

Interpreting Column Headers and Labels Guide

This guide is intended to help decode the components that make up the name of a variable downloaded from the HHEAR Data Repository. The column headers serve as metadata for the data within each column. They describe who the data are about, what the data describe, when it was collected, etc. Below are some examples that illustrate how column headers may differ, depending upon the variable being described.

Variables Without Study Visit: Time-invariant variables are listed only using the entity and attribute.



Variables Including Study Visit: Time-varying variables include a study visit tag so time period is clear.



Variables showing Continuous Measurements: Continuous variables will almost always include a unit of measurement. Exceptions are unit-less measures, such as Z-scores and specific gravity.



Lab Sample Variables: Columns that contain direct biological measures of exposure or response or environmental exposures will include the sample matrix, in addition to the measurement, analyte, unit and time period. This format is the same for assays performed in HHEAR labs and for results from assays that were supplied by the parent studies.



Entity Matrix Measurement Analyte Unit Study Visit
ChildSample-Cord-Blood-Concentration-Arsenic-V-Acid-Micrograms-Per-Deciliter-Birth

Entity Matrix Measurement Analyte Unit Study Visit
PregnancySample-Urine-Limit-Of-Detection-Arsenic-Nanogram-Per-Milliliter-Third-Trimester

Entity Matrix Measurement Analyte Unit Study Visit
ChildSample-Urine-Concentration-Mono-isobutyl-Phthalate-DiBP-Microgram-Per-Liter-Childhood-Period

Derived Lab Sample Variables: Derived metrics will be clearly labeled using different measurement tags. Example would include Mean-Concentration, Annual-Concentration, Maximum-Value, etc.

Entity Matrix Measurement Analyte Study Visit
ChildSample-Saliva-Mean-Concentration-Cotinine-Childhood-Followup

Environmental Sample Variables

Entity Matrix Measurement Analyte Unit Study Visit
MotherHouseholdSample-Drinking-Water-Concentration-Arsenic-V-Acid-Microliter-Pregnancy

Key

Term	Color	Definition	Example
Entity	Red	A person, place, or object that exists; the person, place, or object that the variable describes	Caregiver-Human, ChildAnatomy, Pregnancy-Sample, MotherHouseholdSample
Attribute	Blue	A characteristic of an entity; the variable that is being described	Biological Sex, Height, Smoking Status
Study Visit	Purple	A time interval of an encounter between a study subject and a study administrator	Birth, First Trimester, Childhood Period, Adolescent Baseline
Unit	Green	A standardized quantity of a physical quality	Kilogram, Centimeter, Microgram Per Liter
Matrix	Grey	Components of a sample other than the analyte of interest	Blood, Urine, Plasma, Saliva, Water Sample,
Measurement	Orange	A type of measure of the amount of analyte in the matrix	Specific Gravity, Mean Concentration, Limit of Detection
Analyte	Gold	A chemical or biological entity; substance or sample being analyzed	Cotinine, Leptin, Lead

The following tables list labels which may appear to represent similar concepts but have specific, context-dependent meanings within the HHEAR ontology:

Intake and Nutrition Behaviors: Definitions of Consumption and Feeding-Related Variables

LABEL(S)	DEFINITION	EXAMPLE STUDIES
Consumption-Behavior	Behavior related to the intake of substances.	2016-1461
Eating-Or-Drinking	The act of eating or drinking some food or beverage.	2017-1945
Feeding Method	A description of the technique for the manner in which a subject is administered food.	2018-2537
Nutrition-Intake	The process of taking in nutrients such as supplements, considered in relation to the body's dietary needs.	2017-1977

Healthcare Access and Utilization

LABEL(S)	DEFINITION	EXAMPLE STUDIES
Destination	A place to which one is traveling or to which something is sent for healthcare.	2017-1962
Hospital-Admission-By-Admission-Source	A subclass of Hospital Admission; this class is used to differentiate between admissions that originate from the ER department of the study hospital versus those that do not.	2018-2120
Hospital-Admission-By-Admission-Type	A subclass of Hospital Admission; this class is used to differentiate the reasons for the hospital admission, Medical, Surgical, or Trauma.	2018-2120
Hospital-Admission-By-Prior-Home-Medical-Technology-Use	A subclass of Hospital Admission; differentiates hospital admissions by whether or not the patient required home medical technology use prior to admission.	2018-2120
Hospital-Utilization	Use of overnight hospital stays for illness purposes.	2017-1407
Hospitalization	Admission to a hospital.	2017-1407

Study Cohorts and Interventions: Definitions of Grouping and Assignment Variables

LABEL(S)	DEFINITION	EXAMPLE STUDIES
Population-Group	A group of individuals united by a common factor (e.g., geographic location, ethnicity, disease, age, gender).	
Seasonal-Population-Group	A Population Group organized by which season of the year the subjects were tested or studied.	
Medical-Intervention	Whether participant was randomized to intervention group or not.	2017-2021

The following tables list variable labels within the HHEAR ontology that have study-specific definitions, capturing unique attributes or conditions in particular study contexts:

LABEL(S)	DEFINITION	SPECIFIC STUDIES
Infection	Presence of one of the following hospital-associated infections: catheter-associated urinary tract infection (CAUTI), central line-associated bloodstream infection (CLABSI), or ventilator associated pneumonia (VAP).	2018-2120
Life-Stage	A designation assigned to a particular period during a life cycle, generally defined by chronological parameters.	2017-1962
Life-Status	Refers to the current condition of being either alive or deceased.	2018-2120
Parasite-Count	Count of parasites.	For malaria, study 2016-1432
Phenotype	An observable characteristic of an individual; pertaining to the individual's medical history.	
Second-Hand-Smoke-Exposure-By-Indicator-Status	A class to identify if a person has been exposed to second hand smoke or has not been exposed to second hand smoke during an implicit time period.	2016-1523
Social-Affect-+-Restricted-And-RepetitiveBehaviorTotal:	A component of the autism assessment instrument Autism Diagnostic Observation Schedule (ADOS); Specifically, it is the Social Affect (SA) + Restricted and Repetitive Behavior (RRB) Total for ADOS	2016-1438
Social-Relation	A social entity that describes a relationship between two or more individuals or groups.	2017-1762