

ADRC Consortium for Clarity in ADRD Research Through Imaging

## NACC Spring Meeting CLARiTI Breakout Session May 6, 2024



## Agenda

#### Welcome – Sterling Johnson, PhD

• Site start up survey results

## Updates and Resources from the CLARiTI Inclusion Core

- Inclusion survey results
- Discussion with ORE Core representatives

#### **Disclosure Core**

- Review of survey results
- Sharing practices across ADRC's
- Return of PET research results
- Visual Interpretation: what to expect
- Discussion

#### Closing - Beth Mormino, PhD



## **Study Aims**



#### mPI team: Johnson, Mormino, Foroud, Rabinovici, Okonkwo, Rivera Mindt, Dickerson, Wolk, Kukull



#### Component Lead Investigators (partial list of 47 investigators)

Johnson/Mormino/Biber: Admin Rivera-Mindt/Okonkwo: Inclusion Biber/Kukull/Toga: Image-Data informatics Keene: Neuropath Rabinovici: PET image reads Shibata: MRI scoring Rahman-Filipiak/Clark/Chin: Disclosure Rosen/Thompson: neuropath MRI templates; AI classification Jagust/Jack: SCAN Villemagne: PET harmonization Detre: Advanced MRI methods Dage/Foroud: Biofluid mgmnt, assays

Donohue: Stats Betthauser: Biomarker time Jones: FDG analysis

Hohman: Data harmonization • integration •

Kantarci: LBD image analysis

#### **Industry collaborators**

- LMI
  - Lantheus/Cerveau
  - Enigma
- Lilly
- Flywheel
- GE
- Siemens
- Philips

## Site start up survey results

Recruitment goals vs. CLARiTI budget

- Sites are able to enroll a total of **3,218 participants** for CLARiTI
- CLARiTI's funding will cover the enrollment of 2,000 participants
- Capacity to meet both CLARiTI and P30 requirement

#### **CLARiTI** supporting P30 obligation

• **24 sites** reported that they want CLARiTI to explore/arrange additional radioligand access in support of their P30 required ATN obligation



## Flortaucipir (FTP) and Florbetapir (FBP)

- Lilly has agreed to provide us with a number of free doses
  - 40% free doses
  - 60% commercial rate
- Based on the site survey, free doses of FTP/FBP will be expended within the first year
- Subsequent doses will be charged at commercial rate of ~\$3,800/dose
  - Budgeted for \$2,500/dose



## **Blood Collection**

- 25/37 ADRC's are collecting blood using the NCRAD ADCFB protocol
- Some sites commented they need to take participant burden into consideration
- 30mL is ideal and requested
- Minimum accepted will be 10mL
- Blood is important for future assays
  - Ptau217, ab42/40, GFAP, NfL
  - TDP43
  - Alpha-synuclein
  - Other TBD assays
- Dried blood spots are in our future









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## Updates and Resources from the CLARITI Inclusion Core

Monday, May 6, 2024

# CLARITI Inclusion Core

#### CLARiTI Inclusion & Engagement Plans

Results from Inclusion Core Site Survey

Inclusion Core FAQs and resources

Questions/Comments?

## **Inclusion Core Mission**

Ensure the inclusion/engagement of persons from Underrepresented Populations in CLARiTI by utilizing a culturally-informed, community engaged research (CER) approach, in close coordination with *all* CLARITI Cores, esp. the Admin and Disclosure Cores, and with local ORE Cores.

## Milestone 1

Increase the inclusion & engagement of persons from Underrepresented Populations (URPs, ≥ 25%) in CLARiTI

## Milestone 2

Establish and maintain close collaboration and communication with other cores to meet inclusion goals



### **Inclusion Core Team**







Dr. Mónica Rivera Mindt, Co-LeadDr.Fordham University/Mount SinaiUniversity

**Dr. Ozioma Okonkwo, Co-Lead** University of Wisconsin, Madison

**Dr. Desiree Byrd, Co-I** CUNY, Queens College



Dr. Vanessa Guzman, Co-I Mount Sinai



**Dr. Adeyinka Ajayi** Project Manager, Mount Sinai



Dr. Charles Windon, Co-I UC San Francisco



Anne Buffington, MPH Project Manager, UW Madison



**Eva Schulte, BS** CRN, UW Madison



Alexander Robateau, MA Study Coordinator, Mount Sinai



## **Milestone 1: URP Inclusion**

- Purpose: Ensure the inclusion and engagement (≥ 25%) of participants from Underrepresented Populations (URPs):
  - Ethnoculturally minoritized groups
  - Low socioeconomic status (SES) (<12 years education)</li>
  - Individuals dwelling in rural areas
- Inclusion Core will offer:
  - Support for local Community Research Liaisons (CRLs)
  - Centralized Community Research Navigators (CRNs)
  - Funding for community support up to \$10k/year
  - Tailored inclusion and engagement materials
  - Community-Scientific Partnership Board (CSPB)



#### Community Research Liaison (CRL)

- Boots on the ground, in-person engagement
- Work centered on the "give" to community members & organizations
- Promotes *inclusion* by supporting community partnerships & liaising with community clinicians, community-based organizations (CBOs), and community members
- Coordinates local inclusion/engagement events/efforts with local ADRC leadership & ORE Core team
- Participates in community events

#### Community Research Navigator (CRN)

- Virtual engagement with centralized team members
- Work centered on the "give" to sites & participants
- Promotes pt. *engagement* (retention & task completion)
- Supports ADRC coordinators with participants' engagement in the CLARiTI protocol
- Additional roles as determined (in collaboration with your ORE Core)

## Milestone 2: Site and Core Collaboration

- Purpose: The Inclusion Core will partner with participating ADRCs to support their success with CLARiTI protocol. Please let us know how we can help your site!
- Inclusion Core will offer:
  - Training and supporting materials for CLARiTI team members (e.g., CRLs)
  - Ongoing partnership and consultation with ORE & Disclosure Cores
  - Access to resources on Community-Engaged Research (CER)
  - Monitoring and troubleshooting of inclusion efforts throughout project





- The success of the CLARiTI Inclusion mandate (>25% URPs) requires close collaboration between the Inclusion Core and ADRC ORE Cores:
  - Onboarding sessions and regular check-ins between IC and ORE Core staff
  - Consultation with ORE Core as needed to support inclusion and engagement
  - Webinars on CER training for ORE Core and all team members
  - Repository of resources and training materials for enhancing CER practices
  - Regular contact between IC leadership and ORE Core Steering Committee
  - Networking with ORE Core leaders and staff during NACC Directors meetings
  - Inclusion Core Site Survey to understand local procedures and practice

# CLARITI Inclusion Core

CLARiTI Inclusion & Engagement Plans

Results from Inclusion Core Site Survey

Inclusion Core FAQs and resources

Questions/Comments?

## **Inclusion Core Survey Results**

- Survey distributed to site PIs and ORE Core leadership March 2024
- 32 sites responded



\*Reminder: CLARiTI participants must be enrolled in your site Clinical Core and have a NACCID. However, you may wish to replenish your Clinical Core or increase URP representation. To do this, you may recruit CLARiTI participants from the community who are new to AD research at your center. They would need to enroll into the Clinical Core first and could then enroll into CLARiTI



### Barriers to URP Inclusion

- Participant Reluctance towards
  study procedures
- Scheduling Challenges: Finding times that work for pts, lack of appointments outside regular working hours
- Participant Burden, particularly with transportation

*"The most significant barrier will be convincing older adults and their adult children that blood draws, MRI, and PET scans are safe and necessary."* 

### Facilitators for URP Inclusion

- Significant Site Expertise: Running community events and educational outreach
- Successful partnerships with local and national organizations
- Ensuring that study staff reflect URPs, hiring from the community

"We have found that a constant presence in the community to provide education, outreach, and support has aided in retention of all participants, but especially our URG participants."

## **Inclusion Core Survey Results**





## **Inclusion Core Survey Results**

Does your center have the capacity to enroll Spanish speaking participants?



- 16/32 sites have capacity to enroll Spanish-speaking participants
- 12 sites have a bilingual neuropsychologist on staff
- 15 sites have a bilingual psychometrist on staff
- All 16 sites conduct Spanish language evaluations

# CLARITI Inclusion Core

CLARiTI Inclusion & Engagement Plans

Results from Inclusion Core Site Survey

**Inclusion Core FAQs and resources** 

Questions/Comments?



## **Inclusion Core FAQs and Resources**

- How will inclusion be monitored during the study?
  - A study dashboard is being developed by NACC allowing ADRCs to view site and study-wide performance on inclusion metrics. More information to come
- How can I learn more about CLARiTI Inclusion plans?
  - Please consider viewing a <u>webinar</u> on this topic given 3/27/24
- I have questions, concerns or ideas about engagement of participants from URPs- who can I share this with?
  - Please contact us at <u>clariti-inclusion@medicine.wisc.edu</u>







## Email us at: clariti-inclusion@medicine.wisc.edu

## Discussion





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## **Current Disclosure Practices Across the ADRC Network**

Annalise Rahman-Filipiak, PhD Disclosure Core

NACC Spring Meeting 2024

## **CLARITI Disclosure Core**



Annalise Rahman-Filipiak, PhD Assistant Professor Michigan ADRC



**Lindsay Clark, PhD** Assistant Professor Wisconsin ADRC



Nathaniel Chin, MD Assistant Professor Wisconsin ADRC



Neelum Aggarwal, MD Professor Rush ADRC



**Brad Dickerson, MD** Professor Harvard ADRC



Haley Kohl, BS Disclosure Core Coordinator Michigan ADRC



Jon Reader, MA Disclosure Core Data Manager Michigan ADRC



## **CLARiTI Disclosure Timeline**





## Purpose

- To evaluate current interest and engagement in return of individual research results across participating CLARiTI sites;
- To understand **infrastructure** for and **barriers** to disclosure implementation;
- To collate disclosure practices and resources across sites;
- To identify sites interested in participating as **pilot sites** for the Disclosure Toolkit



## Methods

- Survey developed by the Disclosure Consultation Team (DCT) based on prior surveys (Roberts et al., 2021) and existing disclosure protocols.
- Surveys sent by NACC to participating sites between 01/15/2024 and 04/08/2024.
- Responses received from 37/37 sites (100% response rate!)
  - \*1 response invalid



## **Disclosure Progress: Comparing 2019 vs. 2024**

	Type of participant					
	Dement	ia or MCI	Normal Cogr	nition or SMC		
Type of information	Roberts Survey 2019	CLARiTI Survey 2024	Roberts Survey 2019	CLARiTI Survey 2024		
Consensus research diagnosis	25 (83%)	27 (75%)	23 (77%)	25 (69%)		
Neuropsychological test results	22 (73%)	27 (75%)	21 (70%)	25 (69%)		
Amyloid PET results	13 (43%)	17 (47%)	8 (27%)	<b>16 (44%)</b>		
MRI results	12 (40%)	21 (58%)	10 (33%)	22 (61%)		
FDG PET results	8 (27%)	6 (17%)	6 (20%)	4 (11%)		
Genetic test results, not APOE*	4 (13%)	2 (6%)	3 (10%)	2 (6%)		
Tau imaging results	3 (10%)	6 (17%)	2 (7%)	4 (11%)		
CSF biomarker results	3 (10%)	8 (22%)	1 (3%)	5 (14%)		
APOE genetic test results	2 (7%)	5 (14%)	2 (7%)	5 (14%)		

\* Indicated in present survey as "Other"

Roberts et al., 2021 N = 30

Present survey N = 36







#### Interest/Engagement in Returning Amyloid PET Results



- 53% currently returning amyloid PET
- 42% interested in the future.
- Of the 19 sites who disclose, 11 disclose routinely and 8 disclose sometimes.



#### Interest/Engagement in Returning Tau PET Results



- 5\* sites (14%) already returning tau PET.
- 69% interested in the future.
- Of the 6\* sites who disclose, none disclose regularly (4 sometimes, 2 rarely).



## **PET Disclosure By Clinical Phenotype**

With whom do you currently share results (assuming consent/assent)?

	Amyloid-Disclosing Sites ( <i>n</i> =19) # (%)	Tau-Disclosing Sites ( <i>n</i> =6) # (%)
Dementia	16 (84.2%)	6 (100.0%)
MCI	17 (89.5%)	6 (100.0%)
Subjective Cognitive Decline	13 (68.4%)	4 (66.7%)
Cognitively Normal	16 (84.2%)	4 (66.7%)

• Results are shared with participants and family/friends; shared with providers ~50% of the time



## **Returning PET Results: Session Format**

Mode of Returning Results	Amyloid-Disclosing Sites ( <i>n</i> =19) # (%)	Tau-Disclosing Sites ( <i>n</i> =6) # (%)
In-Person	13 (68%)	5 (83%)
Phone	10 (53%)	2 (33%)
Zoom	9 (47%)	4 (67%)
Mailed Letter or Report	4 (21%)	1 (17%)
Email	0 (0%)	0 (0%)
Electronic Health Record	4 (21%)	0 (0%)

- Most sites report that PET feedback takes <30 minutes
- Physicians and advanced practice providers most frequently provide feedback; neuropsychologists, social workers, and trainees may also be involved.



## **Elements of Disclosure Visits**

Disclosure Element	Amyloid Disclosing Sites ( <i>n</i> =19) # (%)	Tau Disclosing Sites ( <i>n</i> =6) #(%)
Pre-Disclosure Education	14 (74%)	3 (50.0%)
Summary Report	10 (53%)	3 (50.0%)
Visual aids/Images of Result (slices)	5 (26%)	2 (33%)
Recommendations/Action Steps	17 (90%)	5 (83%)
Clinical Referral	13 (68%)	3 (50%)

• Separate consent often used

Maps onto NACC Best Practice Guidelines for Biomarker Disclosure: <u>https://files.alz.washington.edu/best-practices/biomarker-disclosure.pdf</u>



## **Returning PET Results: Result Format**

	Amyloid-Disclosing Sites ( <i>n</i> =19) # (%)	Tau-Disclosing Sites ( <i>n</i> =6) # (%)
Quantitative Data	3 (16%)	1 (17%)
Categorized/Labeled Data	18 (95%)	4 (67%)
Personalized Risk Estimates Incorporating Results	1 (5%)	0 (0%)
Other	2 (11%)	3 (50%)

- PET Results are most frequently given an interpretive label (e.g., "Elevated" vs. "Not Elevated")
- Few sites disclose raw/quantitative data or personalized risk estimates
- Other: participants' scan images



## **Reasons to Return PET Results**

Reason for Disclosure	Amyloid-Disclosing Sites ( <i>n</i> =19) #(%)	Tau-Disclosing Sites ( <i>n</i> =6) #(%)	
Participant or Family Requested Results	17 (89%)	6 (100%)	
Participant's Physician Requested Results	10 (53%)	2 (33%)	
Inform Participant's Healthcare or Medical Decision-Making	15 (79%)	3 (50%)	
Thanking Participants for Their Contribution to Research	17 (89%)	4 (67%)	
Retention of Participants in Research	17 (89%)	4 (67%)	
Ongoing Disclosure-Specific Study	11 (58%)	2 (33%)	



## **Reasons NOT to Return PET Results**

Reason not to Disclose	Sites <u>Not</u> Disclosing Amyloid ( <i>n</i> =17) #(%)	Sites <u>Not</u> Disclosing Tau (n=30)
Information not Useful/Actionable	3 (16%)	5 (17%)
Financial Burdens	2 (11%)	3 (10%)
Time Burdens for Staff	4 (21%)	6 (20%)
Personnel Shortage	3 (16%)	6 (20%)
Participants Not Interested	0 (0%)	0 (0%)
Lack of Expertise in Disclosing Results	5 (26%)	5 (17%)
Not Part of Original Study (or in Consent)	11 (58%)	11 (37%)
Results Do Not Meet Clinical Regulations	3 (16%)	8 (27%)
Potential for Unintended Harms to Participants	6 (32%)	7 (23%)
Concerns About Legal Liability	2 (11%)	2 (7%)
Other	6 (32%)	4 (13%)



## **Additional Disclosure Barriers**

- Exploratory compounds that are not FDA approved and/or without established cutoffs
- Lack of radiologic read
- Tau collected as part of a specific subpopulation (e.g., CTE in AD); concerns about validity of cutoffs/meaning of result
- Lack of resources, time, and pathways for clinical follow-up for distressed participants



## **Survey Limitations**

- N/A variable unclear if not currently collecting these data, or other reason
- Unclear whether sites conducting disclosure are doing so as part of ancillary study (e.g., LEADS) versus longitudinal cohort.



## **Future Directions**

- Pilot site selection & consultations
- Develop disclosure training materials & certification program
- Final Disclosure Protocol & Toolkit available via NACC YEAR 2



## Acknowledgements

#### • Thank you to:

- Teams who took time to respond to our many CLARiTI surveys!
- Jon Reader (CLARiTI Disclosure Core Data Analyst)
- Erin Chin (CLARiTI)
- Brittany Hale & Heather O'Connell (NACC)





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# Disclosure Core Introduction and Goals

Lindsay Clark, PhD Disclosure Core NACC Spring Meeting 2024

## **Disclosure Core Goals**



Develop and adapt a flexible biomarker disclosure toolkit



# Develop training resources and materials



Investigate disclosure feasibility, safety, and satisfaction



## Flexible biomarker disclosure toolkit

- If sites already have return of results processes, can continue to use those processes for CLARiTI participants
- For sites who do not currently return biomarker results, or want to supplement current processes:

**Educational materials** 

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## Disclosure toolkit development

Develop and test with pilot sites

Collaborate with Inclusion Core for participant input

Finalize toolkit and disseminate through NACC

Add tau PET disclosure materials once available

Update toolkit materials based on preliminary feedback

## **Biomarker Disclosure Process**

Before	Return of Results	After
	Prepare for next steps	
	Ensure comprehension and assess initial reaction to result	
result, brief psychological screening, answer questions)	Return the result (nontechnical words, pauses, verbal and written report of result)	Possible mental health or research questionnaires
Pre-test education and informed consent Assess for readiness (reason for learning	Assess what person knows about AD and biomarker tests. Confirm readiness to learn results.	Follow-up within a couple of weeks to check-in



NACC Biomarker Disclosure Guidance: https://files.alz.washington.edu/best-practices/biomarker-disclosure.pdf Largent et al., 2023 Testing for AD Biomarkers and Disclosing Results Across the Disease Continuum.

## **Disclosure** Core

#### **Training Resources**



#### **Research outcomes**



## Thank you!

# **Questions or Comments?**

Email us at: Lindsay Clark (Wisconsin ADRC): Irclark@medicine.wisc.edu Annalise Rahman-Filipiak (Michigan ADRC): rahmanam@med.umich.edu





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## **Clinical Read Approach**

Gil Rabinovici, MD UCSF ADRC Image Reads Core Lead

NACC Spring Meeting 2024

## **Clinical Read Approach: Amyloid PET**

Visual interpretation method developed for LEADS, ADNI-4



- ADNI tracer-specific SUVR thresholds (18-۲ 20 CL)
- Final binary read (elevated/non-elevated)
- **Regional pattern**
- Additional reader notes

- FTP, MK-6240, PI-2620
- Tau staging conforming to new criteria: MTL only, moderate neocortical, high neocortical



## **Visual Reads vs. Quantification**

LEADS, N=467, 96% concordance

ADNI-4, N=42, 98% concordance





## **Standardized Image Display**

#### Example [<sup>18</sup>F]Florbetaben PET Scans

Non-elevated amyloid scan:









Low [18F]Florbetaben SUVR High

Elevated amyloid scan:



001\_S\_0001\_FBB\_2024-01-01.nii Participant: 001\_S\_0001 Scan date: 2024-01-01 Tracer: [18F]Florbetaben SUVR range: 0.0-2.5



Low High [18F]Florbetaben SUVR



#### **CLARiTI Image Reads Team**

#### **Visual Readers**



Gil Rabinovici, MD UCSF ADRC



David Soleimani-Meigooni, MD UCSF ADRC



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Michael Zeineh MD, PhD Stanford ADRC



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**Jonathan McConathy MD, PhD** University of Alabama, Birmingham



Victor Villemagne, MD Pittsburgh ADRC



Zoe Lin UCSF ADRC

Not pictured: Carol Soppe



## Discussion



## Announcements

- Visit us at our booth!
  - Meet members of the CLARiTI Administration team
- Next webinar is on June 20, 10 AM CT
  - Blood & Biomarkers/NCRAD
- Stay in touch.
  - Email CLARiTI Administrative Team: <a href="mailto:clariti@medicine.wisc.edu">clariti@medicine.wisc.edu</a>
  - Email CLARiTI Inclusion Team: <a href="mailto:clariti-inclusion@medicine.wisc.edu">clariti-inclusion@medicine.wisc.edu</a>
  - Website: <a href="https://naccdata.org/nacc-collaborations/clariti">https://naccdata.org/nacc-collaborations/clariti</a>



## **Thank you for attending!**

scan for breakout session slide deck and resources