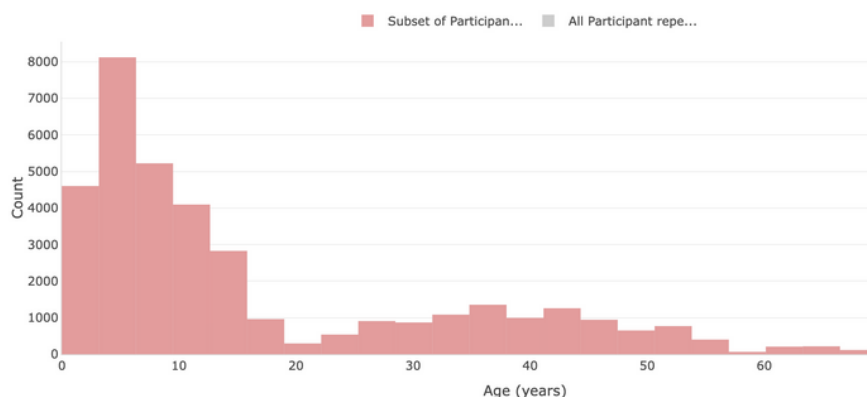
Original variable name: ageyrs

Min: 0.08 Mean: 16.8956 Max: 76.05

36,565 (100%) of 36,565 Participant repeated meas

Subset on Age (years)

to Clear



a. Name one of the featured variables:

b. What proportion of participants were in the <5 years age group?

Hint: You can search for variables in the "find a variable" box in the left sidebar

c. What was the mean age of the participants?

4. Click the **Visualize** tab -> New visualization, and choose the **bar plot** tool



For the main axis variable, choose **age group**. For overlay, choose **sex**.

Under the plot, choose **proportion** instead of count.

a. What proportion of males were in the 5-15 age group?

Turn to the next page for detailed answers to this exercise!



1. Dataset diagram

- There are **531** participants in this study.
- There are **36,565** participant repeated measures (observations) in this study.
- What does it mean to have >1 repeated measure per participant?

It means that participants were observed more than once.



The dataset diagram at the top of the page is helpful for several reasons. It displays the various types of data collected in the study, such as data on communities, households, participants and samples, and their sample sizes. It indicates whether variables were collected once or at multiple timepoints over the study. Variables collected more than once are placed under "repeated measures". This dataset contains 36,565 repeated measures for 531 participants, which indicates that each participant was observed repeatedly over the course of the study, with an average of about 70 observations per participant.

2. View study details tab

- What is the study design? **Longitudinal cohort study**
- What was an objective of this study? **Estimating the incidence of malaria**
- Where was this study conducted? **Tororo district, Uganda**

▼ Description

Brief Summary & Objectives: The second Program for Resistance, Immunology, Surveillance and Modeling of Malaria in Uganda (PRISM2) study is from the East Africa International Center of Excellence for Malaria Research. Data from the longitudinal cohort in Nagongera sub-county, Uganda, including corresponding entomological surveillance data, are included in ClinEpiDB. PRISM2 study objectives include:

- Estimating the incidence of malaria, parasite prevalence, and the molecular force of infection among cohort study participants
- Characterizing factors that determine the malarial force of infection
- Determining factors that affect the duration, density, and clinical consequences of blood stage malaria infection
- Assessing the associations between overnight travel and the risk of malaria infection
- Estimating measures of transmission intensity including the human biting rate, sporozoite rate, and the entomological inoculation rate at the household level
- Characterizing the species composition of mosquito vectors and the host source of mosquito blood meals
- Identifying pathogens responsible for non-malarial febrile illness among cohort study participants

Geographic Location/Study Sites: Nagongera Sub-County, Tororo District, Uganda

Dates of Data Collection: October 2017 - October 2019

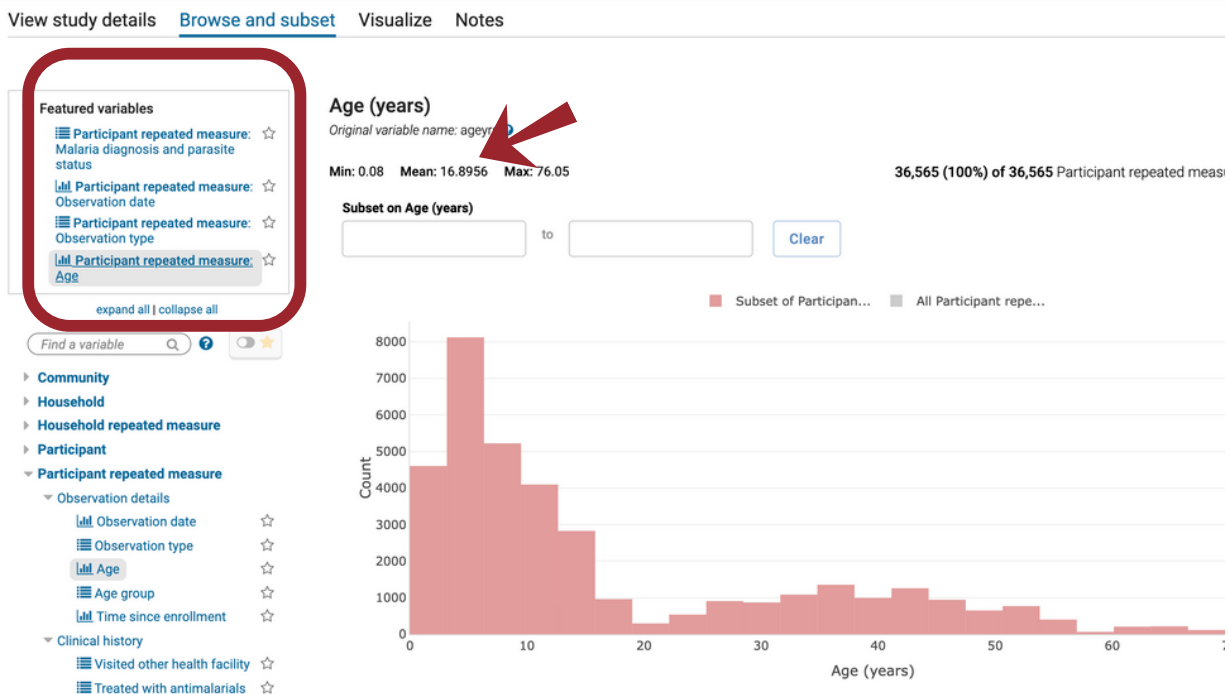
Study Design: Longitudinal cohort study

Methodology, Study Design Details:

The study details page provides a wealth of information about the dataset, including links to publications, a summary of the objectives, study design and methodology, links to study documentation, and a listing of the study team.

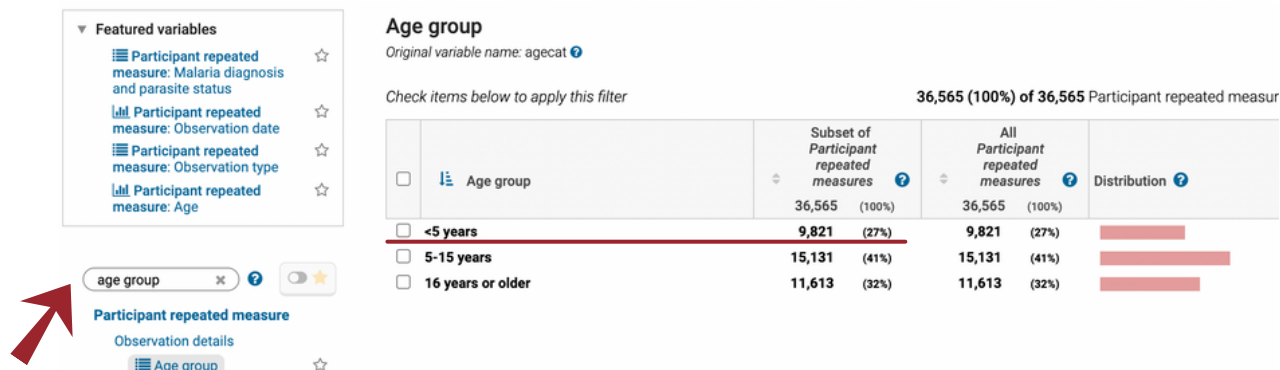
3. Browse and subset tab

- Name one of the featured variables: **Malaria diagnosis and parasite status**
- What proportion of participants were in the <5 years age group? **27%**
- What was the mean age of the participants? **16.9 years**



The browse and subset tab provides a list of all the variables collected in the study, organized into categories in a "variable tree" that can be expanded and collapsed. We also provide a definition for most variables, and the name of the variable in the original dataset, making this tab an interactive codebook. Key variables that would be useful in analyses are highlighted in a "featured variables" box at the top of the page. Variables can be starred to make them more accessible.

Clicking on a variable label displays the distribution of the variable. Age is a continuous variable and its distribution is displayed with a histogram. The mean age of the participants is 16.8 years, but notice that the histogram shows that age has a bimodal distribution (two peaks) representing children and adults.



You can look for the variable "age group" in the "Find a variable" search box. "Age group" is a categorical variable and its distribution is displayed with a frequency table and bar graph. We can see that 27% of the participants were in the <5 years age group.

4. Visualize tab

a. What proportion of males were in the 5-15 age group? **0.473 or 47.3%**



The visualize tab provides a menu of commonly used graphs and tables to explore associations between two or more variables. In this exercise, we are graphing a single categorical variable (age group), so we chose the bar plot. By adding the overlay variable "sex", we stratified (separated) the age group by sex. We can choose to display either count or proportion. Of the males enrolled in the study (the figure legend shows that they are indicated in blue), 47.3%, or nearly half, were in the 5-15 years (school-age) group.

Thank you for completing this exercise on navigating the ClinEpiDB platform! Please contact help@clinepidb.org with feedback or questions.