All of Us RESEARCH PROGRAM | Researcher Academy

Fisk University & Meharry Medical College

Using the *All of Us* Researcher Workbench to Drive Action for Health Equity

Fisk University
Nashville, TN

February 28, 2024

Community-Campus Partnerships for Health
Promoting Health Equity and Social Justice

RTI INTERNATIONAL

The *All of Us* Researcher Academy is supported by the Division of Engagement, *All of Us* Research Program, National Institutes of Health, Award Number 1OT20D028395-01.

Agenda

- Welcome & Occasion
- Researcher Academy and *All of Us* Overview
- Researcher Presentation: Fisk University
- Researcher Presentation: Meharry Medical College
- Q&A Session
- Remarks from Dr. Karriem Watson, CEO *All of Us* Program
- *All of Us* Research Hub & Workbench
- Celebration of Institutional Champions & Colleagues
- Announcements & Updates
- Attendee Insights
- Closing Remarks

CCPH's *All of Us* Researcher Academy Team

Community-Campus Partnerships for Health's mission is to promote health equity and social justice through partnerships between communities and academic institutions.

Alan Richmond, MSW
Executive Director

Angela Balfour Franklin
Engagement Lead

Paul J. Kuttner
Director of Partnerships

Introducing the RTI Team

Megan Lewis
Principal Investigator

Jen Uhrig
Principal Investigator

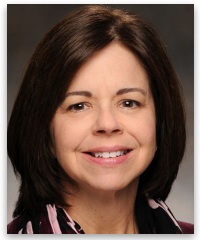
Sula Hood
Co-Lead

Brian Southwell
Co-Lead

Ifeoluwa Adewumi

Katie Atkinson

MaryBeth Branigan



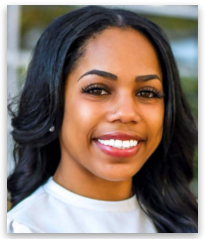
Sheri Cates

Javan Carter

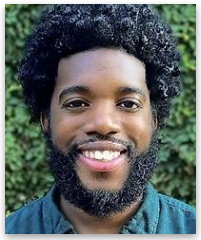
Astrid Flores

Iris Glaze

Heidi Guyer

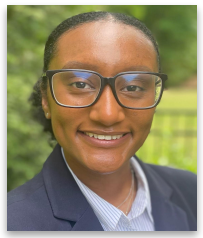


Stefanee Tillman



Trey-Rashad Hawkins

Vincenzo Malo



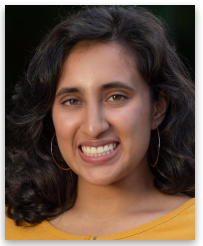
Courtney Richardson

Lissette Saavedra

Hadyatoullaye Sow

Tamara Terry

BriAnna Walker



Leslie Zapata Leiva

HBCU alumni of or affiliation ties with Howard University, Meharry Medical College, North Carolina Central University, and Winston-Salem State University

All of Us RESEARCH PROGRAM | Researcher Academy

Researcher Academy and *All of Us* Overview

What Is the *All of Us* Researcher Academy?

The National Institutes of Health's ***All of Us*** **Research Program** is a historic effort to collect and study data from one million or more people living in the United States.

The goal of *All of Us* is to speed up health research discoveries, enabling new kinds of individualized health care.

The program aims to reflect the diversity of the United States and to include participants from communities that are underrepresented in health research.

The ***All of Us*** **Researcher Academy** provides training and technical assistance for researchers underrepresented in the biomedical workforce conducting research with the ***All of Us*** **Researcher Workbench**—the cloud-based analytics platform where researchers can access data from *All of Us* participants.

The academy supports students and faculty at institutions that have a historical commitment to educating underrepresented students and a track record of training researchers underrepresented in the biomedical workforce, including Historically Black Colleges and Universities (HBCUs).

All of Us Researcher Academy

GOAL

Establish a diverse learning network of researchers who will use *All of Us* data

PURPOSE

Promote equitable access to and use of the *All of Us* Researcher Workbench by a diverse array of researchers

INITIAL OBJECTIVES

Engage with HBCUs to **raise awareness** and **assess needs**

Create internships and fellowships for students and faculty at institutions that have a historical commitment to educating underrepresented students

Curate a training curriculum focused on the skills needed to access and conduct research using *All of Us* data

Provide technical assistance for researchers underrepresented in the biomedical workforce using the Researcher Workbench

Build partnerships with similar programs to draw insights to support scholars

Conduct **ongoing evaluation** of academy activities to ensure program success

Tuition-Free Short Courses for Academy Scholars

We are offering a suite of tuition-free course offerings and learning resources:

Accessing and Using the Researcher Workbench
- Researcher Workbench 101

Research Study Design
- Conceptualizing the study and problem focus
- Research study design and ethics
- Analyzing social determinants of health data

Data Analysis and Management
- Analysis and use of the different workbench data types (e.g., wearable data, survey data, and EHR data)
- Coding via R and Python (organized by proficiency level)
- Data management and analysis
- Examining data intersectionality

Research Dissemination
- How to prepare conference abstracts and peer-reviewed publications
- Promotion of publications
- Blogging/research translation

Securing External Research Funding
- Funding mechanisms (e.g., NIH grants, dissertation grants, other funders)
- Grant writing and mock study sections

Self-Care for Researchers
- Mentee and scholar well-being
- Work-life balance

Research Partnership Considerations
- Team science and collaboration
- Authorship
- Protecting intellectual property

Guidance for Educators
- How to support students on the platform
- Best practices for facilitating coursework/projects on the Researcher Workbench platform

Library Science Resources for Research
- Introduction to literature searching to support *All of Us* analyses

Institutional Champion Awards

- **Support teams in conducting research with the *All of Us* Research Program dataset**
  - Up to $75,000 to support teams of faculty, students, and postdocs
  - Interdisciplinary teams of health and social science researchers
- **Institutional Champion awardees**
  - Group 1 announced in August 2022
  - Group 2 announced in July 2023
  - Group 3 announced in April 2024

Researcher Academy Internship

- **Internships to facilitate experiential learning through mentored research projects**
  - Students are paired with mentors who have active projects in the *All of Us* Researcher Workbench
  - Internships are hosted virtually or in person
  - 4-month commitment
  - Students submit an abstract for possible inclusion at a future *All of Us* Researchers Convention
- **Internship completion recognition**
  - Certificate acknowledging Academy Internship Program completion
  - Feature in Researcher Academy *Connections* newsletter
- **Six interns completed our first cohort in summer 2023**
- **Now accepting applications for interns and mentors for second cohort!**

All of Us Researcher Academy Newsletter

- **Quarterly distribution**
- **500+ Subscribers**
- **Features**
  - Researcher Spotlight
  - Career Corner
  - Academy Announcements
  - Upcoming Courses and Events

Winter Issue now available!

Scan the QR code or visit researcheracademy.rti.org/newsletter to read all our newsletter issues.

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Connections

Issue 6 | Winter 2024

IN THIS ISSUE

- New Year, New Opportunities
- Academy Announcements
- Spotlight Dr. Dorothy Browne, Shaw University
- Career Corner: How to Find a Professional Mentor
- Upcoming Academy Courses

New Year, New Opportunities and Connections

Although researchers sometimes receive praise for their individual accomplishments, progress in science has long been a team sport. Mentoring, in particular, can be a vital source of guidance on funding for research and encouragement to develop new analytical skills. In this issue, we continue our focus on mentoring by mapping out steps for identifying your ideal mentor in Career Corner (p. 7). We also explore how the *All of Us* Researcher Academy and its related efforts are supporting knowledge mobilization and team science.

Artificial intelligence and machine learning (AI/ML) are one emerging domain of work in which new skills are increasingly important. Yet historically underrepresented communities have not benefited from AI/ML developments at the same pace as other groups. NIH's Artificial Intelligence/Machine Learning Consortium to Advance Health Equity and Researcher Diversity (AIM-AHEAD) and RTI International have created a new resource for researchers who want to develop AI/ML skills. The traineeship, which begins this month, will guide participants through an intensive 8-month program in advanced data analysis using the resources of the *All of Us* database and AIM-AHEAD's data science training core.

Teamwork is important for 21st century science, but it does not happen without planning and effort. Being intentional about building and maintaining teams can be an important step in growing research capacity at your institution.

-continued on page 2

Learn more about the Researcher Workbench

Visit the *All of Us* Research Program website

Subscribe to *Connections*

Read past issues of *Connections*

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Research Presentations

FISK UNIVERSITY
ESTABLISHED 1866

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A Case Study Analysis of Area Deprivation and Sleep Health

Oreoluwa Owoseeni
Rejin Nepal

Introduction

- From regulating hormones to boosting cognitive function, quality sleep underpins countless physiological and psychological processes.
- Despite its importance, millions suffer from sleep disturbances, experiencing negative consequences ranging from cardiovascular disease and diabetes to anxiety and depression.
- Recent studies suggest that socioeconomic factors, impacting access to resources and living conditions, might contribute to these disparities.
- In this case study, we look to explore the potential link between sleep quality and socioeconomic status, using predetermined deprivation indexes for different zip codes as a proxy.
- By exploring this potential connection, we aim to elucidate the systemic factors influencing sleep health and address sleep inequities, enhancing the overall well-being across diverse communities.

Overview

- Literature review of recent studies related to sleep health and socioeconomic factors to help form our research question
- Using the *All of Us* Research Database and analytical tools to set our sample size for study
- Data cleansing from our selected cohort and dataset
- Data analysis and visualization using the Workbench Jupyter Notebook and Python
- Deductions and Inferences

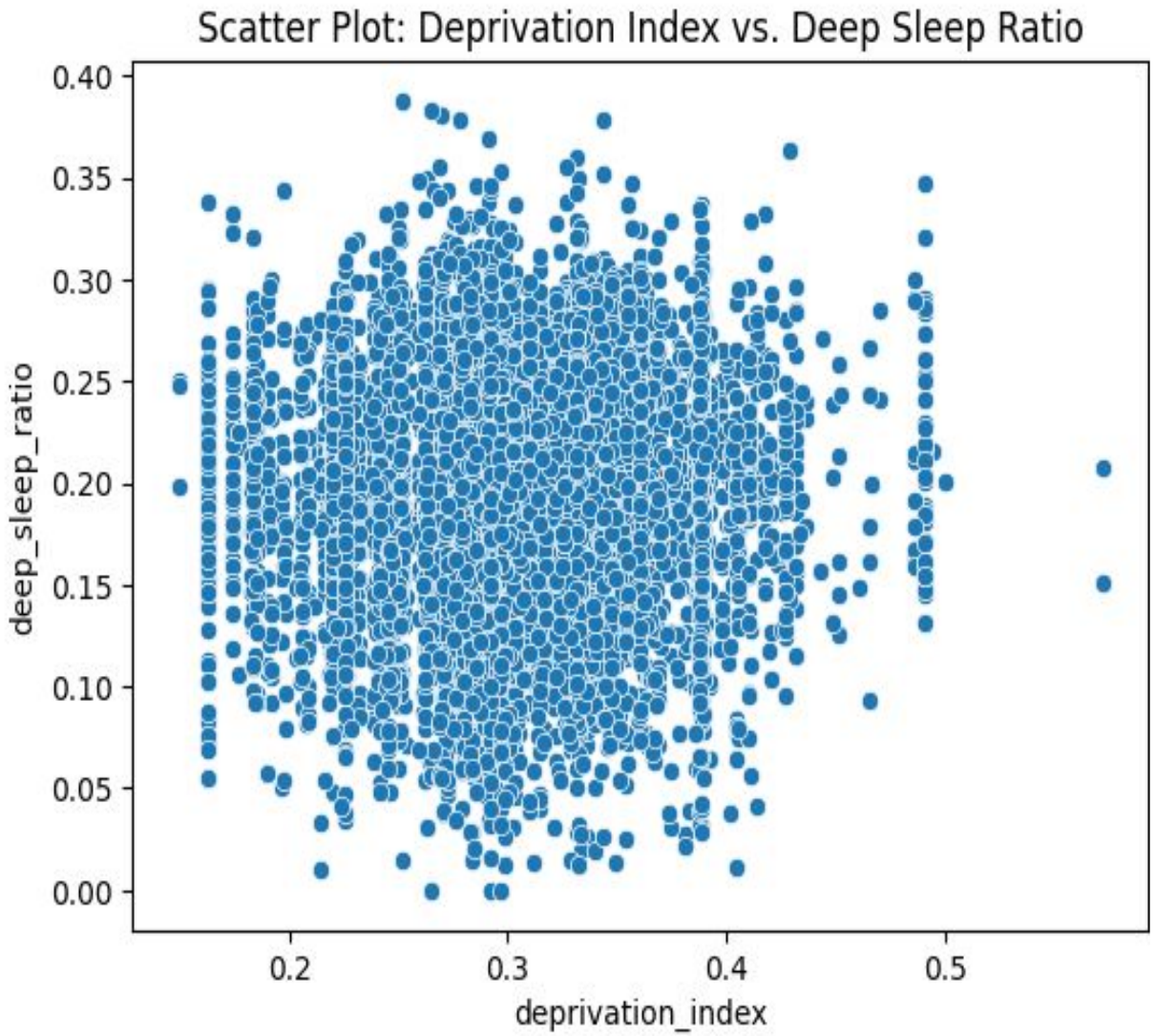
Literature Review

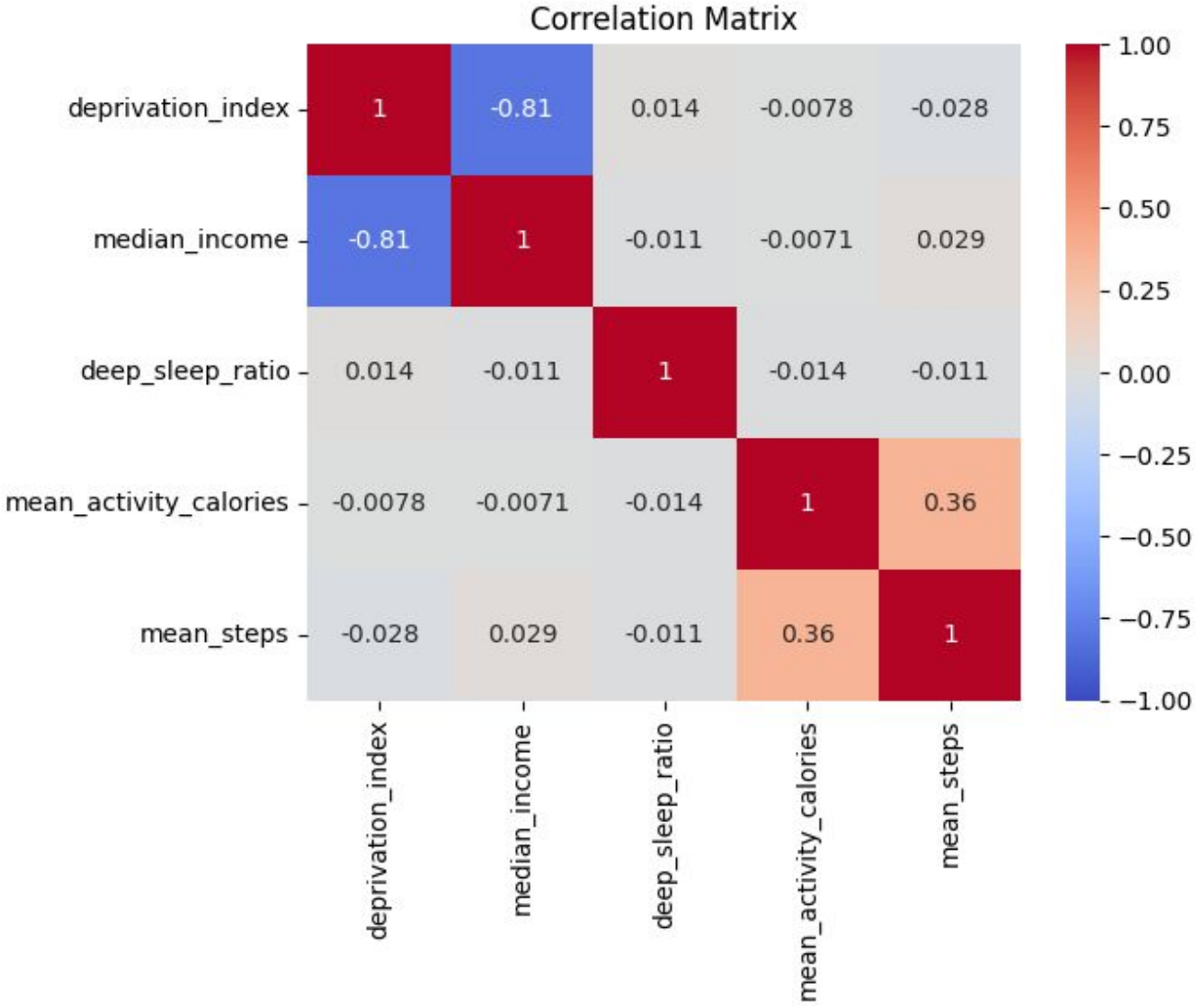
- We reviewed about 30 papers related to sleep health and its relationship with socioeconomic factors.
- Most of the papers established that there isn’t a direct connection between sleep quality and income levels.
- Four stages of sleep: Light, Deep, Deeper, and Rapid Eye Movement (REM).
- Sleep quality was established to be determined by the amount of deeper sleep an individual has, preferably ≥ 25%.

Study Design

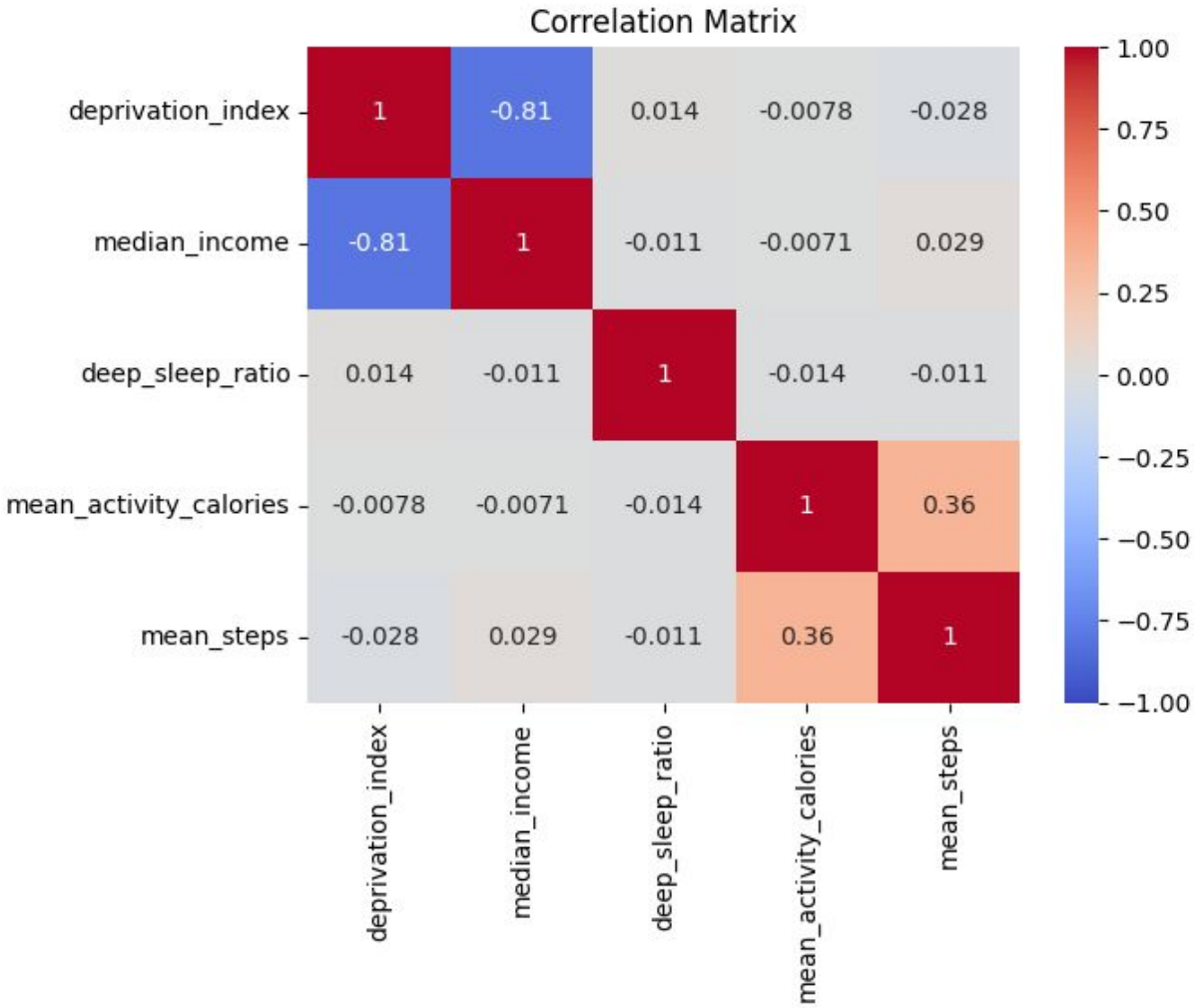
- Hypothesis: *Individuals in low income and socioeconomically deprived areas experience a smaller ratio of deeper sleep than individuals with less deprived areas*
- After data cleansing, cohort size of n = 9695 adults ranging from ages 18 - 70 at the time of survey.
- We determined socioeconomic status of individuals by the area deprivation index (ADI) based on the analysis of the American Community Survey (ACS) measures in 2015 (income, housing, education, employment, etc.).
- We calculated the ratios of deep sleep as against sleep time for the individuals and then made visualizations to examine if there were any correlations between the ADIs and the deep sleep ratios.
- We also checked for any correlations between the activity calories (with steps taken) and deep sleep.

Preliminary Results





Analysis



- Negative correlation between the deprivation indices and income levels, validating the ADI values (Blue: First row and second column).
- Positive correlation between activity calories and steps taken, validating the metric (Pink: Fourth row and fifth column).
- Positive but not significant correlation between ADI and deep sleep ratio (Grey: Third row and first column).
- Negative but not significant correlation between deep sleep ratio and income levels (Grey: Second row and third column).
- Negative but not significant correlation between deep sleep ratio and activity calories (Grey: Third row and fourth column).

Discussions and Future Steps

- There is a negative correlation between ADI and income levels, which was expected and in line with study design, but we see a **positive** correlation with ADI and deep sleep and negative correlation with income level and deep sleep.
- This indicates that there might be other contributing factors accounted for in ADI (general socioeconomic data) that we will analyze separately for significant correlations.
- Examine how the association between deprivation index and sleep outcomes varies across genders or ethnic groups.

References

- Leavitt, J. (2024, January 18). How much deep, light, and REM sleep do you need?. Healthline. https://www.healthline.com/health/how-much-deep-sleep-do-you-need
- Huyett, Phillip, and Neil Bhattacharyya. "The association between sleep disorders, employment, and income among adults in the United States." Journal of Clinical Sleep Medicine 18.8 (2022): 1967-1972.
- Patel, Nirav P., et al. "" Sleep disparity" in the population: poor sleep quality is strongly associated with poverty and ethnicity." BMC Public Health 10 (2010): 1-11.
- Mezick, Elizabeth J., et al. "Influence of race and socioeconomic status on sleep: Pittsburgh Sleep SCORE project." Psychosomatic medicine 70.4 (2008): 410.
- Grandner, Michael A., et al. "Sleep symptoms, race/ethnicity, and socioeconomic position." Journal of clinical sleep medicine 9.9 (2013): 897-905.

Thank you for listening!

Contributions by:

1. Oreoluwa Owoseeni
2. Rejin Nepal
3. Qingxia Li, PhD.

Acknowledgements to:

- *All of Us* Research Program
- Fisk University Department of Life and Physical Sciences
- This research is funded by NIH grant #3OT2OD028395-01S1

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The Future of Health Begins With You

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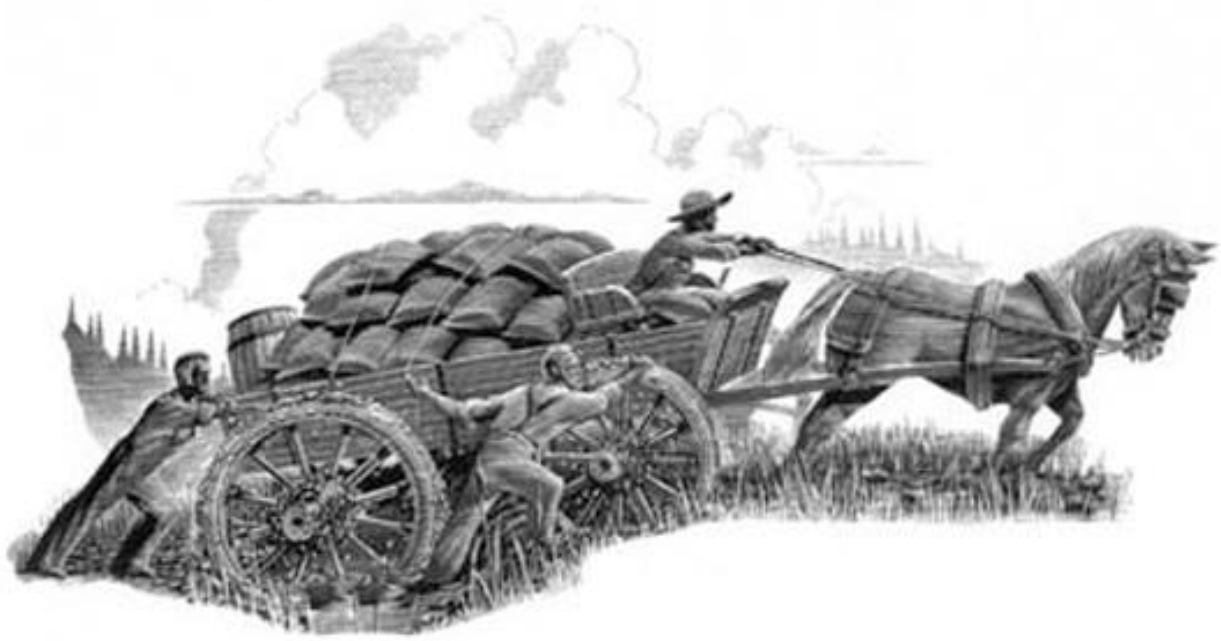
HBCU Road Tour

Using the *All of Us* Researcher Workbench to Drive Action for Health Equity

An Update from Meharry Medical College Department of Public Health Practice School of Graduate Studies

Leah Alexander, PhD, MPH

MEHARRY®
MEDICAL COLLEGE
We teach health *caring*.



Our Mission & Vision

Mission

To improve the health and well-being of people of color and underserved communities. We strive to eradicate health disparities through educational excellence, evidenced-based research, and culturally competent service.

Vision

Diversifying the field of Public Health leaders, practitioners, and researchers to advance health equity locally, nationally, and globally.

MEHARRY® MEDICAL COLLEGE

Department of Public Health Practice

OUR GOALS

To provide a quality public health education experience that equips diverse students with the competence to address the public health needs of all populations, especially the underserved.

To provide opportunities for faculty and students to engage in scholarly activities that enhance the public health evidence base for the elimination of health disparities

To provide opportunities for the professional development of students, faculty, community, and the public health workforce.

To provide opportunities for students to engage in collaborative and transformative public health practice activities

To strengthen and sustain partnerships and collaborations with local and national academic, community, and public health practice organizations

All of Us Faculty @ Meharry

Research Team

Leah Alexander, PhD, MPH
Associate Professor
- *Community Engaged Research*
- *Application of Behavioral Theory*

Wansoo Im, PhD
Associate Professor
- *Geographic Information Systems*
- *Community Mapping*
- *Public Health Exposome*

LaMonica Stewart, PhD
Professor
- *Prostate Cancer*
- *Summer Research Training Programs*

Team Topics of Interest:
- Health Disparities
- Social Determinants of Health
- Data Science
- Secondary Data Analysis

Class of 2024 Participants

Mia Barber
Sydney Batts
Kendra Bettis
Alexis Cunningham
Kaylah Dowdell
Elijah Johnson
Sariah Harris
Robyn McDaniel
Alisha Puri
Doresha Robinson
Maurice Swift
Jayla Williams

All of Us + ILE @MMC

- The Integrative Learning Experience (ILE) serves as a capstone to their public health education program at Meharry Medical College. The ILE integrates students' academic interest, professional interests, and goals and provides an opportunity to conduct in-depth research or analysis within the context of a mentoring relationship with their ILE Preceptors.

- The ILE is required for all students to complete the MPH program and obtain their degree. The ILE project planning and preparation activities span the final two semesters of the program, ending in completion of the Integrative Learning Experience course, and submission of a final ILE paper and presentation.

Public Health & Competency Based Learning

- Competencies are a set of skills necessary for the broad practice of public health. They are desirable for professionals engaging in practice, education, and research. All of the MPH courses are designed to enhance public health competencies.

- Address what students should be able to do after completing the program.

- It's important that students and faculty understand the Public Health competencies. Every course syllabus outlines what the competencies are and how they will be assessed (exam, projects, paper, etc.) in the course.

CEPH ACCREDITED MASTER'S

Project Updates

- 6-8 projects
- Teams and individual projects
- Populations, exposures, health conditions:
  - African Americans
  - Hispanics
  - Women, child bearing age
  - Pregnant women
  - Obese adults
  - Sexually transmitted infections
  - Diabetes
  - Cancer
  - Preeclampsia
  - Pre-term birth
  - COVID-19
  - Access to healthcare
  - Vaccine Hesitancy

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Department of Public Health Practice

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Questions & Answers Session

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Welcome from the *All of Us* Research Program, NIH

All of Us RESEARCH PROGRAM | Researcher Academy

All of Us Data and Research Center

All of Us Research Hub

Presented to HBCU Road Tour - Nashville

Presented by Celestial Jones-Paris, Ph.D.
Clinical Scientist II
celestial.r.jones-paris.1@vumc.org

All of Us
DATA & RESEARCH CENTER

Today's Objectives

During today's presentation, we will

- Learn about the *All of Us* Research Program and the data we offer
- Explore the public-facing Research Hub and its tools
- Examine the steps for registration
- See how to start a research project on the Workbench

Making Health Discoveries Possible

The *All of Us* Program wouldn't be possible without the generosity of our participants and the dedication of our researchers to enable health discoveries.

@AllofUsResearch
@AllofUsCEO
#JoinAllofUs

One of the world's largest, most diverse biomedical datasets of its kind

Inviting at least

1 Million people from across the United States

Data available from **413,450+** participants

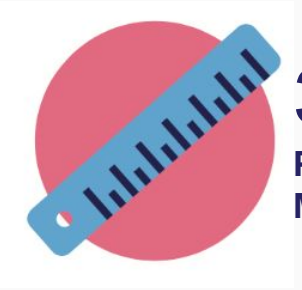
75% are from communities underrepresented in biomedical research

45% are from racial and ethnic minority groups

Data as of April 2023

Summary of Data Available in the Researcher Workbench

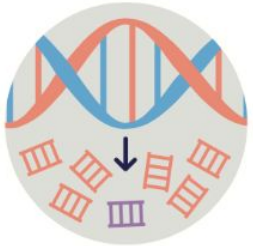
413,350+
Survey Responses



337,500+
Physical Measurements

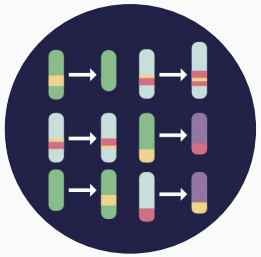
312,900+
Genotyping Arrays

287,000+
Electronic Health Records



245,350+
Whole Genome Sequences

15,600+
Fitbit Records
NEW! Sleep Data



11,350+
Structural Variants
NEW! In 2023

1,000+
Long-Read Sequences
NEW! In 2023

Data as of April 2023

The *All of Us* Research in Action

Researchers from all settings and career stages are committed to the responsible/ethical use of participant data and returning value back to communities.

Nyia L Noel, MD, MPH

Assistant Professor of Medicine Boston University School of Medicine

Advocacy

Dr. Noel, an OBGYN at a Boston hospital, is leveraging the *All of Us* Research Program dataset to study hypertensive disorders in pregnancy and uterine fibroids. Her goal is for the public to see fibroids as a public health issue, and she highlights the need for policies to increase funding for research.

Research Highlight (English) New Intervention Addresses Racial Disparities in Uterine Fibroid Care and Treatment

Siya Qi, MS

Director, Precision Engagement, Asian Health Coalition

Community Engaged Research

The Asian Health Coalition focuses on community science and works closely with the 25 Asian Engagement & Recruitment Core (ARC) partners across the nation, the NIH, health care providers, and national organizations to help increase representation of Asian Americans, Native Hawaiians, and Pacific Islanders in the *All of Us* Research Program.

The Asian Health Coalition Launches Community Scientist Project to Address Health Equity through Community-based Participatory Research

KiTani Lemieux, PhD

Associate Professor, Division of Basic Pharmaceutical Sciences

Campus-Wide Engagement

Dr. Lemieux's research focuses on better understanding the role of noncancerous cells as cancerous cells mutate and grow in triple negative breast cancer patients, a type of breast cancer that disproportionately affects African American women. Together with other faculty at her campus, she has supported pharmacy students' research with the *All of Us* Research Program.

It Takes All of Us: Xavier University Spotlight

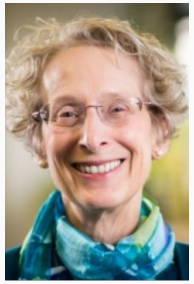
Kathryn McDougal, PhD

Clinical Assistant Professor Towson University

Undergraduate Instruction

Dr. McDougal's research efforts stem from her focus to provide undergraduate students with the opportunity to experience authentic research within undergraduate courses. She works on genomics and epidemiology-based projects with students using data from the *All of Us* Research Program.

An Instructor's Guide to Student Projects on the Researcher Workbench



Louisa Stark, PhD

Professor of Human Genetics and Director of the Genetic Science Learning Center, University of Utah

High School Instruction

Dr. Stark's research interests focus on science and health education for students and educators from the K-12 level through graduate and medical education as well as patients and members of the lay public. Her team has created a curriculum to introduce high school students to the *All of Us* Research Program.

K-12 Curriculum

How the Research Hub Works

Data: Access Flowchart and Tools

Public Tier

Anyone can visit ResearchAllofUs.org (the *All of Us* Research Hub) to learn more about the data available for research and explore aggregated participant data and summary statistics, with participant identifiers removed. Public resources include:

- **Data Snapshots:** Aggregated, public-facing overviews of participant characteristics and data types
- **Data Browser:** Interactive preview into the *All of Us* dataset through public-facing aggregate data
  - Currently includes participant-provided survey responses, physical measurements, data from EHRs and wearables, and genomic data
- **Survey Explorer:** Details the questions included in each of the surveys
- **Research Projects Directory:** Descriptions of each research project within the Researcher Workbench

Researcher Workbench

Registered Tier

Registered researchers can access in-depth data and a variety of research tools to conduct a range of studies.

Surveys

Electronic Health Records

Physical Measurements

Wearables

Data have been processed to protect participant privacy.

Controlled Tier

Registered researchers with amended institutional agreements can access all of the data in the Registered Tier plus additional and expanded data types, including genomic data, real dates of health events, ICD codes, more granular demographic data, and more.

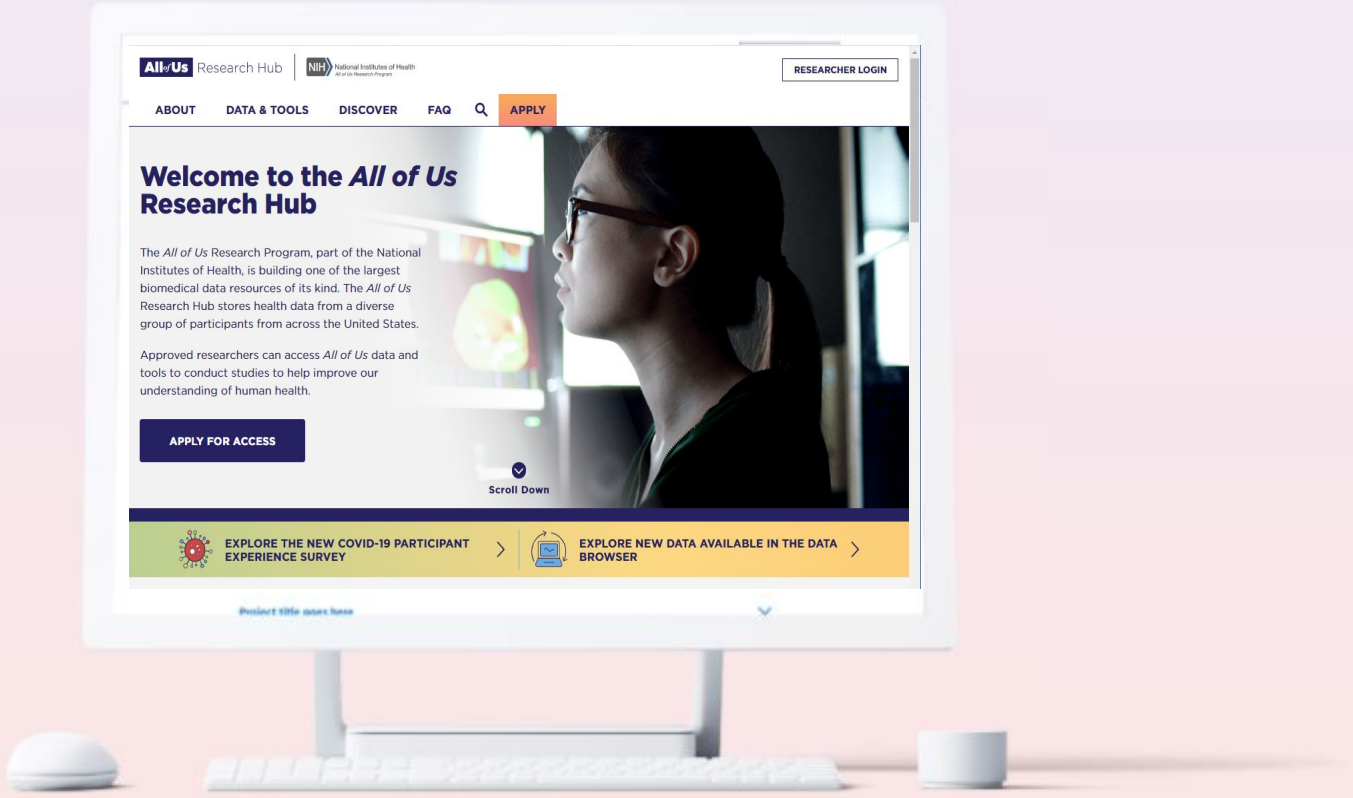
Genomics

Health and Lifestyle surveys

Counts in the Public, Registered, and Controlled Tiers may vary based on the lag time associated with the data curation process under the program's rigorous privacy protections.

The Research Hub

The *All of Us* Research Hub



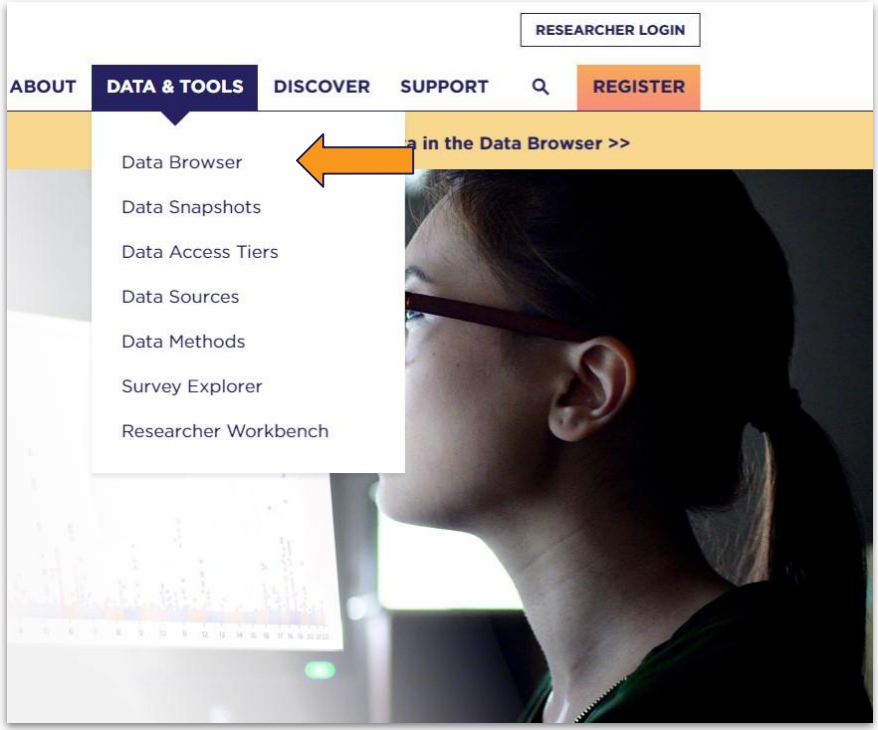
https://www.ResearchAllOfUs.org/

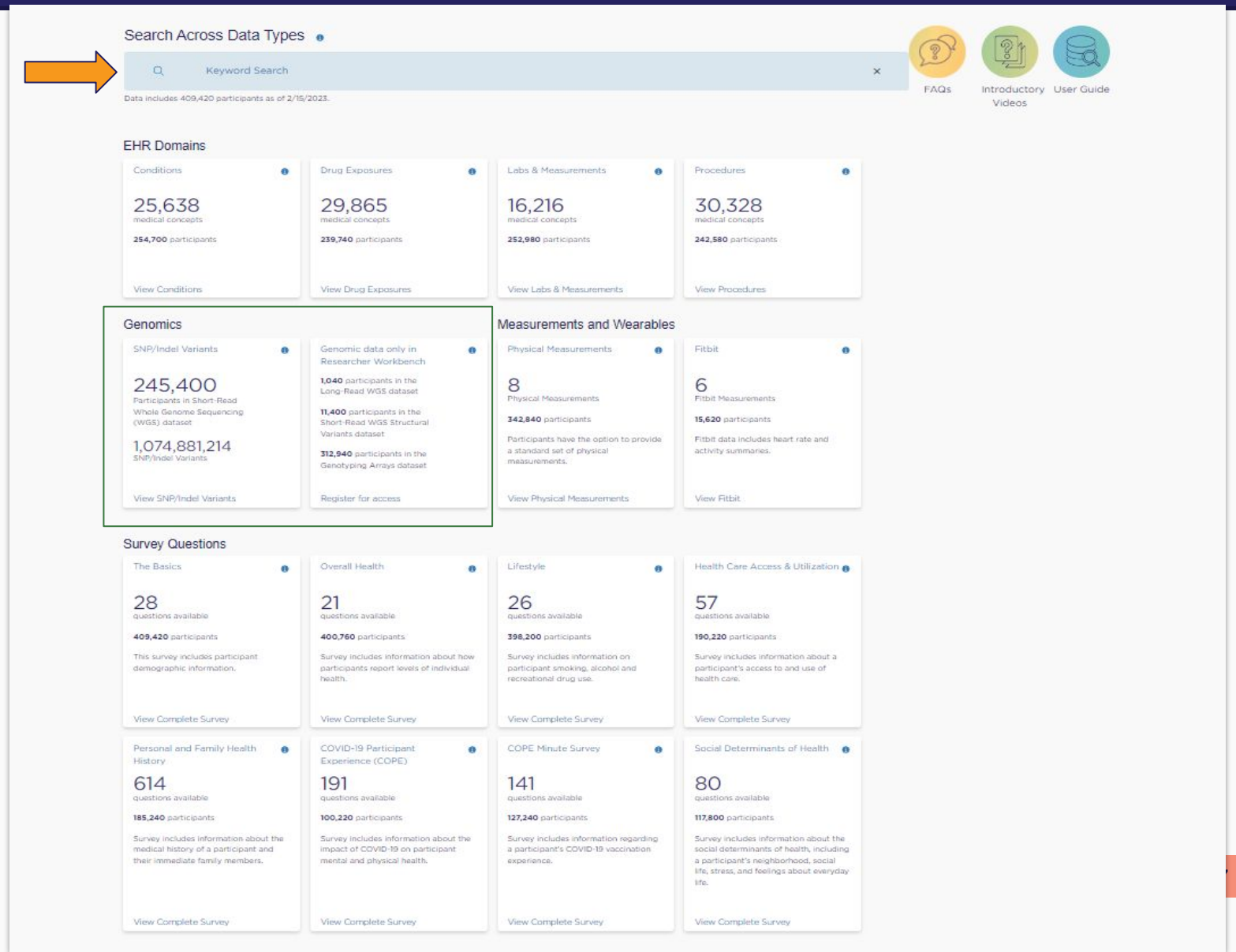
Researchallofus.org is home to *All of Us* data, research tools, & projects.

"The Public Website"

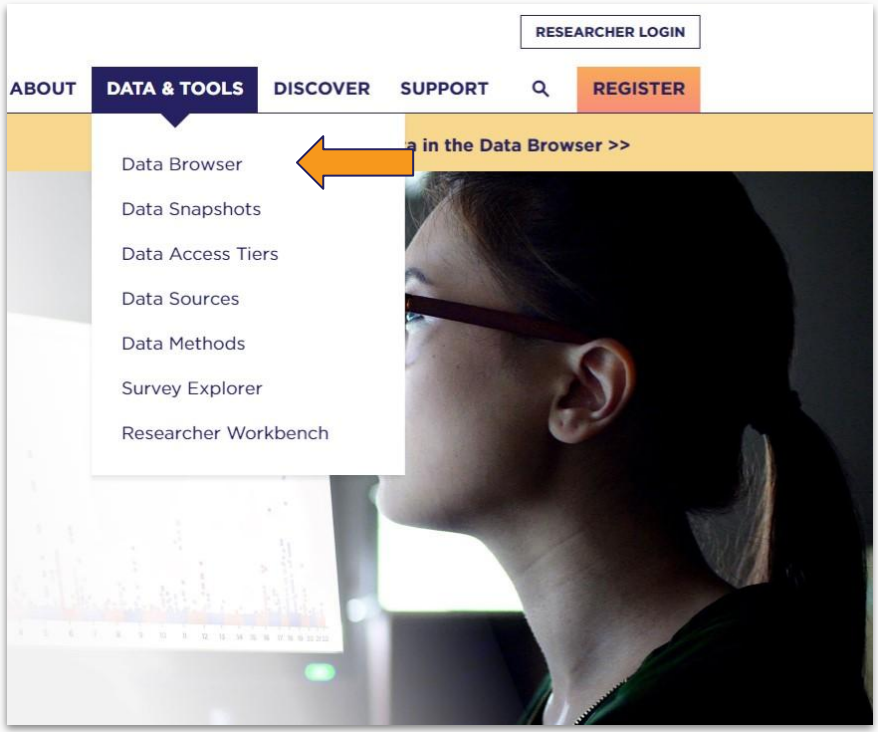
"The Workbench"

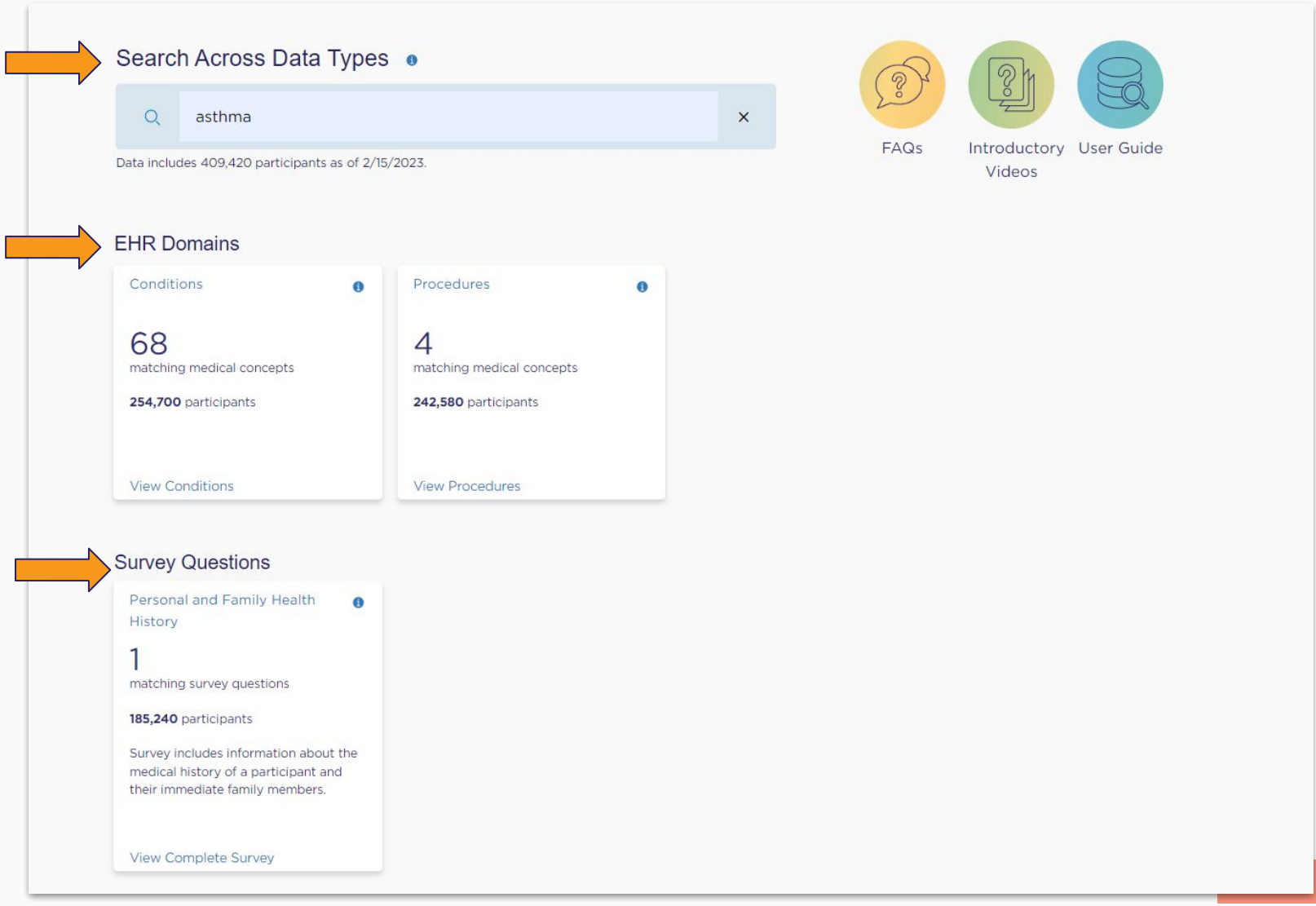
The Data Browser is an interactive way to view the data.



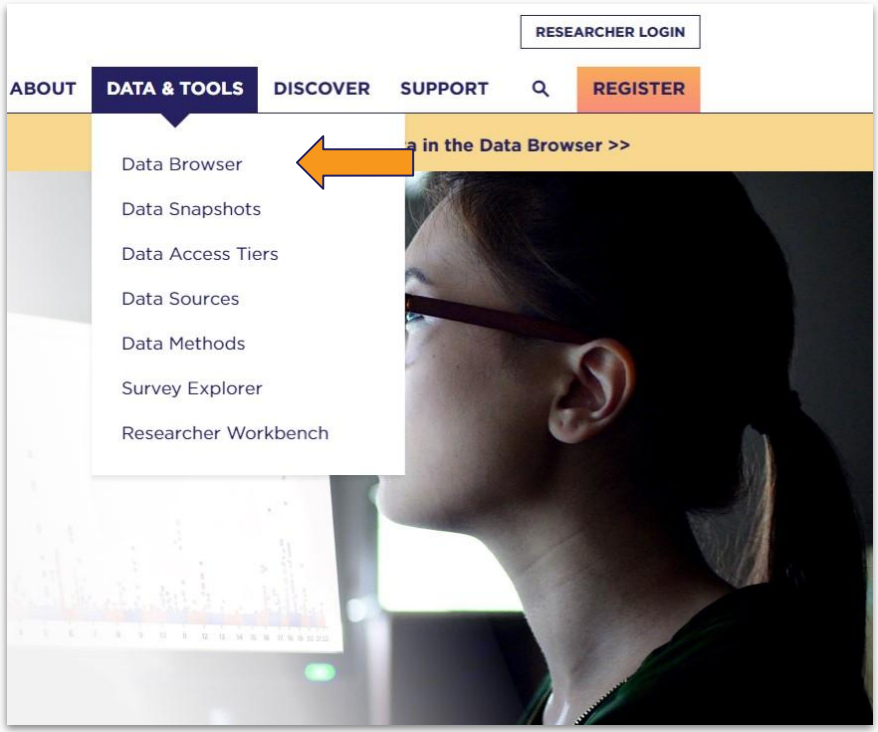


Explore the Data: The Data Browser



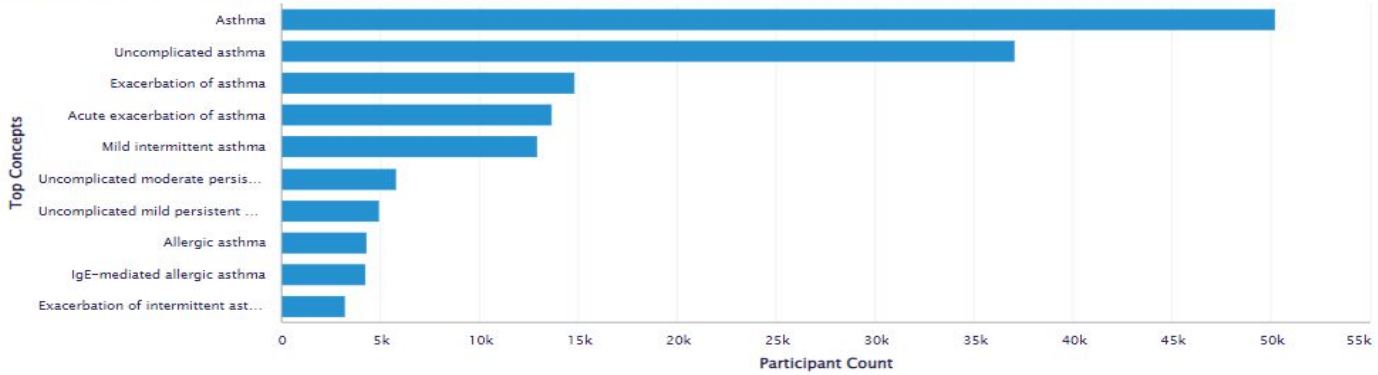


Explore the Data: The Data Browser



DATA DISCLAIMER

Top 10 Conditions by Descending Participant Counts

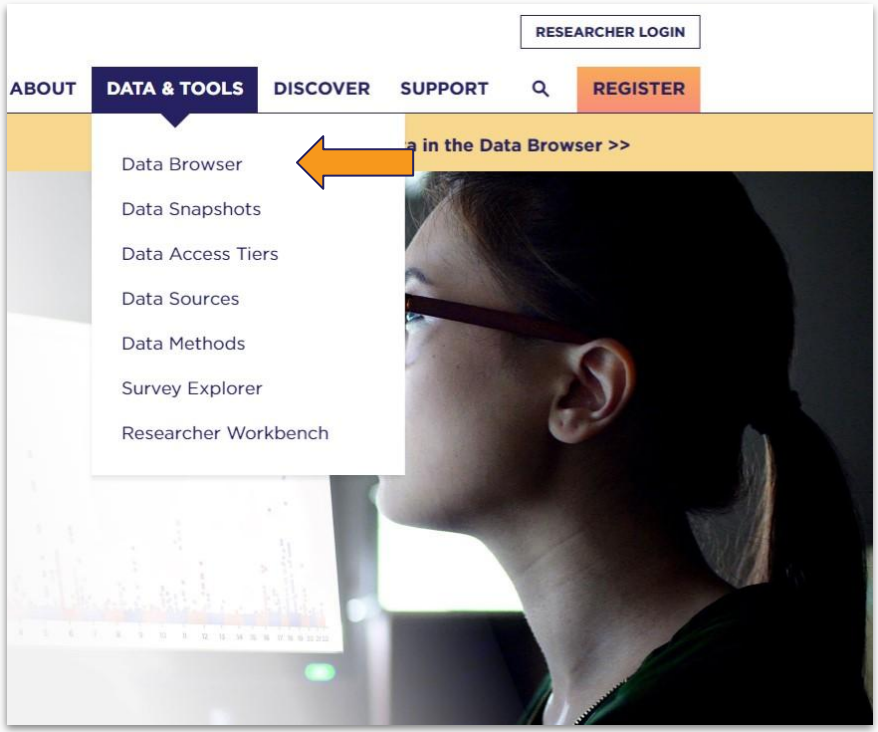


Showing top 1-50 of 68 matching medical concepts

Interested in general health information related to "asthma"?
Search MedlinePlus

Conditions	Participants of 254,700	% of 254,700
1. **Asthma**	50,160	19.69 %
Also Known As **Asthma**tic, Airway hyperreactivity, Bronchial hyperresponsiveness, Hyperreactive airway disease, Bron··· See More		
2. Uncomplicated **asthma**	37,040	14.54 %
Also Known As Uncomplicated **asthma** (disorder)		
3. Exacerbation of **asthma**	14,780	5.8 %
Also Known As Exacerbation of **asthma** (disorder)		

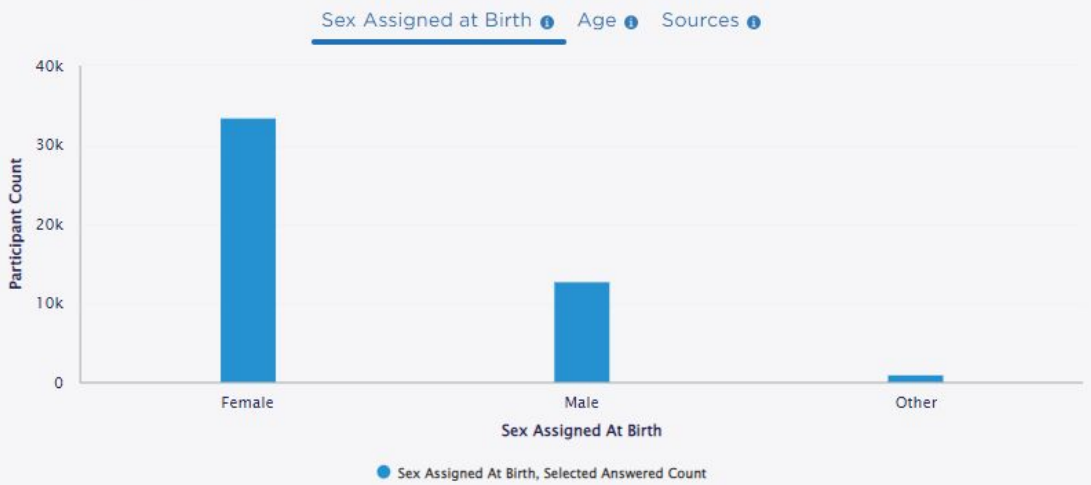
Explore the Data: The Data Browser



Conditions	Participants of 254,700	% of 254,700
1. **Asthma**	50,160	19.69 %
2. Uncomplicated **asthma**	37,040	14.54 %
3. Exacerbation of **asthma**	14,780	5.8 %
4. Acute exacerbation of **asthma**	13,640	5.36 %

Also Known As
Asthmatic, Airway hyperreactivity, Bronchial hyperresponsiveness, Hyperreactive airway disease, Bron··· See More

Sex Assigned at Birth | Age | Sources

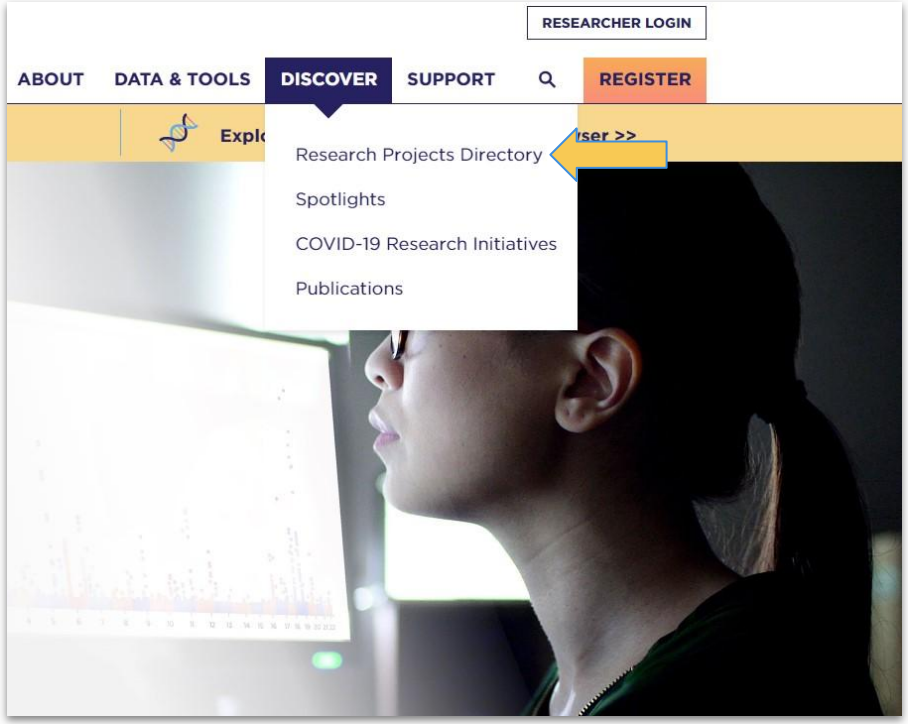


Also Known As
Uncomplicated **asthma** (disorder)

Also Known As
Exacerbation of **asthma** (disorder)

Also Known As
Acute exacerbation of **asthma** (disorder), **Asthma** attack

Use the Project Directory to view all active projects.



Research Projects Directory

9,303 ACTIVE PROJECTS

This information was updated 2/21/2024

The Research Projects Directory includes information about all projects that currently exist in the Researcher Workbench to help provide transparency about how the Workbench is being used. Each project specifies whether Registered Tier or Controlled Tier data are used.

Note: Researcher Workbench users provide information about their research projects independently. Views expressed in the Research Projects Directory belong to the relevant users and do not necessarily represent those of the All of Us Research Program. Information in the Research Projects Directory is also cross posted on AllofUs.nih.gov in compliance with the 21st Century Cures Act.

Search By: | Project title: enter keywords you are looking for

Demographic factors associated with autoimmune skin diseases

I hope to characterize the prevalence of autoimmune skin diseases (including psoriasis, eczema, vitiligo, bullous pemphigoid, pemphigus vulgaris, dermatomyositis, cutaneous lupus) in the All of Us cohort, and determine whether differences across ethnic groups or other demographic factors exists.

Glucocorticoids impact on breast cancer prognosis

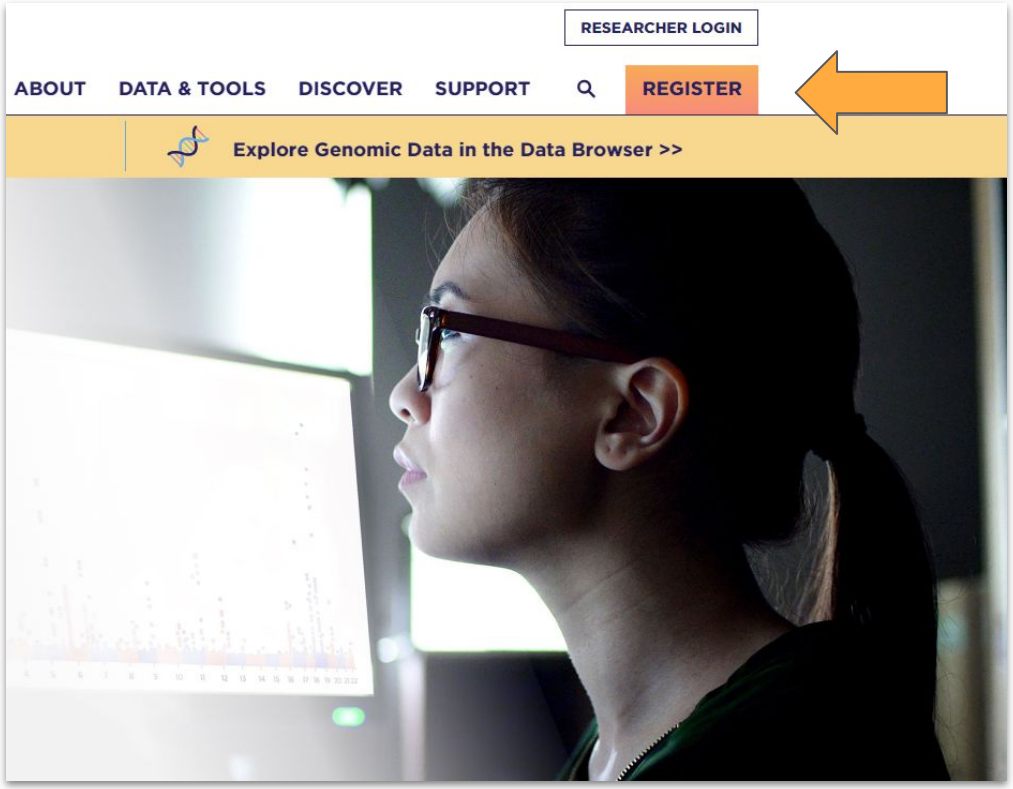
The effects of glucocorticoid (GC) co-treatment on the prognosis of Steroid hormone receptor positive and triple negative (TNBC) breast cancer patients with different racial backgrounds.

Metabolic Dysfunction among RP Patients

Mutation currently linked to a causative gene for autosomal recessive retinitis pigmentosa in Asian populations have also been casually linked to the development of T2D. We have reason to believe that this may not be a phenomenon per say

How to Register

Registration is easy!



researchallofus.org/academy_ev

How to Register

STEP 1

CONFIRM YOUR INSTITUTION'S AGREEMENT

Before you can create an account, your institution must have a Data Use and Registration Agreement (DURA) in place with *All of Us*. **Confirm DURA**.

STEP 2

CREATE AN ACCOUNT AND VERIFY IDENTITY

After creating your Researcher Workbench account, you will be asked to verify your identity through Login.gov or ID.me. **Learn more**.

STEP 3

COMPLETE THE MANDATORY TRAINING

The training focuses on conducting responsible and ethical research using the Researcher Workbench. Additional training is required to access the Controlled Tier. **Learn more**.

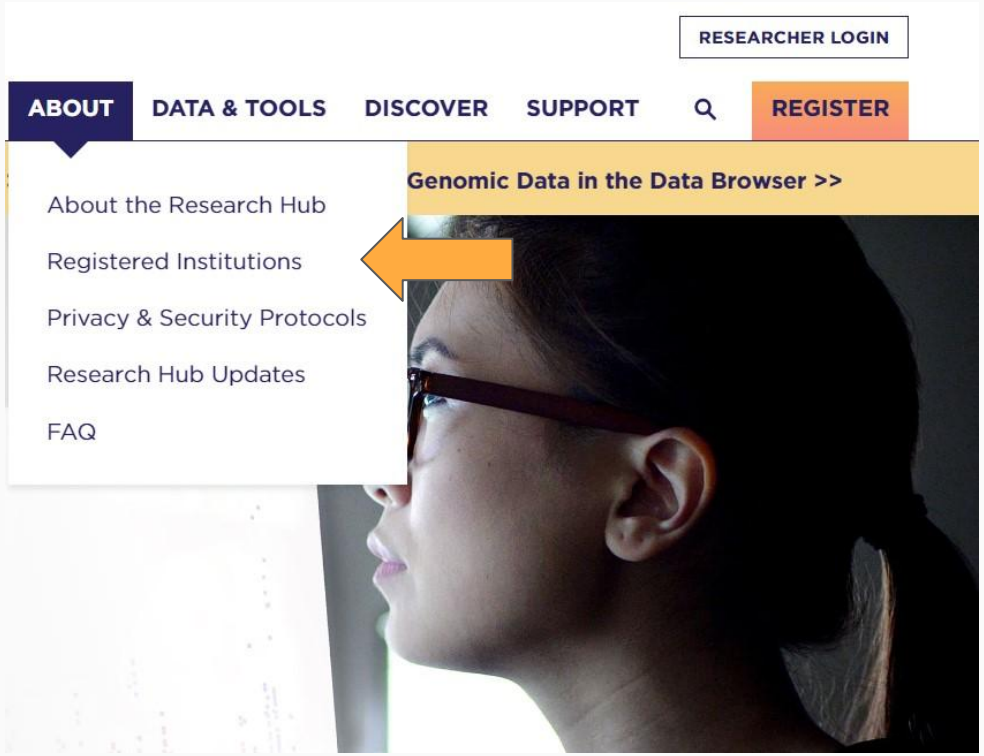
STEP 4

SIGN THE DATA USER CODE OF CONDUCT (DUCC)

This agreement outlines the program's expectations for researchers who use the Researcher Workbench and describes how program data may be used. **View the DUCC**.

CREATE AN ACCOUNT

See if your institution has an agreement with us for access.



Registered Institutions

Access to the Researcher Workbench is available only to registered researchers with an institutional Data Use and Registration Agreement (DURA). Academic, not-for-profit, and health care institutions can enter into a DURA. Search or browse the list below to confirm if your institution has a DURA in place.

705
Institutions Have Agreements in Place

If your institution is listed below, **AND** includes your preferred data tier, **AND** doesn't require individual agreements

If your institution is not listed below, **OR** doesn't include your preferred data tier, **OR** requires individual agreements

CREATE AN ACCOUNT **SUBMIT A REQUEST**

Quick search - enter your institution's name

Key: (R) Registered Tier (C) Controlled Tier (i) Individual agreements required by institution (e) eRA Commons required by institution

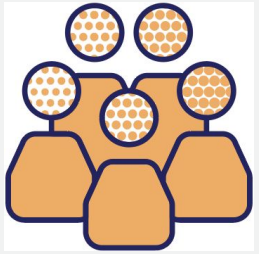
Institution	Access Level	*Contact at Institution*
A.T. Still University of Health Sciences	R C	*Gayla Sublette*
Abigail Wexner Research Institute at Nationwide Children's Hospital	R C	*Nichole Michaels*
Above and Beyond Family Recovery Center	R C	*Daniel Hostetler*
Access Care Anywhere	R C	*Carissa Bishop*

All of Us RESEARCH PROGRAM

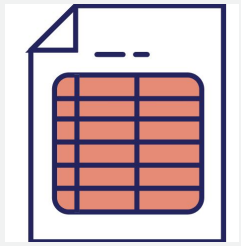
The Researcher Workbench and how to start a research project

The Researcher Workbench = secure cloud analysis platform

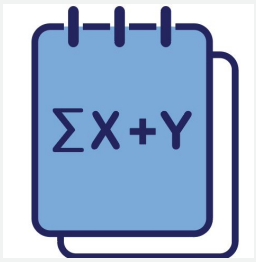
WORKSPACES



COHORT BUILDER



DATASET BUILDER

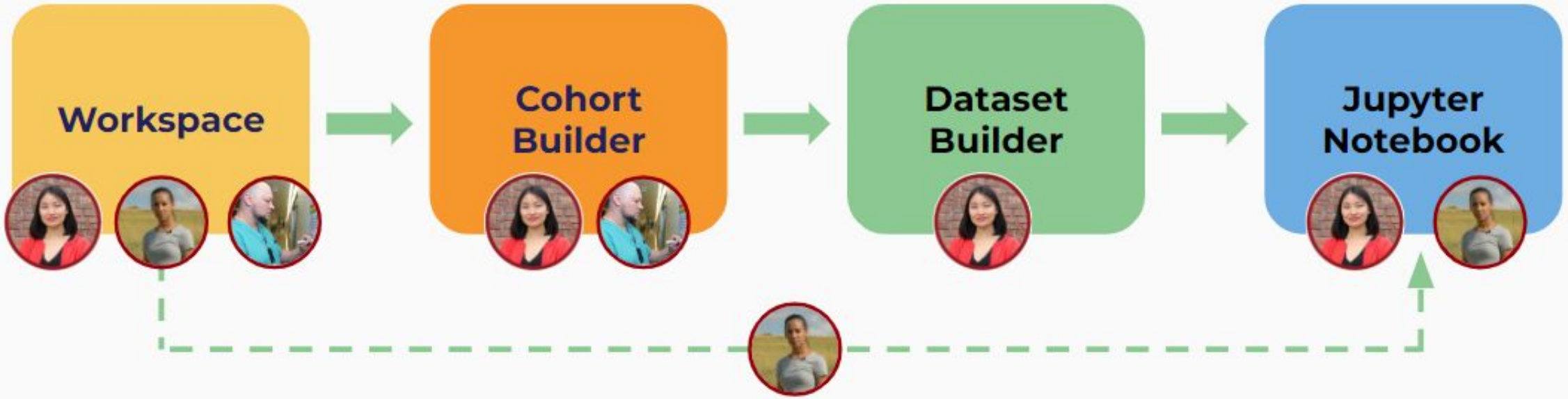


NOTEBOOKS

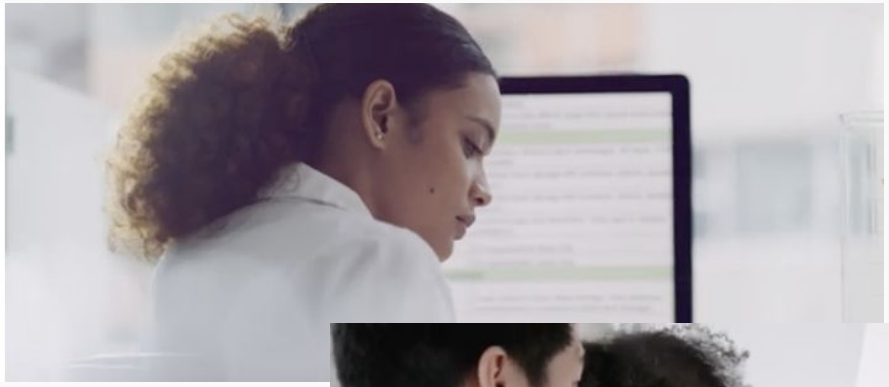
WORKBENCH USER SUPPORT HUB

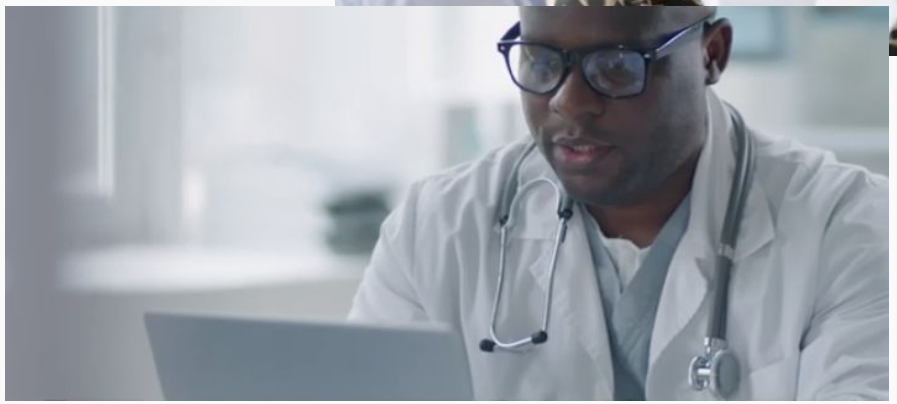
The Workbench is Collaborative

Within the Researcher Workbench, a researcher (and their research team) collaborate in "workspaces." The workflow is flexible & collaborative.



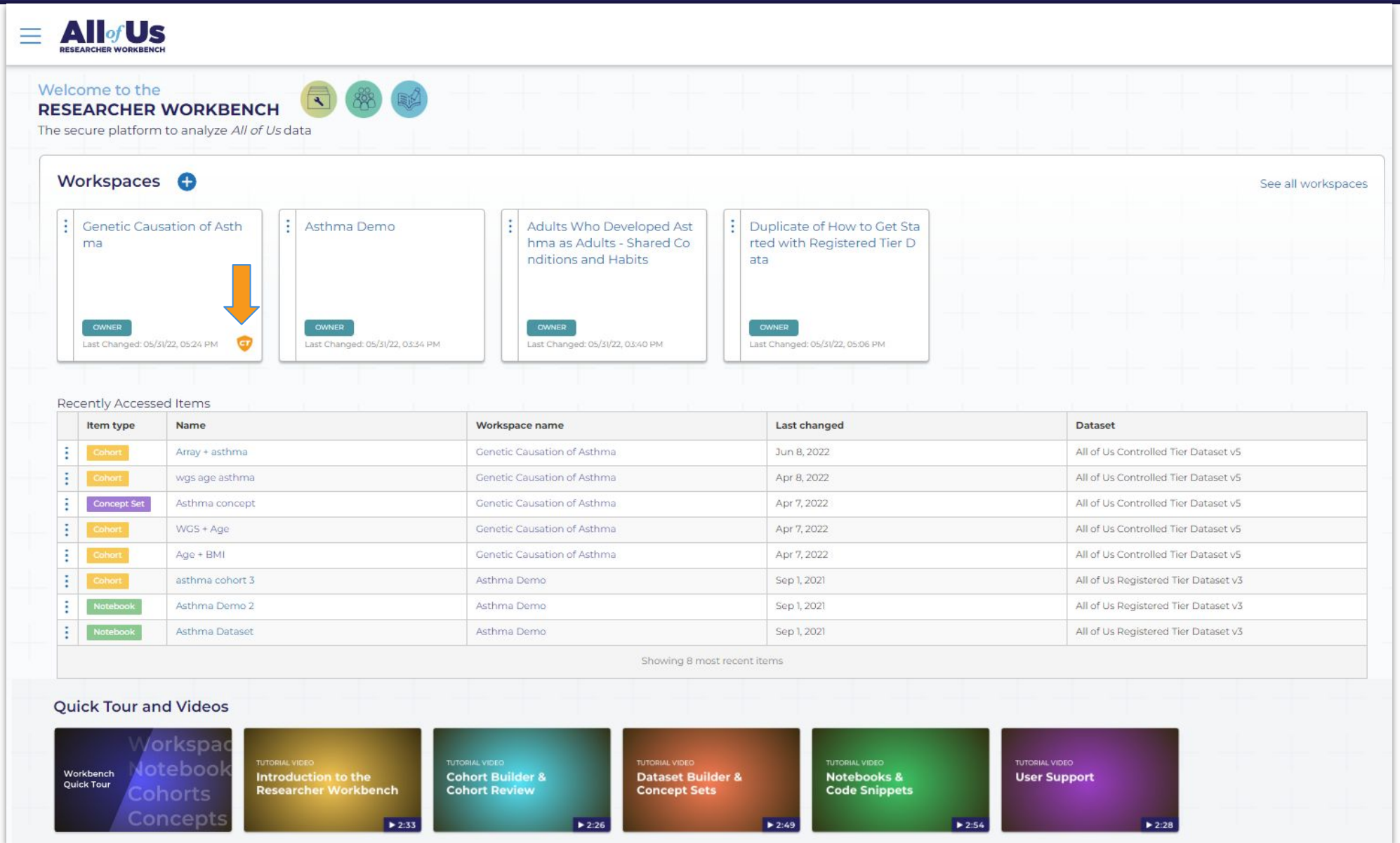
No IRB approval needed.



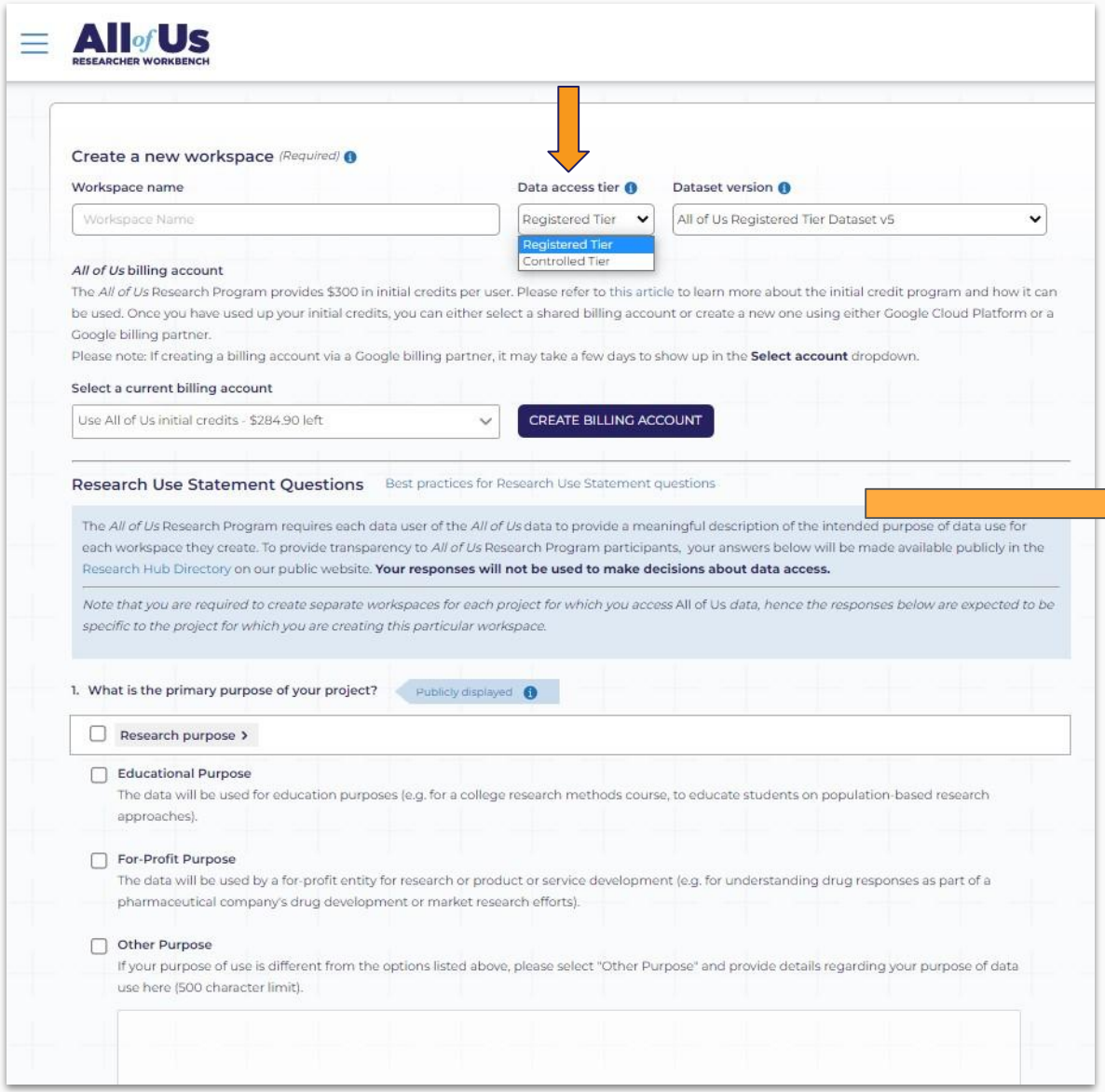


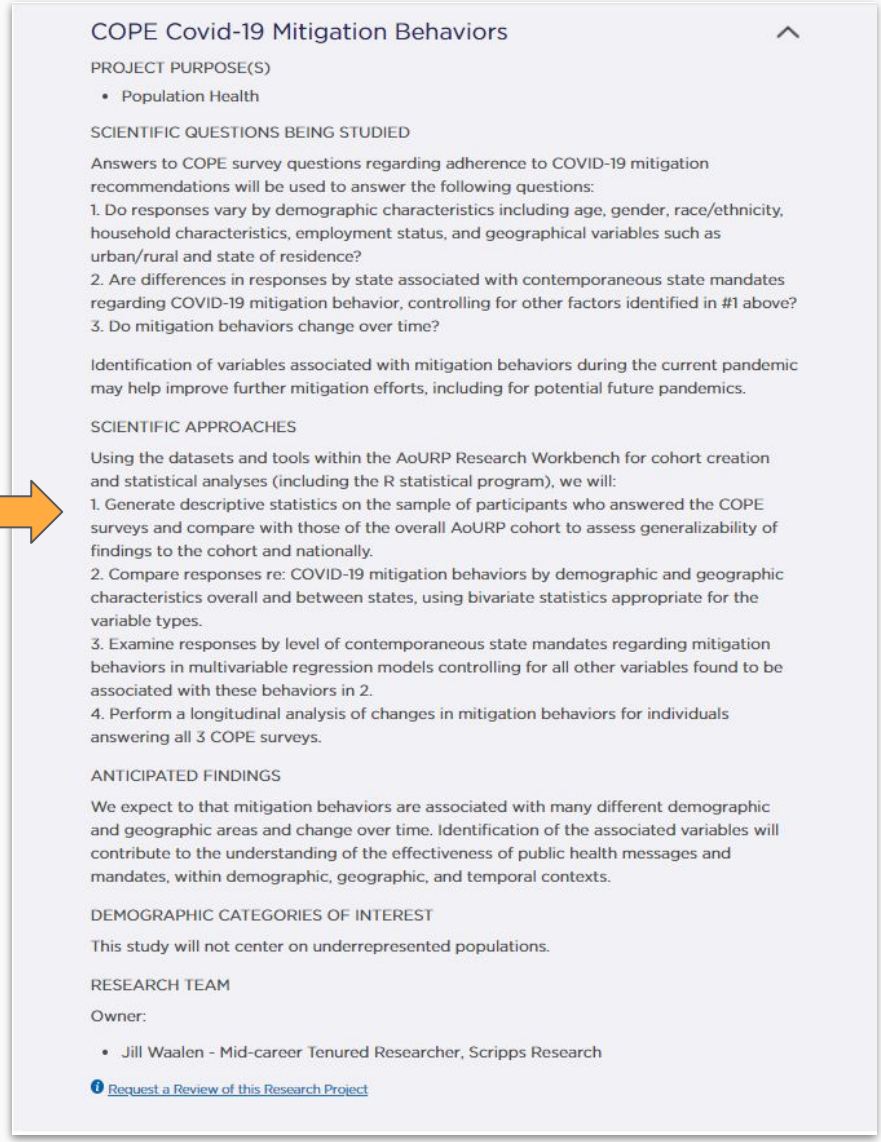
We use a passport model and approve the researcher

The Workbench landing page

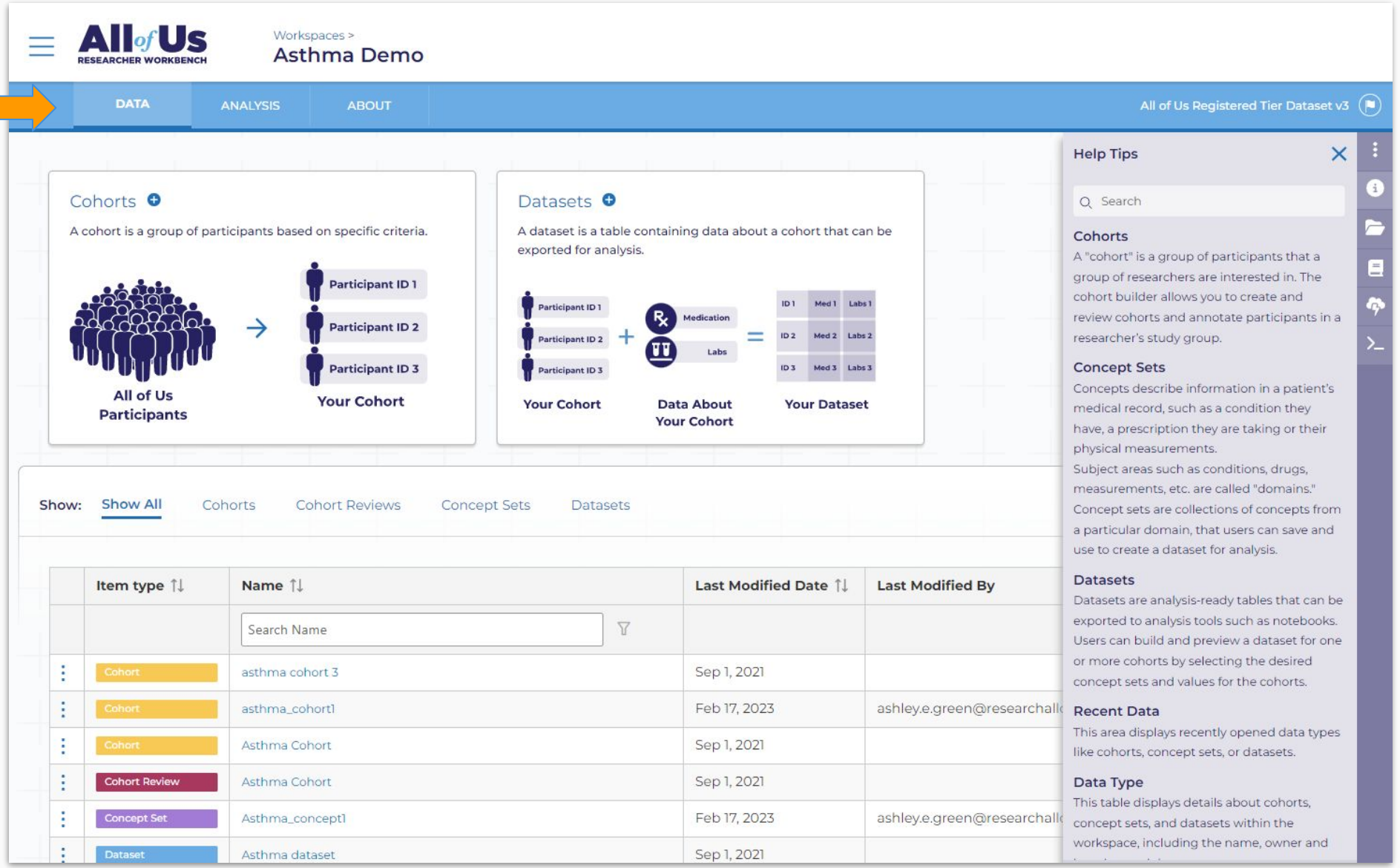


Answer questions about your Workspace.

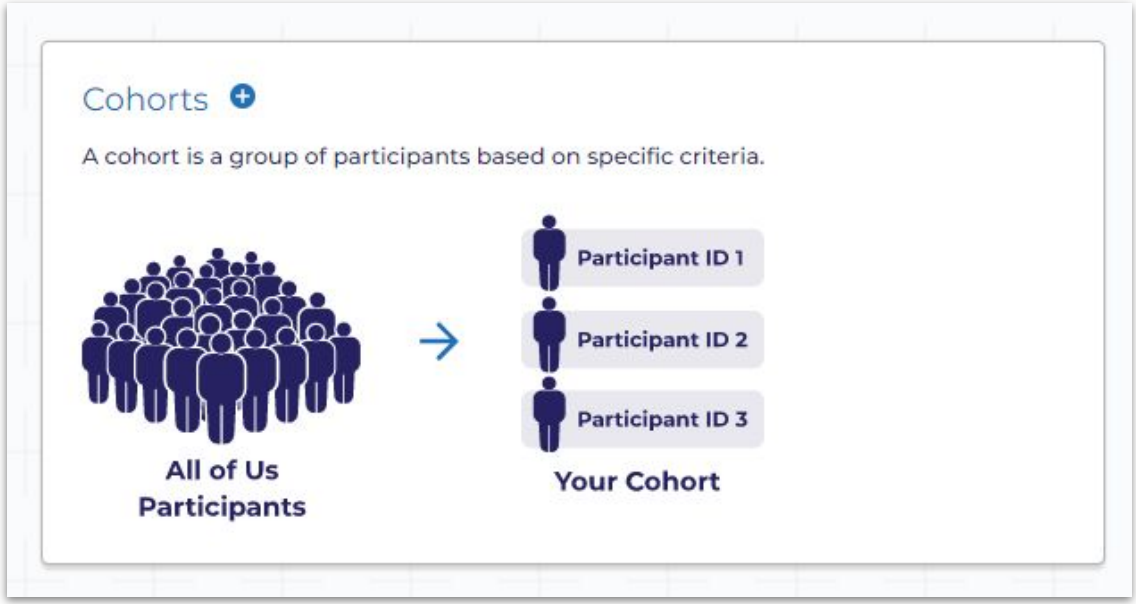


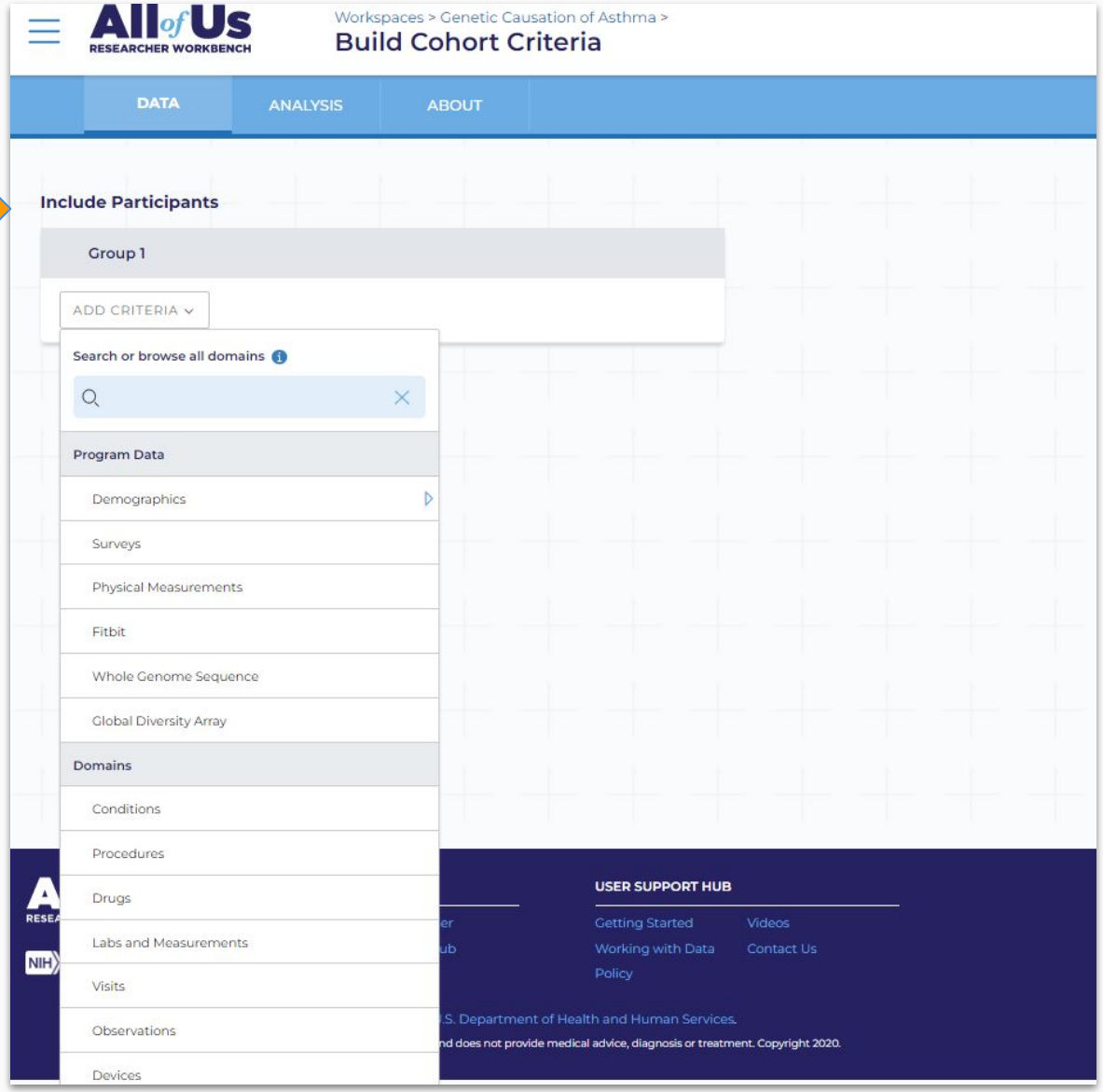


The Researcher Workbench

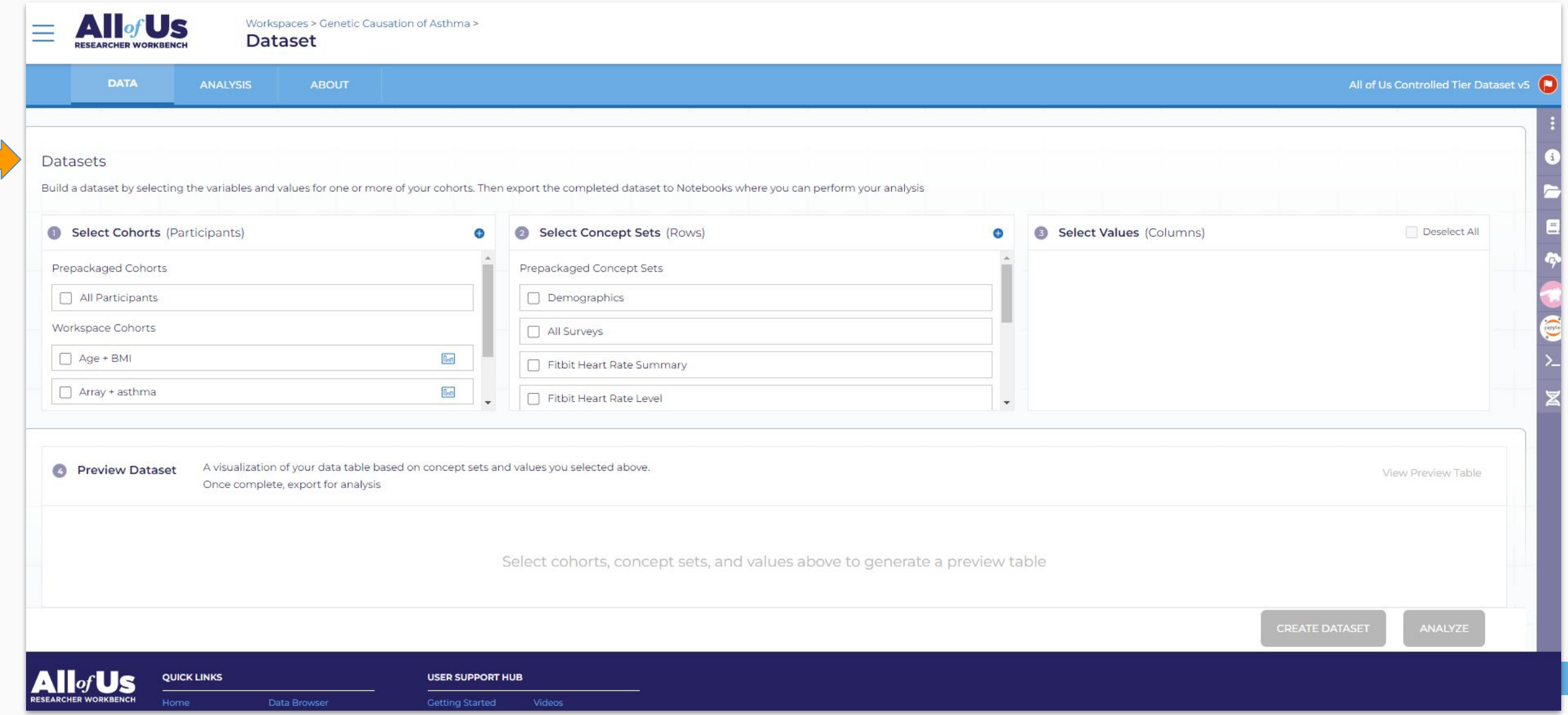


The Researcher Workbench





The Researcher Workbench



Support Resources

Our Support Tools

Email us questions anytime at support@researchallofus.org.	**Zoom in for our live New User Orientation or Office Hours.**	**User Support Hub**
Email us or use our “Help” icon to • Resolve technical issues • Ask questions about our data or the research program • Give us feedback or make suggestions • and more….	Webinar objectives: • Understand data & data organization • Learn how to get started on Researcher Workbench • Learn how to utilize the User Support Hub • Technical Assistance	Our User Support Hub provides: • Articles, videos and tutorials about the Re…kbench an…aset • Up…uct offe… fea… • Ev…

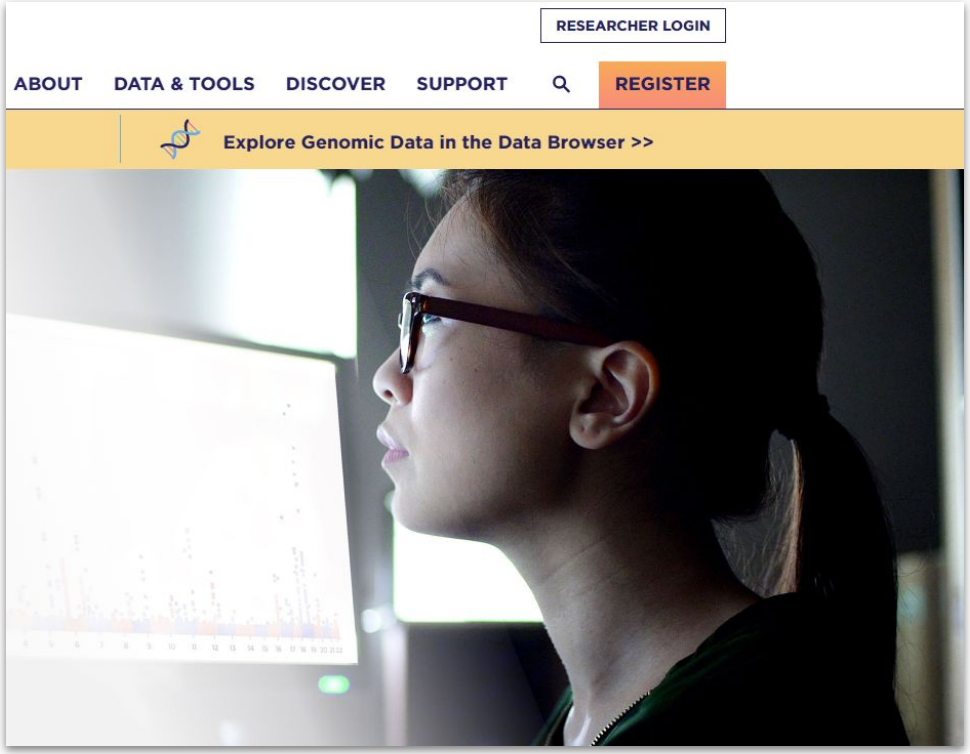
Upcoming Events and Opportunities

- **Registration is now open for the *All of Us* Researchers Convention to be held on April 3 and 4.** The free, virtual event is open to researchers across all disciplines and career stages. It provides an opportunity for researchers who use *All of Us* data to showcase their work for others who share their interests in precision medicine. Register for the *All of Us* Researchers Convention at ResearchAllofUs.org/2024Convention.

- **Apply for the Biomedical Researcher (BR) Faculty Summit to be held May 14 to 18, 2024.** The summit supports researchers from diverse backgrounds, including those from communities that are underrepresented in the biomedical research workforce, who are interested in using the *All of Us* Researcher Workbench. Applicants who are selected to attend the summit will be accepted into the *All of Us* BR Scholars Program, a one-year program that provides networking opportunities, professional development sessions, grant funding, and research training. **Apply for the summit by February 29, 2024.**

- **Call for papers: *Journal of the American Medical Informatics Association* (*JAMIA*) seeks papers about returning value to communities from the *All of Us* Research Program.** Topics of interest include the use of *All of Us* data by community members, community-based organizations, and community scientists; analyses that address priority health concerns of communities; engagement of community members in the research process to promote epistemic justice; and more. **Submissions are due by April 6, 2024**. Learn more on the *JAMIA* website.

Join our community of researchers!



Help us connect with other researchers!

Email **ashley.e.green@vumc.org** if you know of others interested in demos or training sessions

Sign up for our newsletter!
allof-us.org/RRSignup

@AllofUsResearch
#JoinAllofUs

Questions & Answers Session

All of Us RESEARCH PROGRAM | Researcher Academy

Celebration of Institutional Champions

All of Us RESEARCH PROGRAM | Researcher Academy

Announcements

All of Us RESEARCH PROGRAM | Researcher Academy

Call for Applications: 2024 Interns

The *All of Us* Researcher Academy is now accepting applications for its Internship Program, which will commence in June 2024.

- **How It Works**
  - Complete a project using the *All of Us* Dataset (supported by a team of co-mentors)
  - Stipend: Undergraduate students $5,000 | Graduate students $6,500 (if not currently supported by an *All of Us* award)
- **Internship Eligibility**
  - Currently enrolled as an undergraduate or graduate student at an HBCU
- **Internship Requirements**
  - 4-month commitment
  - Attend at least two academy courses/workshops
  - Attend monthly meetings with fellow interns and weekly touch-base meetings with mentor
  - Submit abstract for possible inclusion at a future *All of Us* Researchers Convention

Scan **QR code** to learn more and **apply by April 1, 2024**, 12:59 pm ET

All of Us RESEARCH PROGRAM | Researcher Academy

Call for Applications: 2024 Internship Mentors

The *All of Us* Researcher Academy invites experienced mentors with active Researcher Workbench projects to apply to mentor undergraduate and graduate student interns starting in June 2024.

How It Works

- The internship requires a **4-month mentoring commitment**
- Mentors guide interns in the completion of a research project using *All of Us* data
- Students submit an abstract to present their project at a future *All of Us* Researchers Convention
- Internships can be conducted **in person, virtually, or in a hybrid format**
- Mentors receive a **$3,000 stipend** (if not currently supported by an *All of Us* award)

To learn more and become a mentor with the *All of Us* Researcher Academy Internship Program, **scan QR code** and **apply by April 1, 2024.**

For additional information, please contact AllofUs_Academy@rti.org

Course Highlights: April 2024

To register for courses, scan the QR code or access https://bit.ly/RA_Course

Course	Format	Date/Time
Mindfulness Practices for Health Researchers	*Live virtual course*	April 22–25, 2024; 5:15–5:45 pm ET

Overview:

This course will lead participants through a progression of mindfulness exercises for health researchers. Participants will learn to intentionally focus their attention, understand what mindfulness is and how it makes a difference, and be able to use mindful attitudes like acceptance, kindness, gratitude, and loving-kindness. This course is ideal for anyone.

Instructor: Dr. TJ Exford

Course	Format	Date/Time
Introduction to Publishing Health Data in Academic Journals	*Live virtual course*	April 4, 11, 18 and May 2, 2024, 3:00 – 4:00 ET

Overview:

This short course series will help to guide participants in the academy with their career paths and inform them of requirements and opportunities that are essential for their success in STEM or STEM-related research. This course is ideal for undergraduate or graduate students interested in publishing their research for the first time.

Instructor: Dr. Vabren Watts

All of Us Researcher Academy Newsletter

- **Quarterly distribution**
- **500+ Subscribers**
- **Features**
  - Researcher Spotlight
  - Career Corner
  - Academy Announcements
  - Upcoming Courses and Events

All of Us RESEARCH PROGRAM | Researcher Academy

Connections

Issue 6 | Winter 2024

IN THIS ISSUE

- New Year, New Opportunities
- Academy Announcements
- Spotlight Dr. Dorothy Browne, Shaw University
- Career Corner: How to Find a Professional Mentor
- Upcoming Academy Courses

Learn more about the Researcher Workbench

Visit the *All of Us* Research Program website

Subscribe to *Connections*

Read past issues of *Connections*

New Year, New Opportunities and Connections

Although researchers sometimes receive praise for their individual accomplishments, progress in science has long been a team sport. Mentoring, in particular, can be a vital source of guidance on funding for research and encouragement to develop new analytical skills. In this issue, we continue our focus on mentoring by mapping out steps for identifying your ideal mentor in Career Corner (p. 7). We also explore how the *All of Us* Researcher Academy and its related efforts are supporting knowledge mobilization and team science.

Artificial intelligence and machine learning (AI/ML) are one emerging domain of work in which new skills are increasingly important. Yet historically underrepresented communities have not benefited from AI/ML developments at the same pace as other groups. NIH's Artificial Intelligence/Machine Learning Consortium to Advance Health Equity and Researcher Diversity (AIM-AHEAD) and RTI International have created a new resource for researchers who want to develop AI/ML skills. The traineeship, which begins this month, will guide participants through an intensive 8-month program in advanced data analysis using the resources of the *All of Us* database and AIM-AHEAD's data science training core.

Teamwork is important for 21st century science, but it does not happen without planning and effort. Being intentional about building and maintaining teams can be an important step in growing research capacity at your institution.

-continued on page 2

Winter Issue now available!

Scan the QR code or visit researcheracademy.rti.org/newsletter to read all our newsletter issues.

Summer Research Opportunities at Meharry

Meharry Enhancing Virology Training (ENVIT) Summer Research Program

SUMMER 2024

The Meharry ENVIT Program is a 9-week virology research training that include didactic lectures in fundamentals of virology and career-development topics for a virology-focused research and education career. The overall program goal is to prepare and increase the number of underrepresented minority (URM) students in virology-focused careers.

To learn more information and access the online application, visit https://home.mmc.edu/school-of-graduate-studies-research/envit/

Meharry Cancer Summer Research Program (SuRP)

SUMMER 2024

The Meharry Cancer SuRP is a 9- or 10-week intensive, hands-on research experience for undergraduate and medical students. The overall goals of the program are to expose students to different types of cancer research and increase their awareness of cancer health disparities. Program participants will work under the mentorship of a Meharry Medical College and/or Vanderbilt University Medical Center faculty on a research project that explores the causes, diagnosis, prevention and/or treatment of cancer.

To learn more information and access the online application, visit https://home.mmc.edu/school-of-graduate-studies-research/meharry-cancer-surp-2/

All of Us RESEARCH PROGRAM | Researcher Academy

Nest Stop on the *All of Us* HBCU Road Tour: Jackson MS, April 23

Keep an eye out for registration information coming in March

Community-Campus Partnerships for Health
Promoting Health Equity and Social Justice

RTI INTERNATIONAL

The *All of Us* Researcher Academy is supported by the Division of Engagement, *All of Us* Research Program, National Institutes of Health, Award Number 1OT20D028395-01.

All of Us RESEARCH PROGRAM | Researcher Academy

Attendee Insights

We want to hear from you

All of Us RESEARCH PROGRAM | Researcher Academy

Closing Remarks

All of Us RESEARCH PROGRAM | Researcher Academy

Thank You!

Community-Campus Partnerships for Health
Promoting Health Equity and Social Justice

RTI INTERNATIONAL

@AllofUsResearch #JoinAllofUs

AllofUs_Academy@rti.org