#### NHLBI Data Repository (BioLINCC)

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#### NIH Health Care Systems Research Collaboratory Steering Committee Meeting

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#### Outline

Studies currently in the data repository

- Policies Timing for release of data
- Policies Typical data modifications
- De-identification notes
- Submitting datasets
- Requesting data from the repository
- 'Issues' associated with data requests
- **Oversight**

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Data repository activities



# **Data Repository Studies**

- Data from more than 600,000 participants in over 100 observational and clinical trial studies.
- 32 Observational studies:

<u>General population studies</u> (Framingham, ARIC, CHS, CARDIA, MESA) *Post-menopausal women* (WHI-OS); *African-Americans* (Jackson), *Puerto Ricans* (PRHHP); *Asian Americans* (HHP); <u>Patient populations</u> *Sarcoidosis* (ACCESS); *Sickle Cell* (CSSCD); *Iron Overload* (HEIRS); *Primary Pulmonary Hypertension* (PPH); *Human retrovirus infected blood donors* (REDS-HTLV, REDS2-MS); *Alpha*<sup>1</sup> *Antitrypsin deficiency patients* (Alpha<sup>1</sup> registry); *Women with suspected myocardial Ischemia* (WISE, 1024); *hemophilia (MHCS)*; <u>Adolescents</u> (Bogalusa, NGHS)



# **Data Repository Studies**

• 77 Clinical Trials:

Asthma Clinical Research Network Trials (BAGS, CIMA, SOCS/SLIC, MICE, DICE, BARGE, IMPACT, PRICE, MIA, LARGE, BASALT/TALC); Acute Respiratory Distress Network (ARMA/LARMA, ALVEOLI, FACTT, LaSRS); Community Interventions (REACT, PAD); Hypertension Treatment (TOHP) I&II, DASH, DASH-Sodium, PREMIER, PATHS); Primary Prevention (MRFIT, ACT, LRC-CPPT); Secondary Prevention (BEST, BHAT, AMIS, CASS, MAGIC, WAVE, CAST, SOLVD, TIMI II & III, PEACE, ESCAPE, AFFIRM, OAT, ENRICHD, BARI 2D); Lung function/Respiratory (LHS, NETT, IPPB), <u>Diagnostic</u> (PIOPED); <u>Other Treatment</u> (MSH, WLM, RTS, VATS); Primary/Secondary Prevention (ALLHAT, HDFP, SHEP, WHI-CT, ACCORD); Emergency Medicine (ROC-HS, ROC-PRIMED, ROC-CPR); Adolescents (CAMP and CAMPCS, DISC, HIFI, TAAG)



# Timing for release of data

• Clinical Trials:

 $\checkmark$  3 years after the final visit of the participants to their clinical trial sites, or

 $\checkmark$  2 years after publication of primary outcome paper



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Observational Epidemiology Studies:

✓ 3 years after the completion of each examination or follow-up cycle, or
 ✓ 2 years after the baseline, follow-up, genetic, ancillary study, or other

data set is finalized within the study for analysis



## Data De-identification

- 1. Be prepared in a manner consistent with the informed consent (eg. Commercial use restrictions, sharing restrictions, research use restrictions)
- 2. Obvious identifiers removed (i.e. HIPAA identifiers).
- 3. Geography is generally removed.
- 4. Dates are recoded as a time interval.
- 5. Sensitive data removed when not integral to the study
- 6. Other data may be recoded to minimize the possibility of reidentification of a participant.
  - a. Top/bottom coding for height/weight
  - b. Grouping of race/ethnicity
  - c. Grouping of marital status, education, income, etc.



## **Submitting Data**

• Data:

✓ Individual level data, preference is for SAS v9 format, or text files with appropriate coding manuals.

Documentation

 ✓ Case reporting forms, protocols, manual of operations, data dictionaries or coding manuals in MS Word format for 508 compliance (select documentation will be posted on the website)

✓ Basic readme file with a description of the data, de-identification notes, or data 'tips'

- Data and documentation uploaded to a secure FTP site
- Data and documentation reviewed for compatibility with guidelines and usability



#### **Requesting data from the Repository**

#### 1. Register on website and complete data request form

Collections	Support morma	
Register a Biospecimen Collection Preparing and Submitting Data Repository Datasets About BioLINCC BioLINCC Handbook	*Institution type: *Support type: Other: Request Details	C Non-Profit Organization C Commercial Organization
Forms and Templates FAQs Glossary Proprietary Studies Questions/Comments	*Describe this request:	
My BioLINCC	*Study: *Design and	A brief overview of your research needs. A Case Controlled Etiologic Study of Sarcoidosis (ACCESS) Action to Control Cardiovascular Risk in Diabetes (ACCORD) Activity Counseling Trial (ACT) Acute Respiratory Distress Network Studies 01 and 03 (ARDSNet 01 and 03) Lc Acute Respiratory Distress Network Studies 06 and 08 (ARDSNet 06 and 08) Pr Hold down "Control", or "Command" on a Mac, to select more than one. Include the participant inclusion/exclusion criteria, expected study visit periods, key analytic variables, primary and secondary outcome measure, follow-up period (if applicable), and intended statistical methods.
	*Information Security: Please check the information security practices to be used: *Will the results be used for a commercial	Include the participant inclusion/exclusion criteria, expected study visit periods, key analytic variables, primary and secondary outcome measure, follow-up period (if applicable), and intended statistical methods. Inadequately described requests may be deferred until a complete description is included.  Institute supported, controlled access server Institute supported, password protected desktop computer Encrypted, password protected laptop computer Incrypted portable media (encrypted external hard drive, encrypted thumb drive) Unencrypted portable media backup (CD, DVD, thumb drive) stored in locked file cabinet Study data must be maintained in a secure and controlled environment C Yes No - the results will not be used for a commercial purpose. A "Yes" response defines this as a "Commercial Purpose" request.



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- Obtain IRB approval or Institutional certification of exemption from IRB review 2. (Framingham and Jackson require IRB approval)



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- 2. Obtain IRB approval or Institutional certification of exemption from IRB review (Framingham and Jackson require IRB approval)
- 3. Sign a Research Materials Distribution Agreement that:
  - $\checkmark$  Prohibits the transfer of data
  - $\checkmark$  Limits use of the data to three years
  - ✓ Specifies a required acknowledgment in manuscripts/abstracts
  - ✓ Requires notification of any new projects
- 4. Obtain institutional sign-off on the research materials distribution agreement.



#### Data Requests - Issues

- There is no scientific merit review of requests for data or screening of manuscripts prior to Journal submission
  - "Head scratching" data requests
    - Pre-hypertension & risk for CVD (sickle-cell, DISC, Alpha1)
  - Possibility of poor or incorrect analyses getting published
    - "Embarrassing presentation"
    - "very sloppy work"
- Ask for a progress report once a year, but response rate is low.
- Manually search for manuscripts based on investigator name and institution





Data repository operates under NHLBI IRB approved protocol

- Policy and procedures are somewhat insulated from arbitrary changes that may be encouraged by NHLBI staff or leadership
- Protocol is not strictly rigid. There is some flexibility in the protocol (there are both 'rules' and 'guidelines')
- Management of the data repository is also insulated from arbitrary demands by those requesting access.



## **Data Repository Activities**

- Approximately 640 investigators from the US and 20 other countries have received data
- Nearly 35% of requested datasets include data from clinical trials
- More than 450 publications in 179 different Journals
- Several data repository investigators elected to collaborate with study investigators



#### Participant Privacy BY SCOTT ADAMS I DIDN'T KNOW THE YOUR GENES PREDICT I MAPPED HUMAN RESOURCES THAT YOU WILL BE YOUR DEPARTMENT HAD A BITTER, LAZY, I USED GENOME . THAT TECHNOLOGY. CAUCASIAN GUY A PENCIL WALLY. WITH SIX HAIRS AND POOR VISION. THIS IS A VIOLATION YOU'LL HATE CUBICLES. I WONDER IF NO. ACCORDING OF MY RIGHT TO MEASURABLE OBJECT-THIS TECHNOLOGY PRIVACY! I'LL FIGHT TO MY MAP. YOU'LL WILL EVER FALL IVES, AND CATS WHO dibert.com IT ALL THE WAY TO LOSE INTEREST MAP YOUR GENOME. INTO THE THE SUPREME COURT! AND FALL ASLEEP. WRONG 72222 HANDS.

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