Welcome to the DMIG Session #3

Agenda:

Hosts: Kit Carson, Todd Nesson

Title: Data & Analysis Support Services

- **BEAD Core** (Jacky Jennings)
- **ICTR Biostatistics Core** (Gayane Yenokyan)
- **JHU Data Services** – Data Access / Data Visualization (Pete Lawson)

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BEAD Core Team

- **LEAD TEAM**
- **Amie Bettencourt, PhD – Lead Faculty, Psych & Behav Hlth**
- **Amelia Brandt, PhD – Lead Sr. Staff & Lecturer, Consultant**
- **Cyd Eaton, PhD – Lead Faculty & Lecturer, Pediatrics**
- **Ethan Gough, PhD – Lead Faculty & Lecturer, Biostatistics/SPH**
- **Suzanne Grieb, PhD – Lead Faculty & Lecturer, Pediatrics**
- **Miranda Jones, PhD, MHS – Lead Faculty, Epidemiology/SPH**
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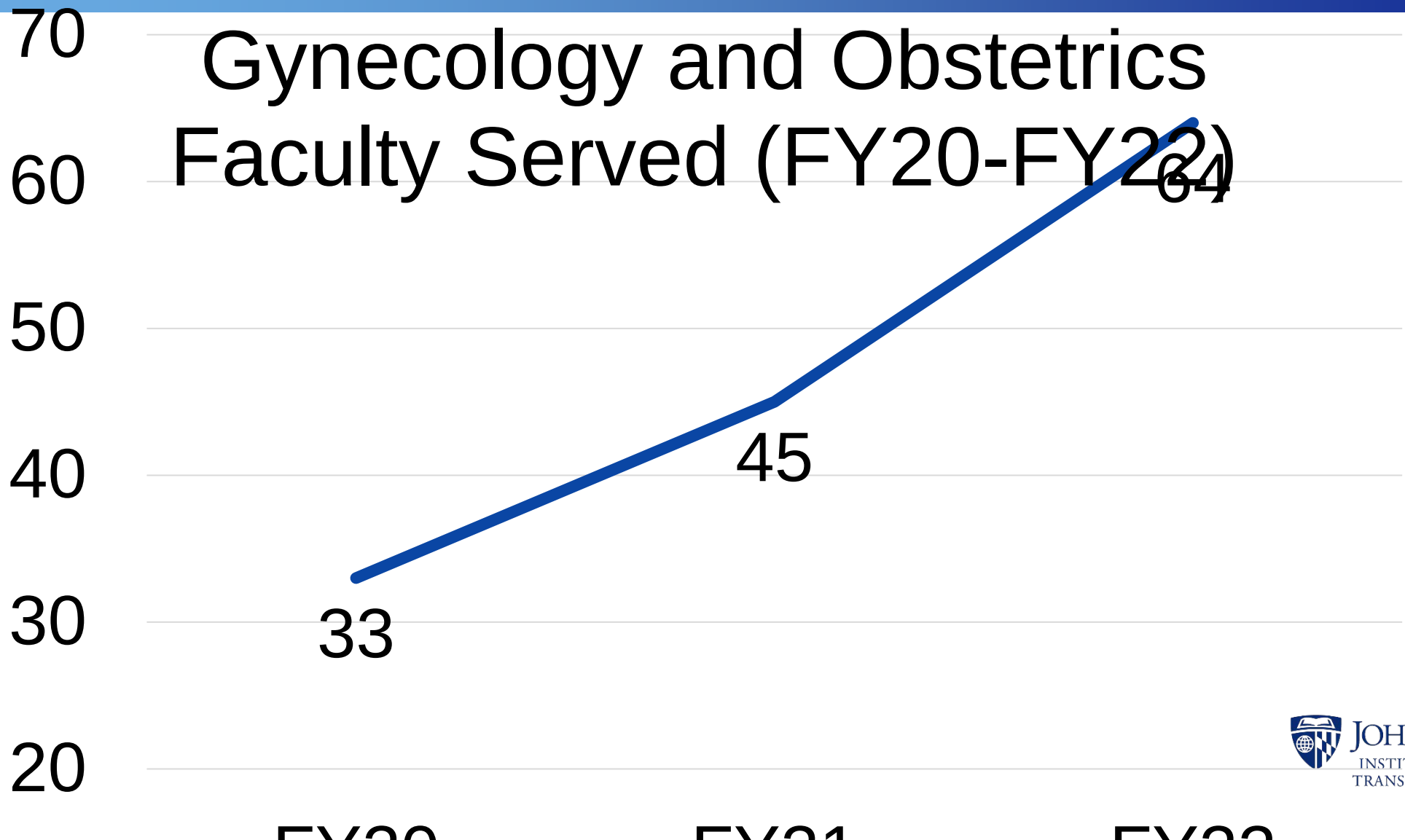

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   (data modality, level of aggregation, degree of data processing/curation)
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   the shared scientific data to support replication or reuse
3. Specification of the standards to apply to the scientific data and associated metadata
4. Name of data repository, how data will be findable and identifiable, timeline
5. Citation guidance, whether modification of research product is possible,
   use of research product for commercial purposes
6. Indicate how compliance with the plan will be monitored and managed,
   frequency of oversight and by whom (typically PIs)

- **Allowable costs:** (1) curating data and developing supporting documentation, (2) local data management consideration, (3) preserving and sharing data through established repositories, (4) de-identifying data

Department of Medicine Investigator Testimonials

- **“BEAD Core group has been outstanding to work with**. I have used BEAD for several research projects and have found their services extremely helpful. The process of contacting and establishing with a BEAD representative was straightforward and quite prompt.” – DOM Faculty Investigator
- **“My impression is that the BEAD Core perfectly fits the needs of many faculty and trainees within our department and fits particularly well for QI projects…**I see access to the BEAD Core as an essential part of ensuring our department can carry out a robust, academically-aligned quality and safety agenda.” – DOM Faculty Investigator
- **“BEAD has been instrumental in getting my research projects to the finish line since I joined Hopkins in 2019 as a junior faculty.** I am very thankful to BEAD and to our *BEAD Core lead* for providing these excellent services to the SOM faculty.” – DOM Faculty Investigator

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Pediatrics Investigator Testimonials

- "My research team and I recently had **a great experience with a team from BEAD** as a consult - they were smart, insightful, thoughtful and practical. We are writing a grant and looking to involve them going forward."
  – Pediatric Investigator
- "**The BEAD Core is a hidden gem at Hopkins. They are responsive, efficient and do excellent work**. I have worked with the BEAD Core … on several data projects - some where [the BEAD] team pulled the data and then analyzed it, others where we have provided the data for analysis. **[Their] work is superb and has resulted in publications in high impact journals**."
  – Pediatric Investigator
- "Just wanted to let you know that [our] R01 was submitted today and is officially in the queue at the NIH. Thank you for all of your help in developing and preparing the sample size and analysis plan.
  Your contributions were instrumental to the [RO1] proposal."
  – Pediatric Investigator

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GYN/OB Investigator Testimonials (Table 9)

- "**It has been a great experience to work with *BEAD Core Lead* and *BEAD Core analyst***, and **none of these projects would have been completed without their help**. We had a lot of very complicated data which they led the way in organizing and analyzing. *Dr. Lead* knows this stuff incredibly well, and even more amazing, he's patient and very good at explaining it to clinicians. ***Lead BEAD Core Faculty* has been worth their weight in gold** in terms of completing these projects. They certainly deserve kudos for helping us accomplish these projects with all that biomarker data."
- – GYN/OB Faculty investigator

- "**It has been delightful to collaborate with you** on this

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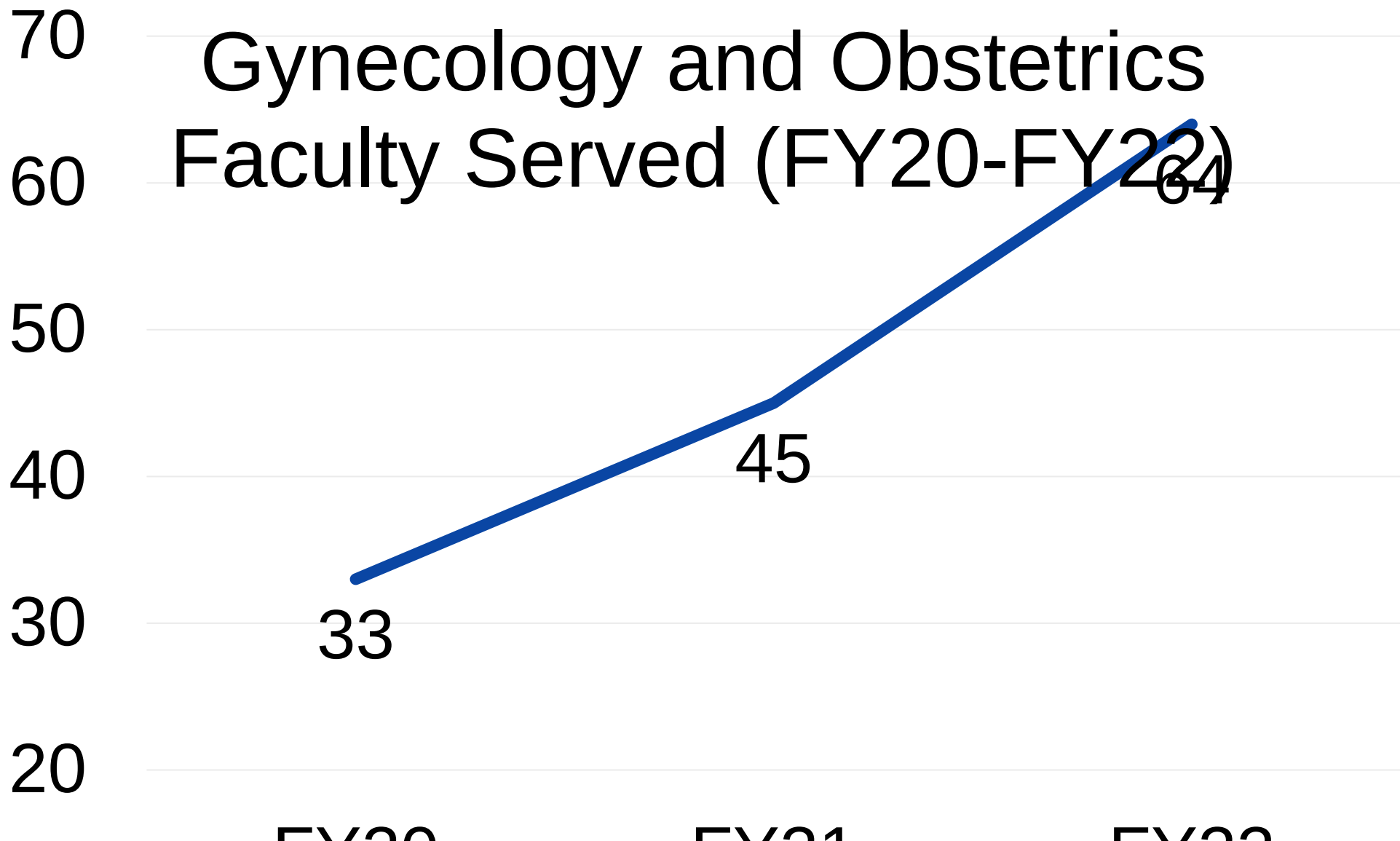

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Allowable costs: (1) curating data and developing supporting documentation, (2) local data management consideration, (3) preserving and sharing data through established repositories, (4) de-identifying data

Department of Medicine Investigator Testimonials

“BEAD Core group has been outstanding to work with. I have used BEAD for several research projects and have found their services extremely helpful. The process of contacting and establishing with a BEAD representative was straightforward and quite prompt.” – DOM Faculty Investigator

“My impression is that the BEAD Core perfectly fits the needs of many faculty and trainees within our department and fits particularly well for QI projects…I see access to the BEAD Core as an essential part of ensuring our department can carry out a robust, academically-aligned quality and safety agenda.” – DOM Faculty Investigator

“BEAD has been instrumental in getting my research projects to the finish line since I joined Hopkins in 2019 as a junior faculty. I am very thankful to BEAD and to our *BEAD Core lead* for providing these excellent services to the SOM faculty.” – DOM Faculty Investigator

Pediatrics Investigator Testimonials

"My research team and I recently had **a great experience with a team from BEAD** as a consult - they were smart, insightful, thoughtful and practical. We are writing a grant and looking to involve them going forward."
– Pediatric Investigator

"**The BEAD Core is a hidden gem at Hopkins. They are responsive, efficient and do excellent work**. I have worked with the BEAD Core … on several data projects - some where [the BEAD] team pulled the data and then analyzed it, others where we have provided the data for analysis. **[Their] work is superb and has resulted in publications in high impact journals**."
– Pediatric Investigator

"Just wanted to let you know that [our] R01 was submitted today and is officially in the queue at the NIH. Thank you for all of your help in developing and preparing the sample size and analysis plan.
Your contributions were instrumental to the [RO1] proposal."
– Pediatric Investigator

GYN/OB Investigator Testimonials (Table 9)

"**It has been a great experience to work with *BEAD Core Lead* and *BEAD Core analyst***, and **none of these projects would have been completed without their help**. We had a lot of very complicated data which they led the way in organizing and analyzing. *Dr. Lead* knows this stuff incredibly well, and even more amazing, he's patient and very good at explaining it to clinicians. ***Lead BEAD Core Faculty* has been worth their weight in gold** in terms of completing these projects. They certainly deserve kudos for helping us accomplish these projects with all that biomarker data."

– GYN/OB Faculty investigator

"**It has been delightful to collaborate with you** on this project. Thank you!"

– GYN/OB Faculty investigator

Biostatistics, Epidemiology And Data Management

BEADCore@jhmi.edu
Beadcore.jhu.edu

Working with the Biostatistics Center, Your Partner Across the Research Life Cycle

Gayane Yenokyan, MD, MPH, PhD

Executive Director, Johns Hopkins Biostatistics Center

Co-Program Director, ICTR Biostatistics Program

Associate Scientist, Department of Biostatistics

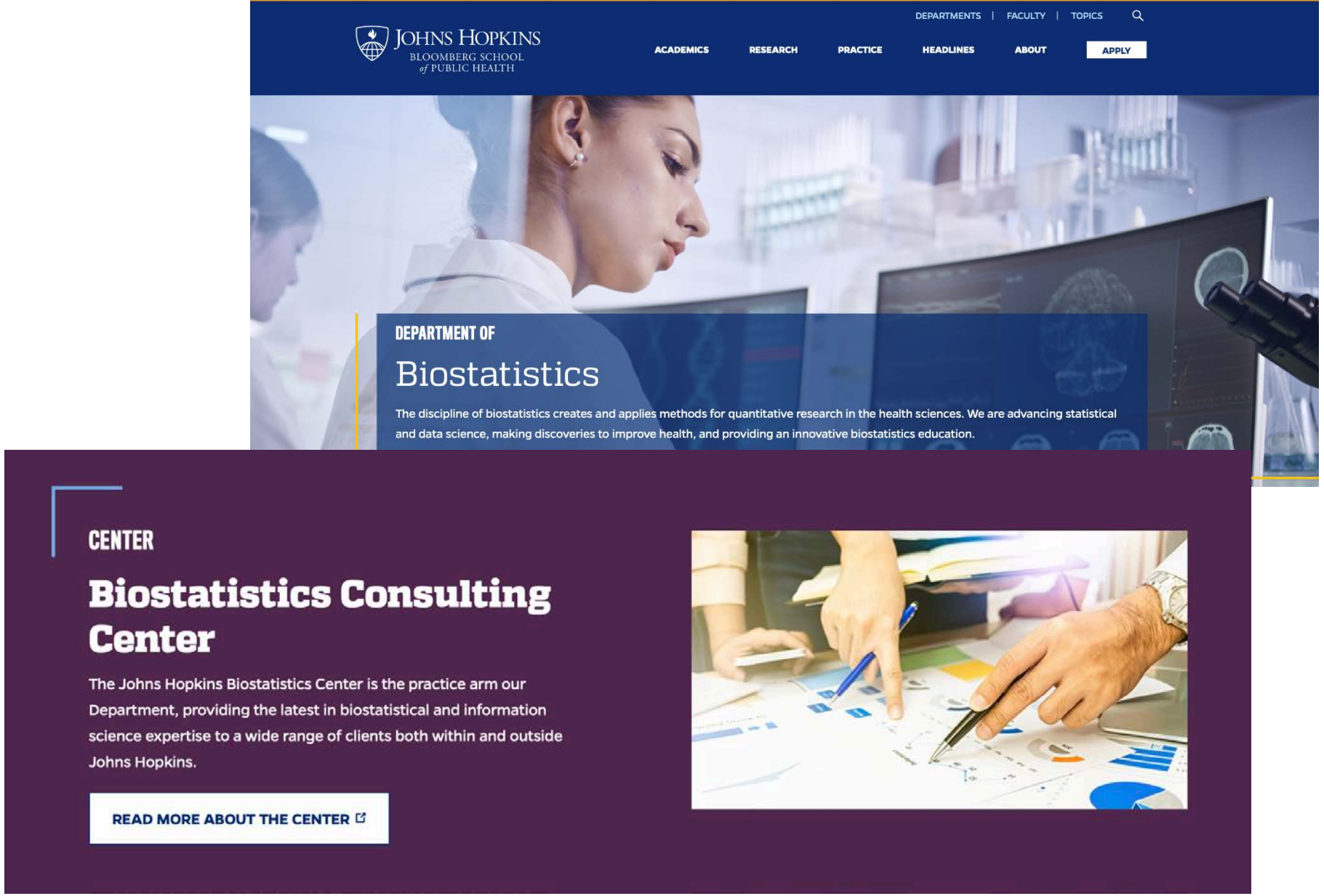
Johns Hopkins Bloomberg School of Public Health

Outline

- Introduction: Biostatistics Center as a first-rate resource for biostatistics and data management support
- Breadth and scope of our consultations
- Tips to make the most from your consultation
- Questions/Comments

Johns Hopkins Biostatistics Center (JHBC): A Snapshot

- The consulting and **practice arm** of the world-renowned **Department of Biostatistics** since 1997
- **Broad expertise in data management, programming, data science and biostatistics**
- **Proven track record** of support for biomedical **research, education and practice**
- **High demand** for and **high satisfaction** of our work
- Support clinical and translational research community as a **member of the ICTR Quantitative Methods core**



https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-biostatistics-center/

JHBC Team

2 branches: Biostatistics and Data Informatics Services Core (DISC)

Faculty appointments in the Department of Biostatistics at ranks Research Associate to Senior Scientist

Data managers and computer programmers

Administrative team

Johns Hopkins Biostatistics Center (JHBC) Mission

Advancing public health and medicine using best practices and comprehensive expertise in biostatistics and data science, **through consulting and education**.

Why Choose JHBC?

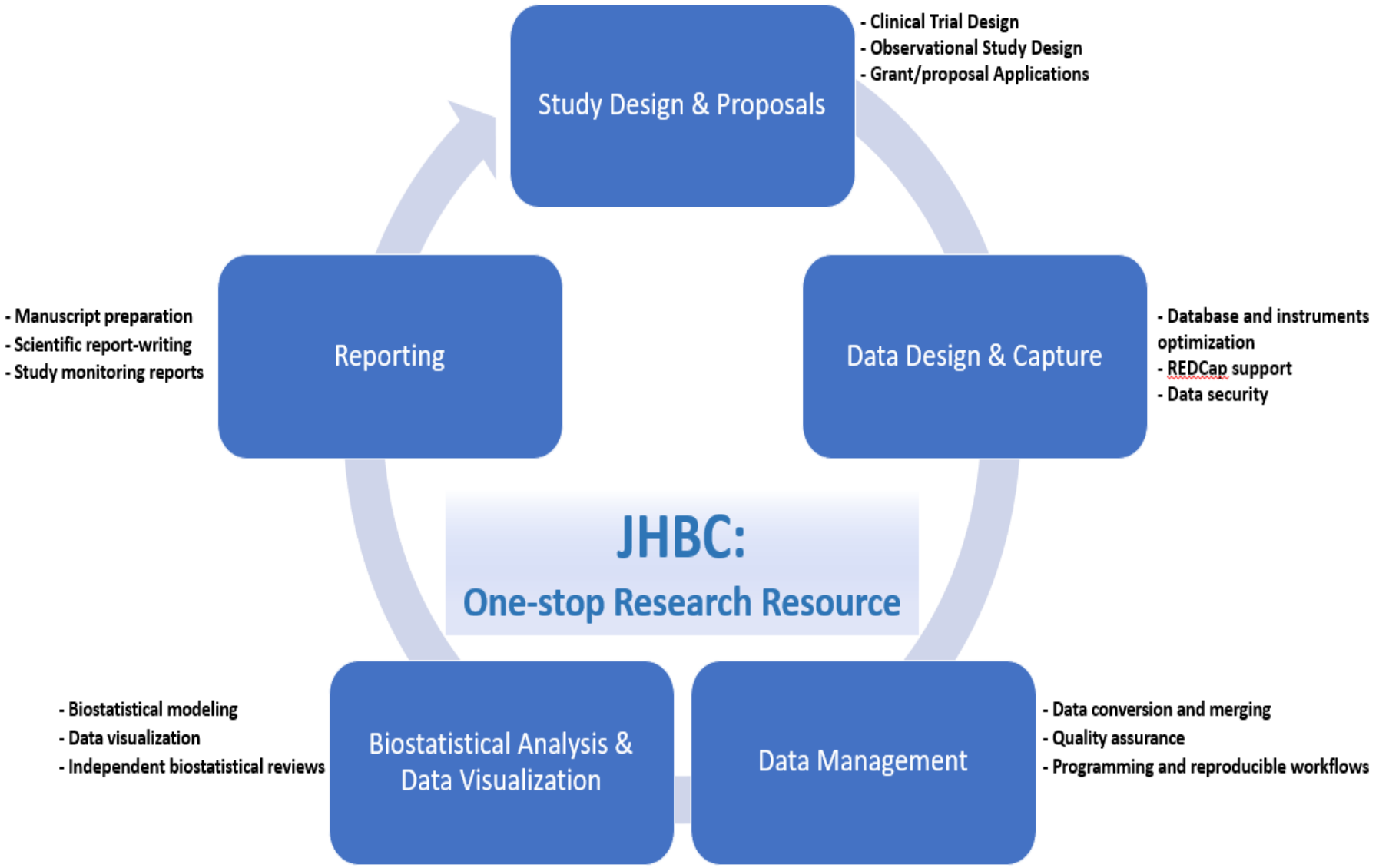
Expertise: Our methodological expertise spans both traditional and cutting-edge models in data science and biostatistics, and our teams have years of experience across research disciplines

Quality: Our commitment to best practices and problem-solving helps ensure our collaborators' work is consistently published in leading journals, garners awards for excellence, and is cited with confidence

One-stop services: We offer full-lifecycle services from data capture or data manipulation and study design to reporting and understanding review responses

People: Our data scientists and biostatisticians are committed to your success, approachable, and recognized for both outstanding knowledge and service

Consulting Across the Research Life Cycle



Focused Areas of Expertise

- Clinical trial design, conduct, reporting, analysis
- Causal Inference methods / treatment effect estimation
- Reproducible research / programming workflows for reporting
- Big Data
- Missing data solutions
- Machine Learning
- Data Capture Systems, Database design, and Programming
- Large public databases (NHANES, HCUP etc.)
- Data from wearable devices and trajectory modeling
- Meta-analysis methods
- Multivariate analysis methods (PCA and FA)

JHBC Specialized Software Expertise

Mechanisms of Consultation

- **Free Support** for clinical and translational research projects through the **ICTR Biostatistics Program**
  - **ICTR Biostatistics Program promotes the appropriate use of rigorous research methods** in the design, implementation, analysis and interpretation of clinical and translational (CT) studies.
- **Fee-for-service (FFS)** projects based on hourly rates
- **Level of effort on grants**

ICTR Biostatistics Program: Overview of Free Services

- 30-minute **biostatistics consulting clinics** for short questions
- **Extended biostatistical and/or data management consultations** (up to 5 free hours per project)
- **Letters of support** for grant applications
- **Translational Research Evaluation Committee (TREC) members** review protocols submitted for BOOST and PROPEL programs that award Clinical Research Unit (CRU) resources to ICTR investigators

Biostatistics Consulting Clinics

- **Who is eligible:** JHU researchers: faculty, staff, post-doctoral fellows and residents, for faculty-led research
- **When:**

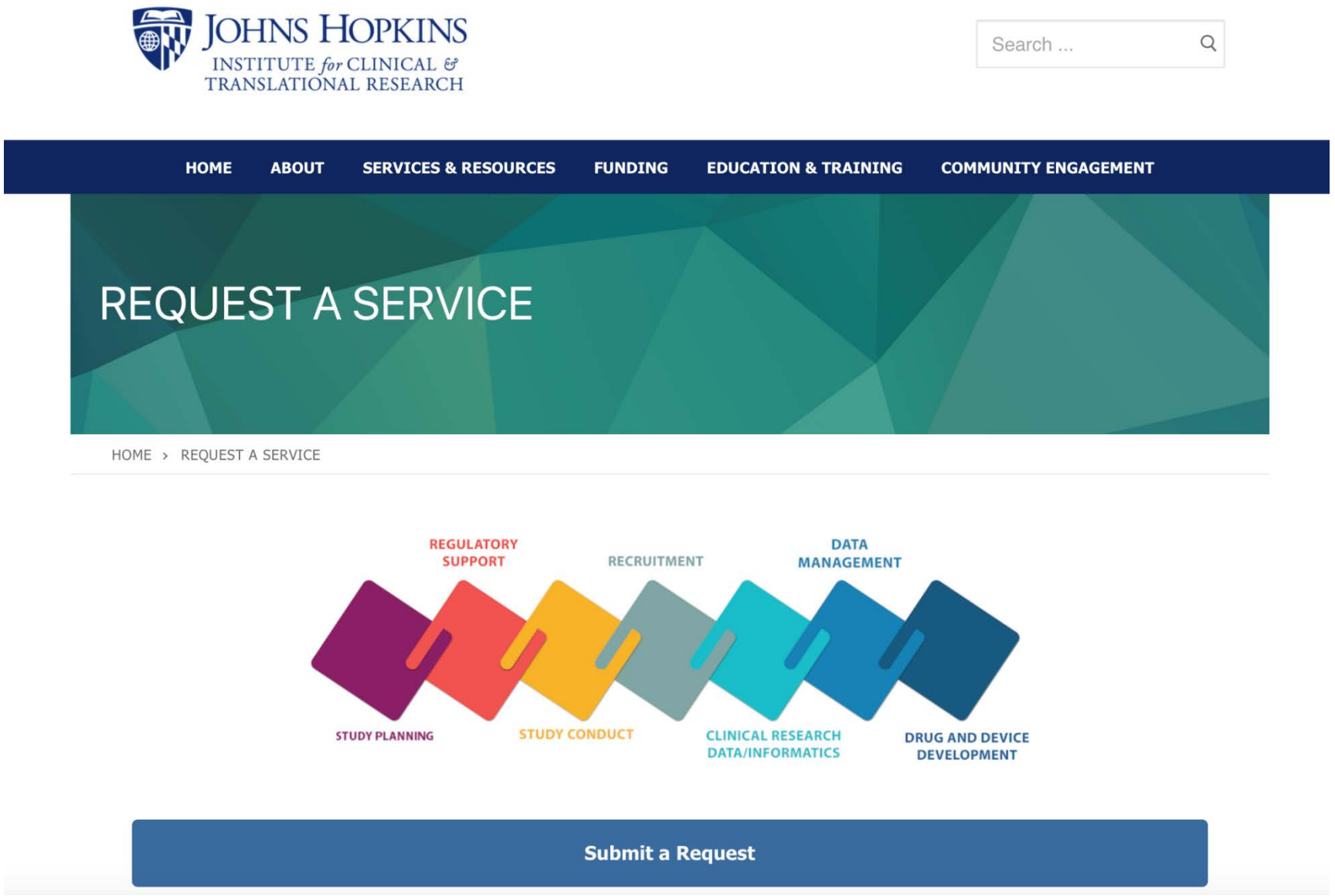
  Tuesday 1:30 p.m. - 2:30 p.m. - **SAS**
  Wednesday 11:00 a.m. - 12:00 p.m. - **R**
  Thursday 11:00 a.m. - 12:00 p.m. - **STATA**
- **Scope:** These consultations are designed for short questions that can be addressed within 20- to 30-minute sessions. Consultations are provided on a first-come, first-served basis
- **How to participate:** Send an email to jhbc@jhu.edu an hour in advance of clinic time. First 3 will get confirmation email.
- **Format:** The virtual clinics via MS Teams

Biostatistics and Data ICTR Requests

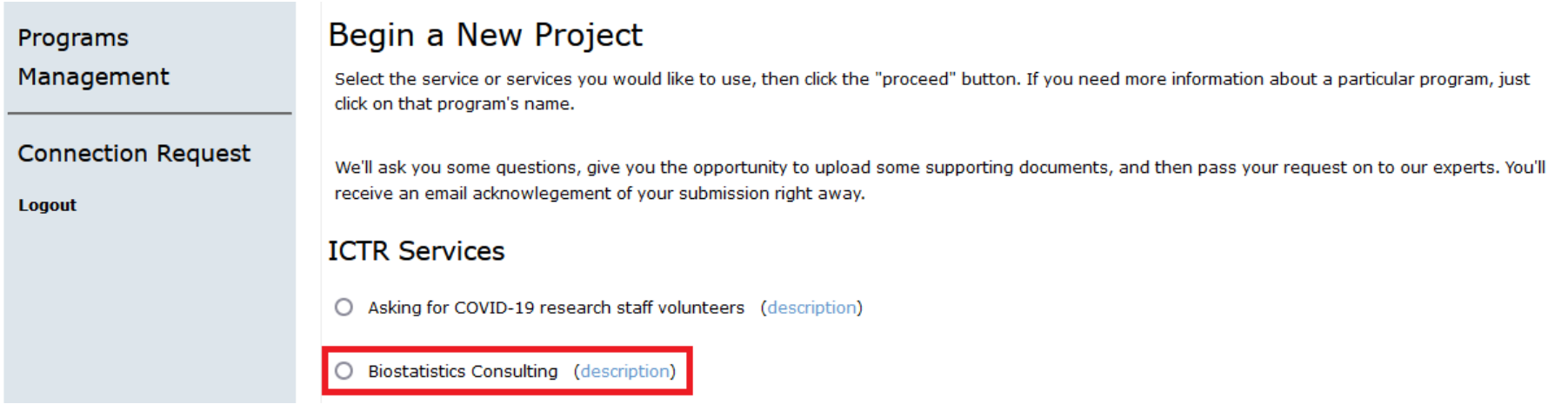
- Up to 5 free hours of biostatistics and data management help per project
- Requests are submitted through the ICTR portal
- Confirmation by email
- Requests are assigned on rotating basis among MS / PhD biostatistics faculty or a data manager/programmer
- Match by expertise / opportunity to work with a biostatistician you worked with before
- Fee-for-service option beyond the allotted time
- **For questions: email** jhbc@jhu.edu.

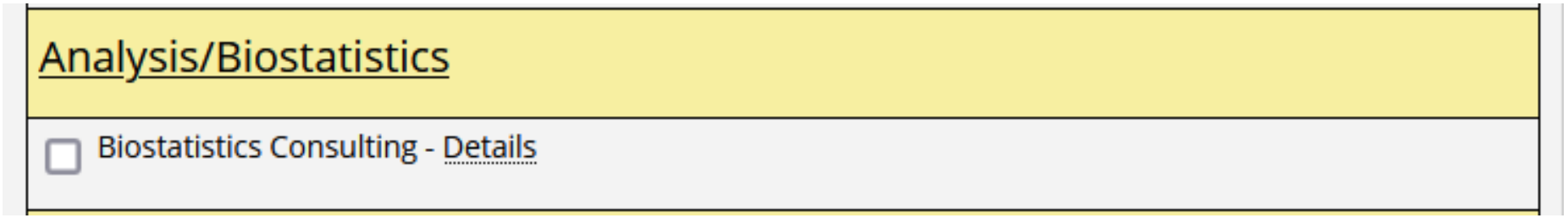
JHBC website: https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-biostatistics-center/services

How to Submit a Request



How to Submit a Request





Heart rate increase after pulmonary vein isolation predicts freedom from atrial fibrillation at 1 year

Zackary D. Goff MD[1] | Balint Laczay MD[1] | Gayane Yenokyan PhD[2] | Bhradeev Sivasambu MD[3] | Sunil K. Sinha MD[3] | Joseph E. Marine MD[3] | Hiroshi Ashikaga MD[3] | Ron D. Berger MD[3] | Tauseef Akhtar MD[3] | David D. Spragg MD[3] | Hugh Calkins MD[3]

[1]Department of Medicine, Johns Hopkins Hospital, Baltimore, Maryland

[2]Johns Hopkins Biostatistics Center, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

[3]Division of Cardiology, Johns Hopkins Hospital, Baltimore, Maryland

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Disclosures: None.

Funding information
Roz and Marvin H. Weiner and Family Foundation; Dr. Francis P. Chiaramonte Foundation; Johns Hopkins Institute for Clinical and Translational Research (ICTR), Grant/Award Number: UL1 TR001079; Norbert and Louise Grunwald Cardiac Arrhythmia Research Fund; Mr. & Mrs. Larry Small AF Research Fund; Edward St. John Fund for AF Research; Marilyn and Christian Poindexter Arrhythmia Research Fund

Abstract

Introduction: Ablation of atrial vagal ganglia has been associated with improved pulmonary vein isolation (PVI) outcomes. Disruption of vagal reflexes results in heart rate (HR) increase. We investigated the association between HR change after PVI and freedom from atrial fibrillation (AF) at 1 year.

Methods and Results: Patients who underwent PVI for paroxysmal AF were identified from the Johns Hopkins Hospital AF registry. Electrocardiograms taken pre-PVI and post-PVI were used to determine the change in HR. Patients followed-up at 3, 6, and 12 months. Of 257 patients (66% male, age 59+/-11 years), 134 (52%) remained free from AF at 1 year. The average HR increased from 60.6 ± 11.3 beats per minute (bpm) pre-PVI to 70.7 ± 12.0 bpm post-PVI. Patients with recurrence of AF had lower post-PVI HR than those who remained free from AF (67.8 ± 0.2 vs 73.3 ± 13.0 bpm; P <.001). The probability of AF recurrence at 1-year decreased as the change in HR increased (estimated odds ratio [OR], 0.83; 95% confidence interval [CI, 0.74-0.93]; P = .002). HR increase more than 15 bpm was associated with the lowest odds of AF recurrence (estimated OR, 0.39; 95% [0.17-0.85]; P = .018) compared to HR decrease.

Conclusions: Resting HR was found to increase after PVI. Increase in HR more than 15 bpm has a positive association with remaining free from atrial fibrillation at 1 year.

JHBC Impact

- ~ 150 walk-ins /year
- ~ 250+ consult requests/year
- 500+ publications in last 10 years
- 5,000+ ongoing data service users
- 86-91% would recommend service to others
- Awards for teaching, papers, posters

How to Make the Most from Your Consultation

When Are Statisticians Contacted

- Study is a twinkle in the researcher's eye
- Study is more thought out, but needs some polishing to proceed
- Study design is defined, needs help with data collection considerations before study starts
- Data has been collected, needs help with analysis
- Data analysis has been performed by someone else, wants blessing
- Manuscript has been submitted, and needs help with reviewer's comments

Advantages of Starting Early

- Help clarify objectives of the research
- Formulate the research question as a statistical problem
- Help identify variables/measures that are important to the research objectives
- Start thinking about the most useful model that will be used for statistical analysis
- Important for the conclusions from the research to have a meaningful interpretation

Suggested timeframes for your biostatistics consultation

Approach JHBC as early as possible!

- ✓ Abstract Preparation: at least 1 month
- ✓ New Proposal Development: at least 1 month
- ✓ Re-submissions: at least 2 weeks to improve scores
- ✓ Manuscript Development/Scientific Writing: 1 to 2 months
- ✓ Manuscript Review: a minimum of 2 weeks
- ✓ Data Analysis: depends on complexity of analysis /status of data

Getting the most from your biostatistics consultation: Sample Size

Well-defined specific aims and primary outcomes

Minimal practically/clinically meaningful difference

Preliminary/pilot data and/or relevant literature on the topic

Measures of variability on primary outcomes

Idea about maximum sample size given the *available resources.*

There will be several iterations of sample size – keep good communication with the biostatistician to manage expectations, deadlines and other important developments that affect the study

Getting the most from your biostatistics consultation: Data Analysis

Provide well-defined specific aims, primary outcomes, and study design description

Have a well-organized and documented dataset and how decisions were made (protocols, reports, meetings notes, emails)

Clarify work expectations in advance:

- Scope of work, deliverables
- Statistical software preference (STATA, SAS, SPSS, R)
- Timeline, any relevant deadlines

What JHBC Brings to the Table

JHBC has collaborated with hundreds of clinical and public health investigators providing

Wide-range biostatistical and data expertise to find most effective solutions	Consistent support from dedicated consultants: from data to statistical analysis	Reproducible work using best practices

We focus our expertise on creating effective collaborations and guiding researchers in

good data management and biostatistics practices.

Contact Information

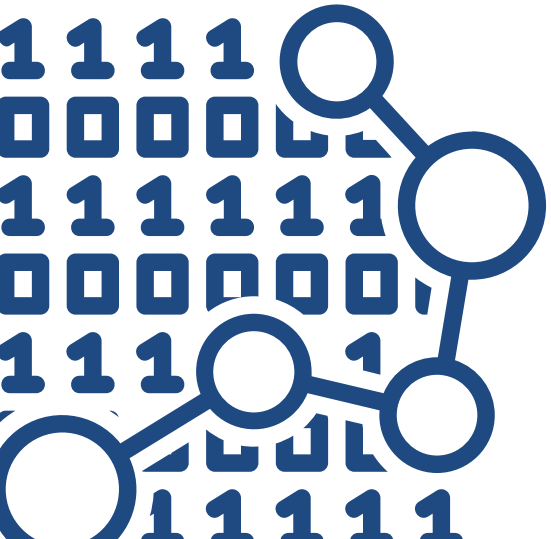
Gayane Yenokyan
JHBC Executive Director
E-mail: gyenoky1@jhu.edu

Andre Hackman
Associate *Director / Data Informatics Services Core (DISC)*
E-mail: ahackman@jhu.edu

Erica Tunstall
Program Coordinator
Email: jhbc@jhu.edu

Pete Lawson, Ph.D.

Data and Visualization Librarian



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JHU DATA SERVICES


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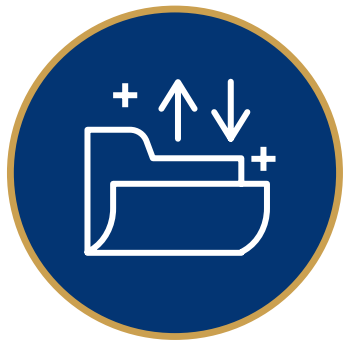
USE


VISUALIZE


MANAGE


SHARE


DATA

FIND OUT MORE

GO TO: dataservices.library.jhu.edu

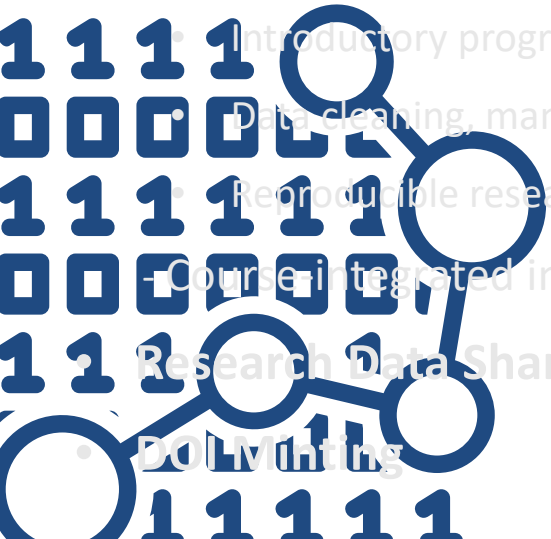
EMAIL: dataservices@jhu.edu

SHARE AT: archive.data.jhu.edu

JOHNS HOPKINS LIBRARIES
DATA SERVICES

How to engage Data Services:

- **Consultations**
  We provide one-on-one or group consultations.
  - One-on-one meetings with researchers, students, or administrative staff
  - Consultations with research groups or labs
  - Data Management Plan (DMP) reviews
- **Instruction**
  - Regular webinars on topics including
    - Research data management and sharing
    - GIS and mapping
    - Introductory programming in R and Python
    - Data cleaning, manipulation, and visualization
    - Reproducible research
  - Course-integrated instruction
- **Research Data Sharing**
- **DOI Minting**



Dave Fearon
Sr. Data Management Specialist

Chen Chiu
Sr. Data Management Specialist

Betsy Gunia
Data Management Specialist

Bonni Wittstadt
Geospatial Services Librarian

Lena Denis
Geospatial Data, GIS, and Maps Librarian

Pete Lawson
Data and Visualization Librarian

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Areas of Expertise

- Data Archiving
- Data Management
- Data Visualization
- Discovering & Accessing Data
- Introductory Computational Computing in R & Python
- Accessing Geospatial Web Platforms & Desktop Software
- Using Geoprocessing Tools
- Accessing & Analyzing Historical Maps & Atlases

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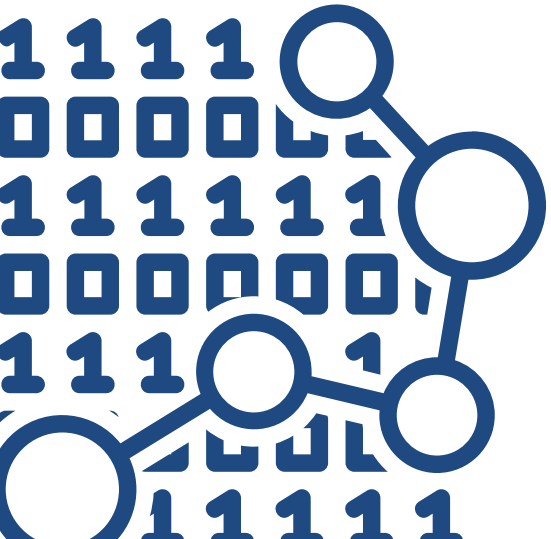
Data Access and Discovery



Data Access and Discovery

- Strategies for finding openly available data
- Access to data licensed to JHU
- Working with researchers to acquire data and provide access
  - JHU Libraries Data Grant
  - Restricted Data Room
  - Data and Statistics Guide

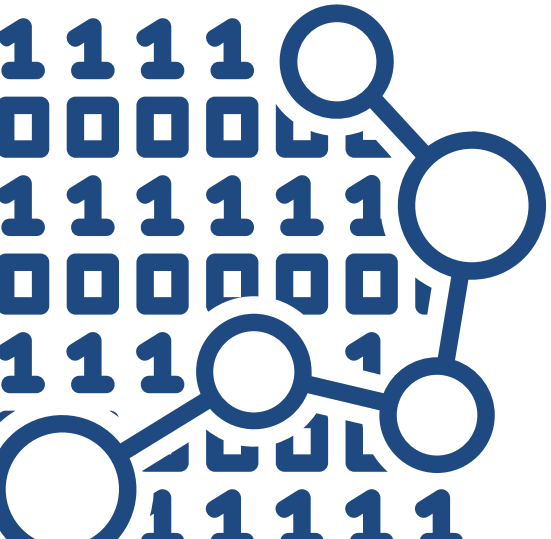
FIND

Looking for Data?

Apply to the JHU Libraries

Data Grant

The data grant supports data purchases for JHU faculty, students, and staff actively conducting research



Visit **bit.ly/jhu-data-grant** for more information about the program, and how to apply

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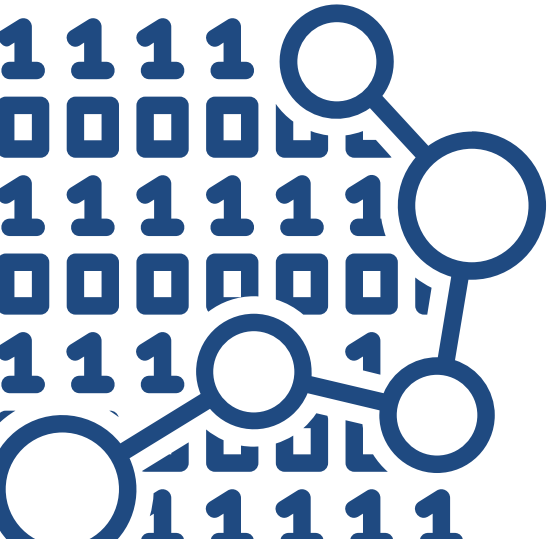
GIS and Maps



DATA SERVICES SUPPORTS GIS AND MAPPING IN RESEARCH

Learn about the many GIS and mapping resources offered by JHU Data Services

CONSULTATIONS Get help with accessing, finding, and visualizing geospatial data and maps, as well as technical help with Esri products.

WORKSHOPS Learn to use the suite of Esri supported applications: ArcGIS Pro, ArcGIS Online, StoryMaps, and more by attending our many GIS and mapping workshops.

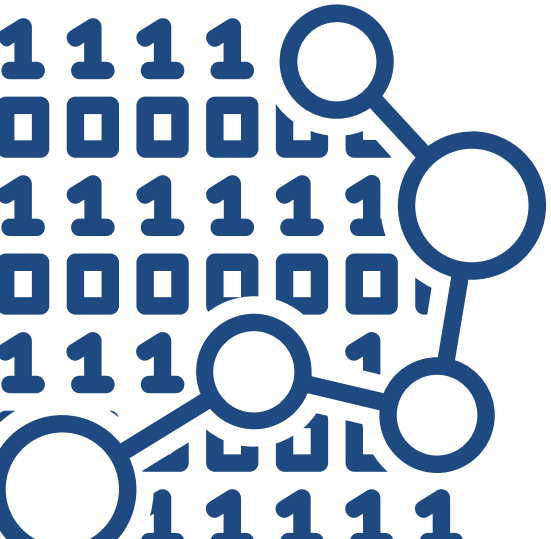
SOFTWARE Access Esri software, including ArcGIS Pro, ArcGIS Online, ArcGIS StoryMaps, and many more applications.

JHU DATA SERVICES

GIS and Mapping

Data Services provides consultations on **using GIS software**, as well as **accessing, analyzing and visualizing geospatial data and maps** in your teaching, coursework, and research.

Computational Research And Programming



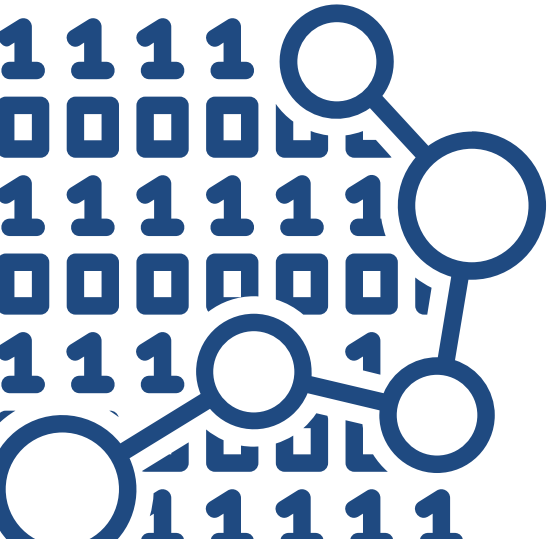
Computational Research and Programming

- Develop computational research skills for data cleaning, wrangling, visualizating, etc.
- Promote open science and reproducible research
- Open source focused (e.g. R, Python, OpenRefine)
- Planning other offerings based on user feedback

USE

Computational Research And Programming

Introductory Programming



Introductory Programming

Coding Fundamentals

- Are you interested in learning how to code but don't know where to start?. Learn about coding terminology and concepts, and to jump start your journey into coding.

Introduction to R for Absolute Beginners

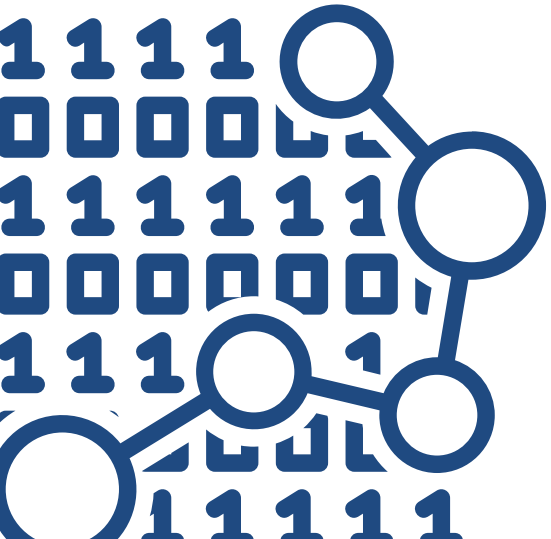
- Covers some basic concepts of coding and involves several hands-on activities to learn basic R skills, such as installing R packages, importing and exploring data.

Introduction to Python for Absolute Beginners

- Provide users with the fundamentals necessary to get started using Python. This workshop is heavily hands-on and will have users feeling comfortable coding and confident enough to leap from beginner to intermediate and beyond in no time.

Computational Research And Programming

Reproducible Research



Reproducible Research Series

Introduction to Reproducible Research

Getting Started with Jupyter Notebooks

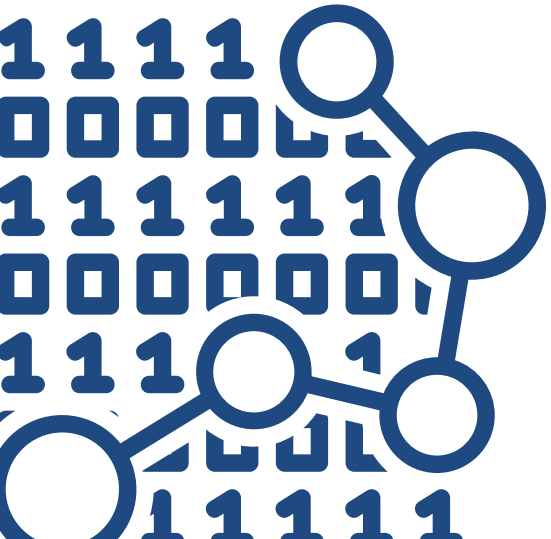
Getting Started with R Markdown

Troubleshooting Git and GitHub Installation

Version Control: Using Git and GitHub

Computational Research And Programming

Data Visualization



Data Visualization

Design

- We can help you **design** a data visualization.
- We can provide **feedback** on a data visualization, and suggest improvements based on design best-practices.

Data Visualization

Creation

- We can assist with implementing a data visualization in software.
- We primarily support open-source programming languages R and Python.

Data Visualization

Creation

R		Python	
base R	general	**matplotlib**	general
ggplot2	statistical	**seaborn**	statistical
shiny	interactive dashboard	**altair**	interactive
plotly	interactive	**plotly**	interactive

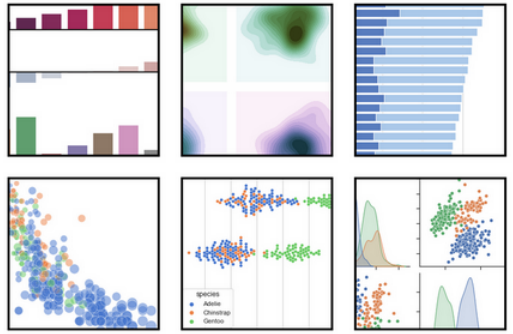
Data Visualization

Learn

Designing Effective Data Visualizations

Tuesday, February 14, 2023 | 12-2pm

Virtual – Register Here



Introduction to Data Visualization in Python

Tuesday, February 21, 2023 | 1-4pm

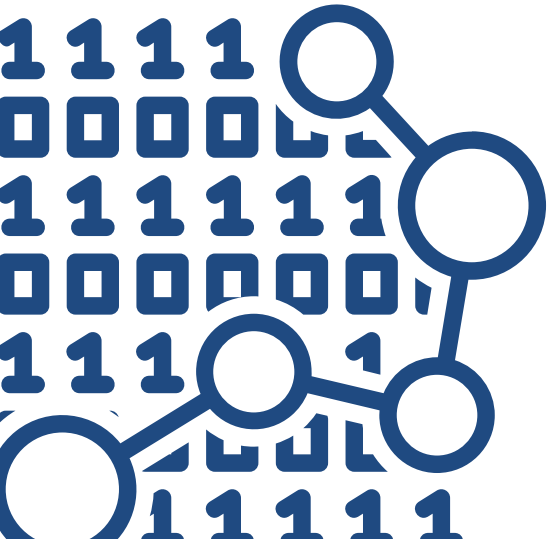
Virtual – Register Here

Data Visualization in R with ggplot2

Tuesday, March 7, 2023 | 1-4pm

Virtual – Register Here

Data Management



Data Management Services at JHU

- Assist with data management plans (DMPs) for research grants
- Facilitate compliance with funder and journal data sharing policies
- Guidance on preparing data for online access, operating the Johns Hopkins Research Data Repository (formerly JHU Data Archive)

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Data Services: What We do with Respect to Data Management and Sharing Plans

Review Plans

- Appropriateness of/identify a repository
- Ensure that you have answered all the necessary elements in your Plan
- Provide feedback on the clarity of your Plan

Manage the Johns Hopkins Research Data Repository

- Open data only (i.e., consent forms allow for public sharing; data is fully deidentified)
- Guidance on preparing data for online access

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How does Data Services help JHU Researchers?

First time writing a DMSP?

- DMPTool Workshop (schedule)
- Self-paced online training (link)
- Write DMPs using DMPTool and send to us for feedback (dataservices@jhu.edu)

Guidance choosing a data repository for sharing data?

- Johns Hopkins Research Data Repository
- Ask us for suggestions

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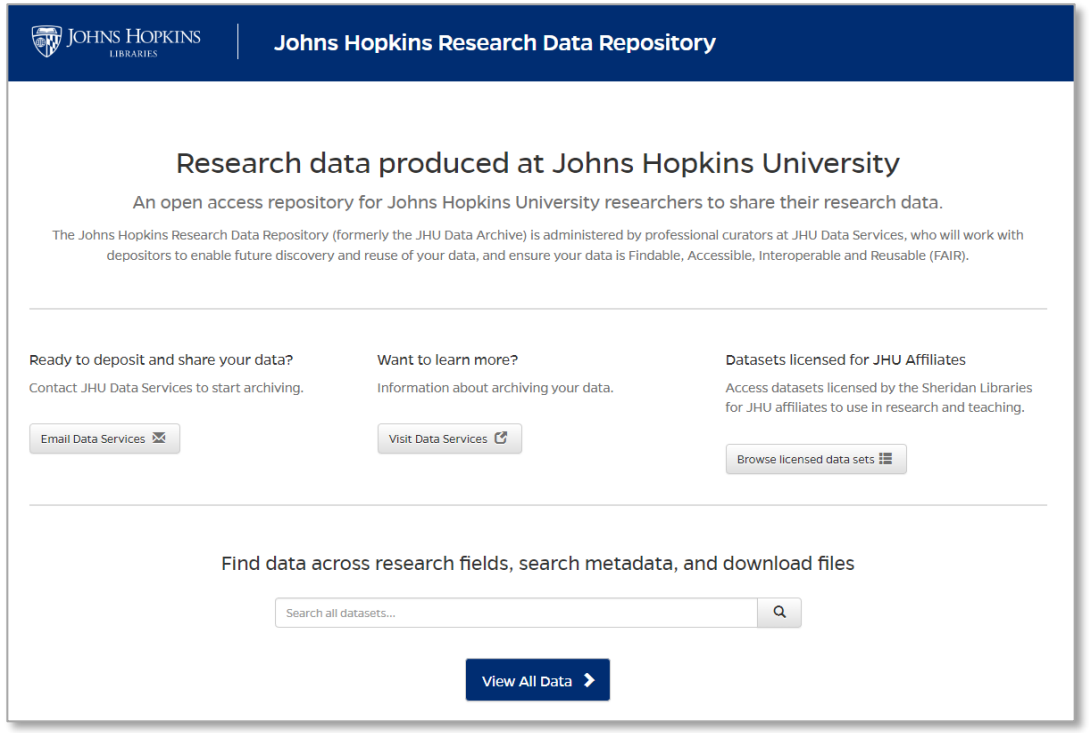
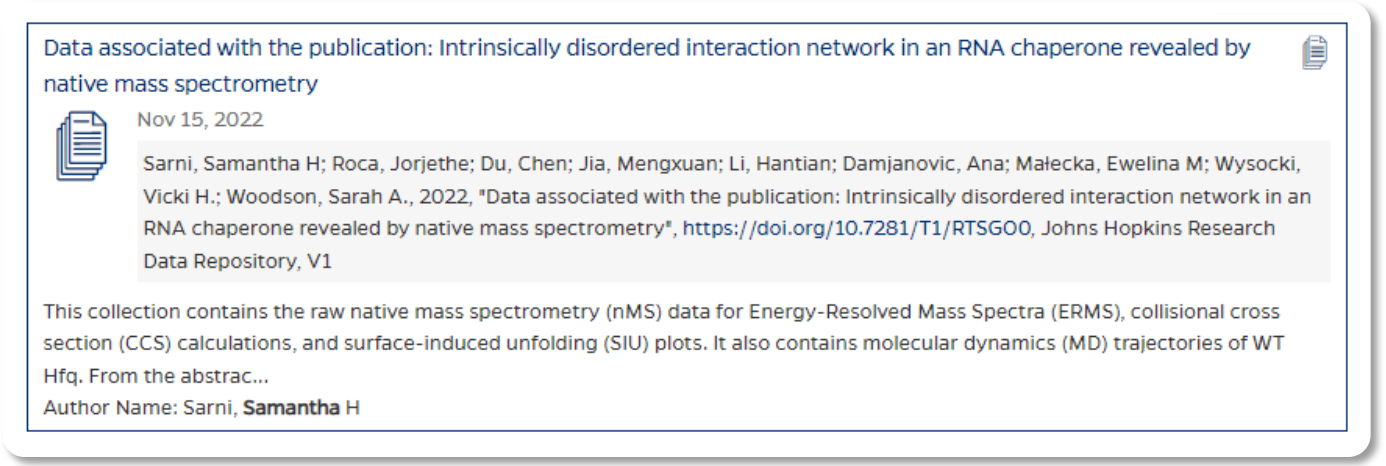
Johns Hopkins Research Data Repository

An open access research data repository for Johns Hopkins University

Formerly the JHU Data Archive, the Johns Hopkins Research Data Repository is administered by Data Management Specialists, who mediate data deposit, curation, and preservation, and oversee the minting of a unique persistent identifier (DOI) for each research data collection.





bit.ly/jhu-archiving-info

bit.ly/jhu-research-data-repository

How does Data Services help JHU Researchers?

Providing de-identification advice for your human participant data

- Workshops: Protecting Human Subject Data Privacy (Introduction and Techniques)
- Self-paced online training (link)
- Contact us to schedule a consult

Guidance on documenting data

- Documenting Research Data modules (link)

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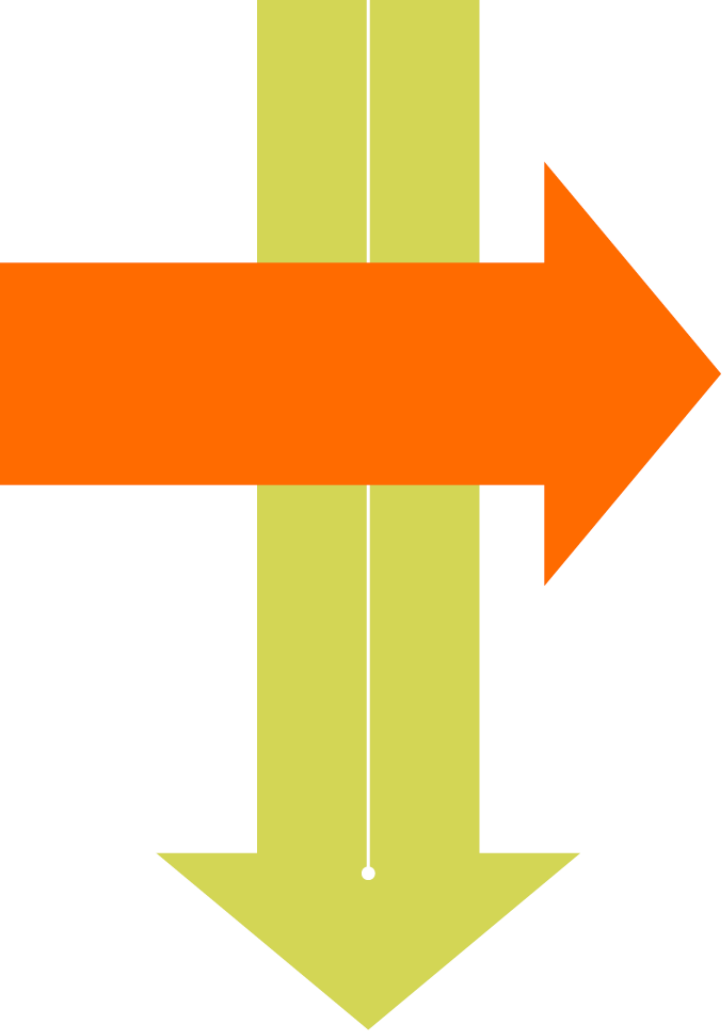

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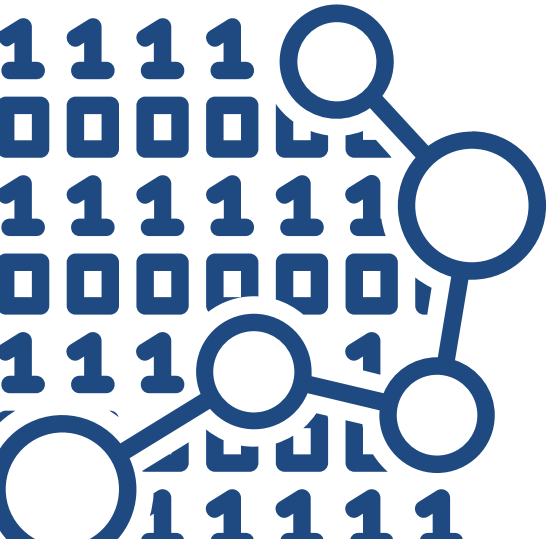
How can Data Services help you?

Guides for various data management and sharing topics

- NIH Data Sharing LibGuide
- Data Management and Sharing (general LibGuide)
- Documenting Research Data
- Protecting Identifiers in Human Subjects

Still have questions? Contact Data Services via dataservices@jhu.edu

Workshops and Training



Workshops and Trainings

VISIT bit.ly/ds-learn

- **Open workshops:** live webinars, open to all JHU faculty, staff, postdocs and students (schedule)

  By request: to groups, departments or classes

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AND SO MUCH MORE …

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A new lunch and learn series offered by Data Services

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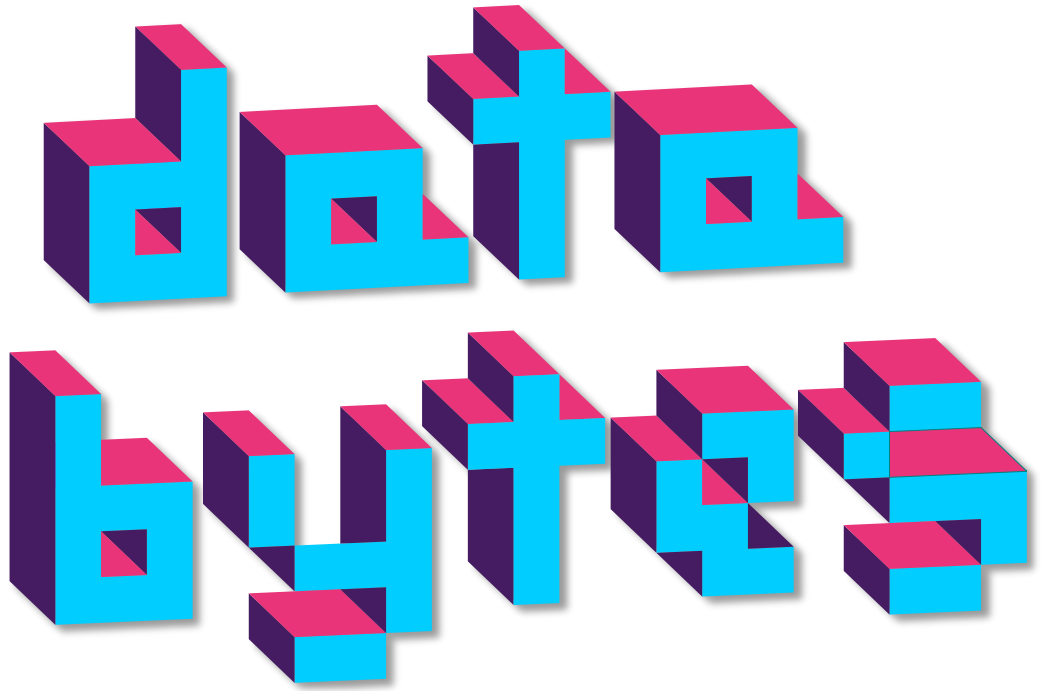

bit.ly/data-bytes

data bytes

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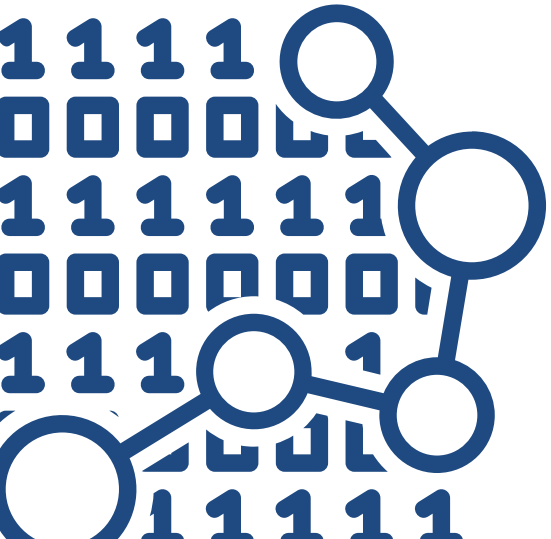
github.com/jhu-data-services

dataservices.library.jhu.edu

dataservices@jhu.edu

Questions?



JHU Data Services Overview

Pete Lawson, Ph.D.

Data and Visualization Librarian

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JHU DATA SERVICES

HELPING YOU NAVIGATE DATA

WE HELP FACULTY, RESEARCHERS AND STUDENTS

FIND USE VISUALIZE MANAGE SHARE DATA

FIND OUT MORE

GO TO: dataservices.library.jhu.edu

EMAIL: dataservices@jhu.edu

SHARE AT: archive.data.jhu.edu

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How to engage Data Services:

- **Consultations**
  We provide one-on-one or group consultations.
  - One-on-one meetings with researchers, students, or administrative staff
  - Consultations with research groups or labs
  - Data Management Plan (DMP) reviews
- **Instruction**
  - Regular webinars on topics including
    - Research data management and sharing
    - GIS and mapping
    - Introductory programming in R and Python
    - Data cleaning, manipulation, and visualization
    - Reproducible research
  - Course-integrated instruction
- **Research Data Sharing**
- **DOI Minting**

Our support model

Dave Fearon
Sr. Data Management Specialist

Chen Chiu
Sr. Data Management Specialist

Betsy Gunia
Data Management Specialist

Bonni Wittstadt
Geospatial Services Librarian

Lena Denis
Geospatial Data, GIS, and Maps Librarian

Pete Lawson
Data and Visualization Librarian

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Diverse expertise

Areas of Expertise

- Data Archiving
- Data Management
- Data Visualization
- Discovering & Accessing Data
- Introductory Computational Computing in R & Python
- Accessing Geospatial Web Platforms & Desktop Software
- Using Geoprocessing Tools
- Accessing & Analyzing Historical Maps & Atlases

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Data Access and Discovery

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Data Access and Discovery

- Strategies for finding openly available data
- Access to data licensed to JHU
- Working with researchers to acquire data and provide access
  - JHU Libraries Data Grant
  - Restricted Data Room
  - Data and Statistics Guide

FIND

Looking for Data?

Apply to the JHU Libraries

Data Grant

The data grant supports data purchases for JHU faculty, students, and staff actively conducting research

Visit **bit.ly/jhu-data-grant** for more information about the program, and how to apply

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GIS and Maps

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DATA SERVICES SUPPORTS GIS AND MAPPING IN RESEARCH

Learn about the many GIS and mapping resources offered by JHU Data Services

CONSULTATIONS Get help with accessing, finding, and visualizing geospatial data and maps, as well as technical help with Esri products.

WORKSHOPS Learn to use the suite of Esri supported applications: ArcGIS Pro, ArcGIS Online, StoryMaps, and more by attending our many GIS and mapping workshops.

SOFTWARE Access Esri software, including ArcGIS Pro, ArcGIS Online, ArcGIS StoryMaps, and many more applications.

JHU DATA SERVICES

GIS and Mapping

Data Services provides consultations on **using GIS software**, as well as **accessing, analyzing and visualizing geospatial data and maps** in your teaching, coursework, and research.

Computational Research And Programming

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Computational Research and Programming

- Develop computational research skills for data cleaning, wrangling, visualizating, etc.
- Promote open science and reproducible research
- Open source focused (e.g. R, Python, OpenRefine)
- Planning other offerings based on user feedback

USE

Computational Research And Programming

Introductory Programming

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Introductory Programming

Coding Fundamentals

- Are you interested in learning how to code but don’t know where to start?. Learn about coding terminology and concepts, and to jump start your journey into coding.

Introduction to R for Absolute Beginners

- Covers some basic concepts of coding and involves several hands-on activities to learn basic R skills, such as installing R packages, importing and exploring data.

Introduction to Python for Absolute Beginners

- Provide users with the fundamentals necessary to get started using Python. This workshop is heavily hands-on and will have users feeling comfortable coding and confident enough to leap from beginner to intermediate and beyond in no time.

Computational Research And Programming

Reproducible Research

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Reproducible Research Series

Introduction to Reproducible Research

Getting Started with Jupyter Notebooks

Getting Started with R Markdown

Troubleshooting Git and GitHub Installation

Version Control: Using Git and GitHub

Computational Research And Programming

Data Visualization

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Data Visualization

Design

- We can help you **design** a data visualization.
- We can provide **feedback** on a data visualization, and suggest improvements based on design best-practices.

Data Visualization

Creation

- We can assist with implementing a data visualization in software.
- We primarily support open-source programming languages R and Python.

Data Visualization

Creation

R		Python	
base R	general	**matplotlib**	general
ggplot2	statistical	**seaborn**	statistical
shiny	interactive dashboard	**altair**	interactive
plotly	interactive	**plotly**	interactive

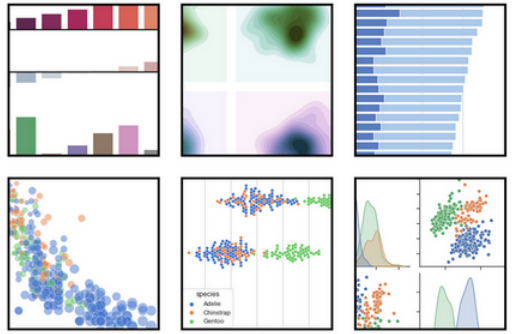
Data Visualization

Learn

Designing Effective Data Visualizations

Tuesday, February 14, 2023 | 12-2pm

Virtual – Register Here



Introduction to Data Visualization in Python

Tuesday, February 21, 2023 | 1-4pm

Virtual – Register Here

Data Visualization in R with ggplot2

Tuesday, March 7, 2023 | 1-4pm

Virtual – Register Here

Data Management

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Data Management Services at JHU

- Assist with data management plans (DMPs) for research grants
- Facilitate compliance with funder and journal data sharing policies
- Guidance on preparing data for online access, operating the [Johns Hopkins Research Data Repository] (formerly JHU Data Archive)

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Data Services: What We do with Respect to Data Management and Sharing Plans

Review Plans

- Appropriateness of/identify a repository
- Ensure that you have answered all the necessary elements in your Plan
- Provide feedback on the clarity of your Plan

Manage the Johns Hopkins Research Data Repository

- Open data only (i.e., consent forms allow for public sharing; data is fully deidentified)
- Guidance on preparing data for online access

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How does Data Services help JHU Researchers?

First time writing a DMSP?

- DMPTool Workshop (schedule)
- Self-paced online training (link)
- Write DMPs using DMPTool and send to us for feedback (dataservices@jhu.edu)

Guidance choosing a data repository for sharing data?

- Johns Hopkins Research Data Repository
- Ask us for suggestions

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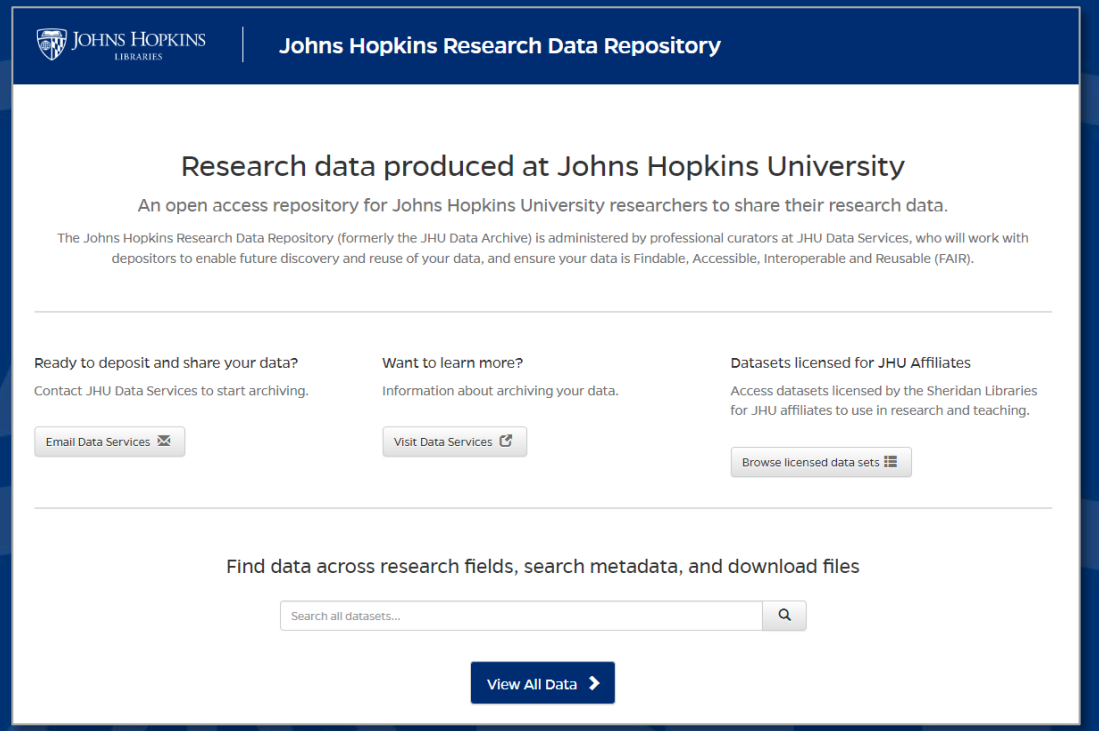
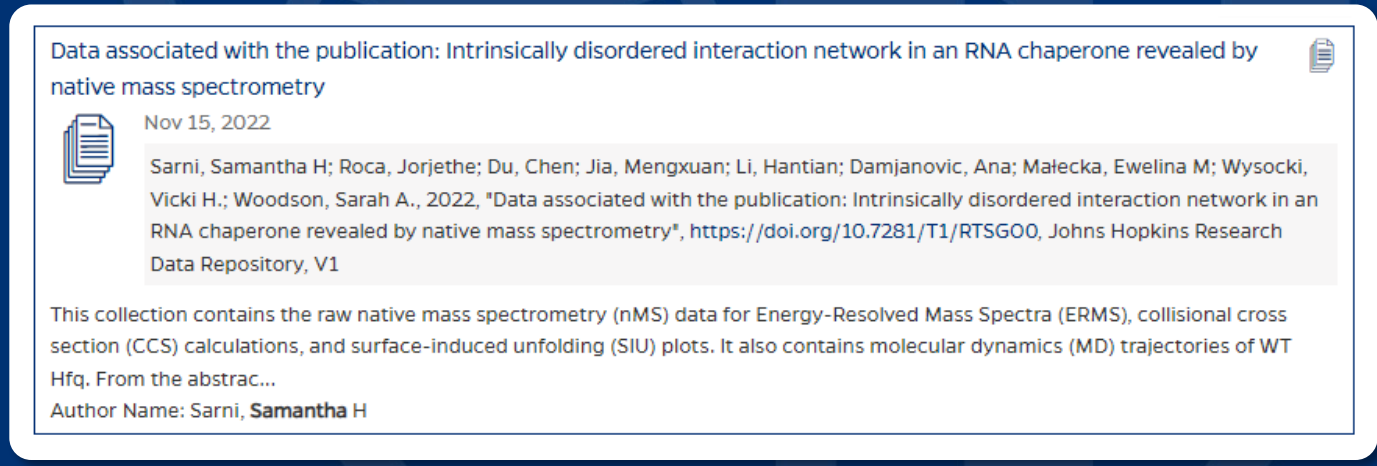
Johns Hopkins Research Data Repository

An open access research data repository for Johns Hopkins University

Formerly the JHU Data Archive, the Johns Hopkins Research Data Repository is administered by Data Management Specialists, who mediate data deposit, curation, and preservation, and oversee the minting of a unique persistent identifier (DOI) for each research data collection.





bit.ly/jhu-archiving-info

bit.ly/jhu-research-data-repository

How does Data Services help JHU Researchers?

Providing de-identification advice for your human participant data

- Workshops: Protecting Human Subject Data Privacy (Introduction and Techniques)
- Self-paced online training (link)
- Contact us to schedule a consult

Guidance on documenting data

- Documenting Research Data modules (link)

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How can Data Services help you?

Guides for various data management and sharing topics

- NIH Data Sharing LibGuide
- Data Management and Sharing (general LibGuide)
- Documenting Research Data
- Protecting Identifiers in Human Subjects

Still have questions? Contact Data Services via dataservices@jhu.edu

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Workshops and Training

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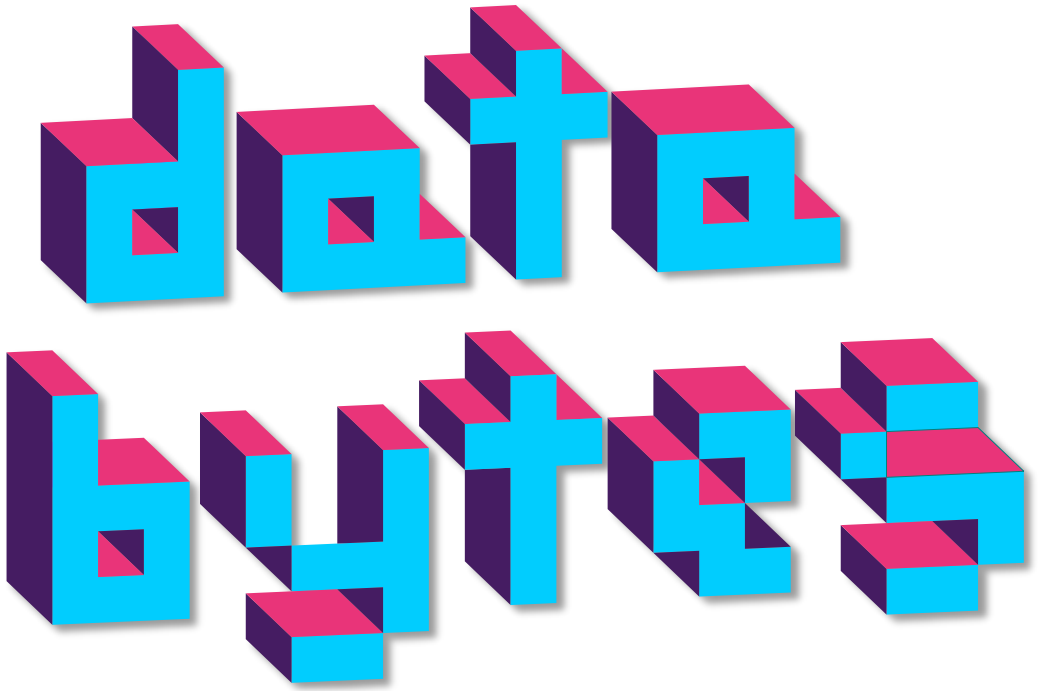

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Next DMIG Webinar:

—**Host:** Tony Keyes
—**Title: Research Support and Ethics**
—**Date / Time: Thursday, May 11th - 11-12**

- **Research Coordinator Support Service - RCSS (Tony Keyes)**
- **Clinicaltrials.gov** (Oswald Tetteh)
- **Research Ethics Consultation Service** (Alan Regenberg)

- **Register For this meeting here:**
- https://jhjhm.zoom.us/meeting/register/tJYscu-rrT8sGdLVpDDQRUWV1SUKWYImrZr0

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Join the DMIG Microsoft Teams

- Join the ICTR Data Managers Interest Group Microsoft Teams group:

  Join DMIG MSTeams Here

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