

American Health Associates Data Description

This is supporting information for the 2023 Health Data for Action (HD4A) Call for Proposals. To apply, or for more information about the funding opportunity, please visit www.rwjf.org/cfp/hd4a4.

Founded in 1990, American Health Associates (AHA) is the #1 full-service mobile diagnostics provider in the United States, currently meeting the laboratory needs of 31% of all Skilled Nursing Facilities (SNFs) in the country. AHA operates 20 full-service laboratories and had over six million patient encounters in 2021. Its mission is to utilize its extensive network of mobile diagnostic testing to provide accessible and timely care.

AHA employs nearly one thousand (W2) mobile phlebotomists who are dispatched daily, surpassing the combined number of phlebotomists from all other companies serving long-term care. AHA laboratories offer less than 24-hour turnaround time across 20 states, with more than 600,000 patient encounters completed within a 5-hour turnaround time (i.e., STAT tests) last year. An additional 22 states receive coverage with a 24-72 hour turnaround time, including urban, suburban, and rural areas.

The patient population served by AHA is unique, as long-term care facilities, including nursing homes and SNFs, cater to a vulnerable, diverse, and frail demographic. Patients include two types of frail individuals: those discharged from hospitals and in post-acute care, and frail patients with multiple comorbidities and often cognitive impairment whose care needs surpass those provided in more independent care settings. Both groups require timely diagnosis and triage to remain safe. While hospitals have clinical laboratories in the building, nursing homes and SNFs do not, yet still need rapid and high-quality testing for their residents. AHA addresses this need.

Long-term care facilities serve a population that generally reflects the racial diversity of the US population but with disproportionately poor outcomes among racial minorities. Black, Hispanic, and Latino residents experience negative outcomes at much higher rates than white residents, as evidenced by the 61% higher COVID-19 death rates in high-minority nursing homes compared to facilities with no minorities during the pandemic.

AHA has amassed a crucial dataset from this unique population. Currently, about a quarter of hospital discharges to nursing homes result in readmissions, which places a significant burden on frail patients and incurs penalties for hospitals. AHA's data includes all results and relevant demographics for patients readmitted to hospitals. By 2024, AHA's data will be linked to the National Death Index, and individual patient demographics and clinical laboratory results will be connected to mortality, covering over 500,000 unique patients' data annually.

The data's scope (millions of observations over many years), its longitudinal nature (nearly 5 observations per patient at different time points on average), and its breadth (covering all blood, urine, sputum, and other laboratory tests) make it an invaluable resource for health services researchers, epidemiologists, and those interested in population health. This dataset can be used for studying national practice patterns in long-term care, physician characteristics associated with underuse or overuse of testing, diagnostic quality, diagnostic safety, public health surveillance, outbreak response, transmission dynamics, chronic condition monitoring, end-of-life care, and more. It also offers a nearly unmatched opportunity to analyze age, gender, and racial/ethnic patterns in care for vulnerable seniors.

Under the HD4A CFP, AHA plans to share de-identified, longitudinal, multi-payer datasets of lab results with individual patient-level data to researchers. With advance planning, the dataset may be linkable to other data sources. AHA will collaborate with each awarded research group to create a customized dataset from the variables listed below, adhering to data de-identification requirements.

Data Dictionary:

- UID - This field represents the unique identifier assigned to each patient across all years of data within the AHA dataset.
- Sex - This field represents the sex of the patient and can be either male or female.
- Birthdate - This field represents the full date of birth for the patient.
- Zip code - This field represents the zip+4 code of the patient's facility where the lab was drawn.
- Facility Address - This field is the text street address, state, and zip for the facility.
- Physician NPI - This field represents the National Provider Identifier (NPI) assigned to the ordering physician.
- Accession - This field represents the AHA order ID assigned to the test, and can be used to link to additional AHA datasets.
- CPT code - This field represents the Current Procedural Terminology (CPT) code assigned to the test.
- DX code - This field represents the diagnosis code assigned to the order.
- Result - This field represents the outcome of the test, i.e. the clinical laboratory result value.
- Order Date, Time - This field represents the date and time when the test was ordered.
- Collection Date, Time - This field represents the date and time when the sample for the test was collected.
- Result Date, Time - This field represents the date and time when the test result was obtained.
- LOINC - This field represents the 'Logical Observation Identifiers Names and Codes' (LOINC) for the associated laboratory test order and result.