# All of Us Research Program Guide to DRC Researcher Resources

National Institutes of Health





Last Updated: October 2024











# **Data & Research Center**

The Data & Research Center (DRC) houses the *All of Us* Research Program data, manages researcher access to the Research Workbench, provides technical support to Workbench users, and hosts public facing tools such as the Data Browser.

Our team at the DRC provides support in the following ways.



DATA USE AND REGISTRATION AGREEMENT (DURA)



REGISTRATION FOR THE RESEARCHER WORKBENCH



VISUALIZE YOUR RESEARCH WITH THE DATA BROWSER



TECHNICAL SUPPORT FOR THE RESEARCHER WORKBENCH



ANALYZING DATA FOR THE PUBLIC



RESOURCES FOR REGISTERED USERS FOR ANALYZING DATA



SUPPORT FOR NETWORKING AND PUBLISHING RESEARCH

# NAVIGATING THIS TOOLKIT

INSTITUTIONAL RESOURCES

RESEARCHER RESOURCES PUBLIC

RESOURCES

This toolkit includes an overview of our support resources.

Use the icons to the left to navigate to a specific slide.

On the top right corner of every slide, our tab system categorizes who may benefit from the slide content.



The DRC supports the securing of a Data Use and Registration Agreement (DURA) at the institutional level. Academic, not-for-profit, and health care institutions can enter into a DURA.



#### **PROCESS REQUESTS**

We process DURA requests.

Requests are reviewed by our internal Access team 1-2 business days following submission.



#### **NOTIFY INSTITUTIONS**

We notify institutions of DURA requests.

VUMC contracting officer reaches out to the institutional administrator 1-2 business days following completion of Access team review.



# FOLLOW UP WITH REQUESTING INSTITUTIONS

We follow up with requesting institutions.

VUMC contracting officer communicates with institutional administrator every 2 weeks until partially executed agreement is received.

VUMC contracting officer approves agreement 1-2 business days following receipt.



# INSTITUTIONAL RESOURCES

RESEARCHER RESOURCES

PUBLIC RESOURCES

# ADDITIONAL RESOURCES

Our Access & DURA

Support tile on the User

Support Hub offers detailed resources on the DURA process.

START THE DURA PROCESS

WATCH A VIDEO ABOUT DURAS



PUBLIC RESOURCES

# Registration for the Researcher Workbench

The DRC supports researchers in registering for an account on the Workbench.

Once an institutional agreement is in place, our registration process takes as little as 2 hours.



#### **REGISTRATION PROCESS**

- 1 Create an account
- Complete Google 2-step Verification
- **3** Verify identity with <u>Login.gov</u> or <u>ld.me</u>
- Complete all necessary Registered and/or Controlled Tier trainings
- (5) Sign Data User Code of Conduct (DUCC)

#### MATERIALS NEEDED TO VERIFY IDENTITY

#### **LOGIN.GOV**

- U.S. BASED USERS
- X INTERNATIONAL USERS
- Institutional email address from a U.S.-based non-profit, health care organization, or academic institution
- U.S. state-issued ID (photo uploaded through the user's mobile phone)
- U.S. Social Security Number
- Valid phone number associated with the user's name

#### **ID.ME**

- U.S. BASED USERS
- INTERNATIONAL USERS
- Valid government-issued ID such as a driver's license or passport (photo uploaded through ID.me)
- Email address
- Phone number

Users may need to provide a SSN or Taxpayer Identification Number (TIN) and secondary documents. Verification may need to be completed via a video call.

# ADDITIONAL RESOURCES STEP BY STEP GUIDE TO REGISTRATION INFO ON IDENTITY VERIFICATION CONTACT OUR HELP DESK

PUBLIC RESOURCES

# Visualize your research with the Data Browser

The DRC manages the Data Browser, a tool that provides interactive views of the publicly available *All of Us* Research Program aggregate-level participant data, including EHR domains, survey responses, and physical measurements.



\*Data as of February 2024

### FOR RESEARCHERS

Researchers use our Data Browser as a research feasibility tool.

For researchers, see an introductory video, our user guide, and an in-depth video that shows examples of those using the Data Browser in their research.

### FOR THE PUBLIC

The public can use our Data

Browser to understand how the
data are visualized publicly.

We take measures to protect participant privacy within all our tools, including the Data Browser. See an introductory video and Data Browser FAQs.

# ADDITIONAL RESOURCES

We provide introductory presentations and demonstrations to groups of more than seven people.

SCHEDULE A
PRESENTATION



### RESOURCES

PUBLIC RESOURCES

# Technical support for the Researcher Workbench

The DRC provides technical assistance to researchers using the Researcher Workbench in a variety of ways, including support via our Help Desk and live, virtual trainings.



#### **CONTACT US**

Email us at <a href="mailto:support@researchallofus.org">support@researchallofus.org</a> or use our Help icon to

- Resolve technical issues
- Ask questions about our data or the program
- Give us feedback or make suggestions
- and more...



#### **NEW USER ORIENTATION**

Zoom in for our live, monthly New User Orientation to

- Understand data & data organization
- Learn how to get started on Researcher Workbench
- Learn how to utilize the User Support Hub



#### **DROP-IN Q&A SESSIONS**

Get live, virtual help at Drop-In
Office Hours every week where
you can ask your questions about
any topic, including

- Workflow implementation questions
- Data refreshes and updates
- · Billing questions
- and more...

# ADDITIONAL RESOURCES

The DRC has a number of other ways that we provide researchers with technical assistance.

SUBMIT A HELP DESK TICKET

UPCOMING OFFICE HOURS



**PUBLIC** RESOURCES

# **User Support Hub resources** for analyzing data

The DRC provides support to researchers through the User Support Hub, which contains a variety of resources that demonstrate how to use our tools and navigate the data within the Researcher Workbench.



### **GETTING STARTED**

This section of our User Support Hub covers

- Learning the basic of the All of Us dataset
- Starting a project within the Researcher Workbench
- Selecting participants and variables
- Analyzing data within the Researcher Workbench
- Paying for your work



#### **WORKING WITH DATA**

This section of our User Support Hub covers

- Information for researchers
- Data characterization/quality report
- Using workspaces and cloud environments
- Data FAQs
- Workspace FAQs
- Workspace Optimization FAQs
- Analysis tools such as Jupyter Notebooks, RStudio, and SAS Studio

### **VIDEO TUTORIALS**

This section of our User Support Hub covers

- Tutorial videos
- Office Hours recordings
- New User Orientation recordings

Example videos include Using R on the Workbench and Data Wrangling

### **ADDITIONAL RESOURCES**

YOUTUBE CHANNEL



> PUBLIC RESOURCES

# Resources for registered users for analyzing data

The DRC provides resources for **REGISTERED** Researcher Workbench users to support data analysis, including featured workspaces, cheat sheets called code snippets, and tutorial notebooks.



#### **FEATURED WORKSPACES**

We provide featured workspaces with end-to-end analyses. Users can duplicate these workspaces and explore the Researcher Workbench interactively.

See our publicly available table of contents.

- Cardiovascular Risk Scoring
- Medication Sequencing
- Systemic Disease and Glaucoma
- PheWAS smoking
- Hypertension Prevalence
- All of Us Descriptive Statistics



#### CODE SNIPPETS

Code snippets provide example code for frequently used operations. The following public articles provide further details.

- What are code snippets?
- Notebook and Code Snippets
- How to use code snippets in Jupyter
   Notebook
- Code Snippet Catalog [Python]
- Code Snippet Catalog [R]
- SQL Optimization

#### **TUTORIAL NOTEBOOKS**

We provide tutorial notebooks that you can duplicate and explore. These instructive notebooks are designed to help you work with specific data types:

- How to Get Started with Registered Tier Data (v7)
- How to Get Started with Controlled Tier Data (v7)
- How to work with Survey Data (v7)

We also have a self-paced learning resource designed with beginners in mind.

Skills Assessment Training Notebooks



Below is a list of Information on the kinds of technical support academic institutions have requested while registering and starting their research in the Researcher Workbench.



- Which resources and skills are important for onboarding onto the Researcher Workbench
- How to utilize point and click tools; see <u>Cohort Builder</u>, <u>Concept Set Selector</u>, <u>Dataset Builder</u>
- What analysis tools are available, including <u>What are Jupyter Notebooks</u>, <u>Using RStudio on the Researcher</u>
   <u>Workbench</u>, and <u>Exploring All of Us data using SAS Studio</u>; see <u>Overview of applications in the Researcher</u>
   <u>Workbench</u>
- How to query information from <u>OMOP tables</u> using SQL & <u>SQL optimization</u>; see <u>Data Dictionaries</u>
- How to work with data with the Research Workbench; see <u>Data Wrangling video</u>
- How to work with genomic data; see <u>How the All of Us Genomic data are organized</u> and <u>How to Work with All of Us</u>
   Genomic Data (Hail Plink)(v7)
- How much will my project cost; see <u>Billing and Credits</u> and <u>What am I paying for?</u>
- How storage works on the Researcher Workbench; see <u>Storage Options Explained</u>; <u>Persistent Disk</u>; <u>Accessing Files</u> <u>in the Workspace Bucket or Persistent Disk</u>



## INSTITUTIONAL RESOURCES

RESEARCHER RESOURCES

PUBLIC RESOURCES

# ADDITIONAL RESOURCES

Collaborative work is beneficial, especially when you are getting started.
Researchers working in groups have the added bonus of having built in expertise and assistance.

Our collaborative workspaces enable team science and productivity.

LEARN ABOUT WORKSPACES



RESOURCES

PUBLIC RESOURCES

# Support for networking and publishing research

The DRC supports researchers in networking and publishing their research by answering publication related policy questions, providing a presentation and publication checklist, and more.



# PUBLICATION POLICY QUESTIONS

We can find answers to your publication policy questions. Researchers are required by the *All of Us* Data User Code of Conduct to report any upcoming presentation or publication.

To comply, researchers must fill out the following <u>Publication and Presentation</u>

Reporting form.



# DATA AND STATISTICS DISSEMINATION EXEMPTIONS

Researchers can submit a request for a Data and Statistics Dissemination Exemption.

Researchers must abide by the *All of Us* <u>Data and</u>

<u>Statistics Dissemination Policy</u> that sets standards for what can be shared publicly to protect participant's privacy. Authorized users can submit a <u>Data and</u>

<u>Statistics Dissemination Exemption</u> request if the represented data does not align with the policy standards.

# PRESENTATION AND PUBLICATION CHECKLIST

Use our <u>Presentation and Publication</u>

<u>Checklist</u> before you publish or present your work.

Please send questions about how to comply with any of the *All of Us* Research Program data use policies to

support@researchallofus.org.

> PUBLIC RESOURCES

# Support for bringing together researcher communities

The DRC supports researchers in connecting with and collaborating with other registered researchers via the Community forum and community workspaces.



### COMMUNITY FORUM

The <u>Community</u> is a place for registered *All of Us* Researcher Workbench users to share tips for using the Researcher Workbench, receive support from other researchers, and find collaborators on research projects.

To participate in the Community, researchers must sign in with their @researchallofus.org credentials.

By participating in the Community, researchers agree to abide by the guidelines and policies of the Community and the *All of Us* Research Program.

# COMMUNITY WORKSPACES

Researchers can share their workspace projects with all other registered Researcher Workbench users as a <u>community</u> workspace.

Community workspaces open a new way to foster knowledge-sharing, collaboration, and learning within the community of researchers using the Researcher Workbench across the world. These workspaces are hosted in the Researcher Workbench in a new Community Workspaces section of the existing featured workspace library.