

Robert B. Cavanaugh PhD, CCC-SLP



Academic & Clinical Positions

- 2023 — ● Health Research Data Analyst
Office of the Dean, Bouvé College of Health Sciences
Observational Health Data Science and Informatics Center, Roux Institute
Product Owner, Roux Institute OHDSI Lab
Northeastern University, Portland, ME.
- 2015 — ● Speech-Language Pathologist
Carolinas Rehabilitation, Atrium Health, Charlotte, NC
Carolinas Neurosciences Institute, Atrium Health, Charlotte, NC
- 2013 — ● Graduate Research Assistant
Center for Aphasia and Related Disorders, UNC - Chapel Hill
PI: Katarina Haley



Education

- 2023 ● University of Pittsburgh, Pittsburgh, PA
Ph.D. Communication Science and Disorders
- 2015 ● University of North Carolina at Chapel Hill, Chapel Hill, NC
M.S. Speech and Hearing Sciences
- 2013 ● University of Pittsburgh, Pittsburgh, PA
B.A. Communication Science and Disorders



Grant Support

- 2021 — ● NIH-NIDCD F31 DC019853 Ruth L. Kirschstein NRSA
Determinants of multilevel discourse outcomes in anomia treatment for aphasia
Role: PI; Impact Score: 25; Direct Costs: \$68,482
Sponsors: Michael Walsh Dickey & William S. Evans
- 2021 — ● Audrey Holland Endowed Award
Determinants of multilevel discourse outcomes in anomia treatment for aphasia
Role: PI; Direct Costs: \$2000
- 2019 — ● NIH-NCATS TL1 University of Pittsburgh CTSI NRSA
Comparing Treatment Intensity between Research and Clinical Practice in Post-Stroke Aphasia
Role: Predoctoral Fellow; PI: Kraemer (TL1TR001858)
Mentors: Michael Walsh Dickey, William S. Evans, & Catherine Palmer
- 2019 ● School of Health and Rehabilitation Sciences Research Development Fund
Role: PI; Direct Costs: \$1000
Faculty Sponsor: William S. Evans



Publications

- 2023 ● Wong, C.N., Wilczek, M.P., Smith, L.H., Bosse, J.D., Richard, E.L., **Cavanaugh, R.**, Manjourides, J., Orkaby, A.R. and Olivieri-Mui, B. (2023). Frailty Among Sexual and Gender Minority Older Adults: The All of Us Database. The Journals of Gerontology: Series A, glad149.

Curriculum Vitae

Speech-language pathologist turned clinical researcher and health research data analyst. Passionate about improving outcomes for individuals with neurogenic communication disorders.

Contact

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Key Interests

- 🌐 Real-world evidence generation for healthcare decision making in neurorehabilitation
- 👤 Improving treatment effectiveness, population-level outcomes, and quality of life for individuals with post-stroke aphasia
- 🔧 Quantitative methods, Open-source software development, Open science, & Science communication
- 🏠 Technology for aphasia rehabilitation

Last updated on 2023-10-30.

- 2022
- **Cavanaugh, R.**, Quique, Y.M., Swiderski, A.M., Kallhoff, L., Terhorst, L., Wambaugh J., Hula, W.D., Evans, William S (2023). Reproducibility in small-N treatment research: a tutorial using examples from aphasiology. *Journal of Speech, Language, and Hearing Research*.
 - Quique, Y. M., **Cavanaugh, R.**, Lescht, E., & Evans, W. S. (2022). Applying adaptive distributed practice to self-managed computer-based anomia treatment: A single-case experimental design. *Journal of Communication Disorders*, 99, 106249. <https://doi.org/10.1016/j.jcomdis.2022.106249>
 - Boyle, M., Akers, C. M., **Cavanaugh, R.**, Hula, W. D., Swiderski, A. M., & Elman, R. J. (2022). Changes in discourse informativeness and efficiency following communication-based group treatment for chronic aphasia. *Aphasiology*, 1-35.
 - Nguy, B., Quique, Y.M., **Cavanaugh, R.**, Evans, William S. (2022) Representation in aphasia research: an examination of US treatment studies published between 2009 and 2019. *American Journal of Speech-Language Pathology*
 - **Cavanaugh R**, Quique YM, Dickey MW, Hula WD, Boss E, & Evans WS (2022). Practice-Related Predictors of Semantic Feature Verification Treatment for Aphasia. *American Journal of Speech-Language Pathology*. https://doi.org/10.1044/2021_AJSLP-21-00296
- 2021
- **Cavanaugh, R.**, Kravetz C., Jarold L., Quique Y., Turner R., & Evans, W.S. (2021). Is There a Research–Practice Dosage Gap in Aphasia Rehabilitation? *American Journal of Speech-Language Pathology*, 30(5), 2115–2129. [10.1044/2021_AJSLP-20-00257](https://doi.org/10.1044/2021_AJSLP-20-00257).
 - Evans W.S., **Cavanaugh R.**, Quique Y, Boss E, Starns J.J., & Hula W.D. (2021). Playing With BEARS: Balancing Effort, Accuracy, and Response Speed in a Semantic Feature Verification Anomia Treatment Game. *Journal of Speech, Language, and Hearing Research*. https://doi.org/10.1044/2021_JSLHR-20-00543
 - Kersey, J., Evans, W. S., Mullen, K., Askren, A., **Cavanaugh, R.**, Wallace, S. E., Hula, W. D., Walsh Dickey, M., Terhorst, L., & Skidmore, E. (2021). Metacognitive Strategy Training Is Feasible for People With Aphasia. *OTJR: Occupation, Participation and Health*. <https://doi.org/10.1177/15394492211023196>
 - Evans, W. S., **Cavanaugh, R.**, Gravier, M. L., Autenreith, A. S., Doyle, P. J., Hula, W. D., Dickey Michael, W., & Dickey, M. W. (2021). Effects of Semantic Feature Type, Diversity, and Quantity on Semantic Feature Analysis Treatment Outcomes in Aphasia. *American Journal of Speech-Language Pathology*. https://doi.org/10.1044/2020_AJSLP-19-00112
- 2020
- **Cavanaugh, R.B.**, Haley, K.L. (2020). Subjective communication difficulties in very mild aphasia. *American Journal of Speech-Language Pathology*, 29(1S), 437–448. https://doi.org/10.1044/2019_AJSLP-CAC48-18-0222



Presentations

- 2023
- **Cavanaugh, R.**, Olivieri-Mui, B., & Smith, L. (2023). Treatment Dosage in Aphasia Rehabilitation: From Research Efficacy to Real-World Evidence. Seminar accepted at the American Speech-Language Hearing Association Convention, Thursday, November 16, 2023, Boston, MA.
 - Wong, C. N., Smith, L. H., **Cavanaugh, R.**, & Olivieri-Mui, B. (2023). Unraveling the Mediating Role of Frailty: Understanding Health Care Utilization among Older Sexual and Gender Minority Adults in the All of Us Research Program. Poster presented at the 2023 OHDSI Symposium, East Brunswick, NJ.

- Yanover, C., Smith, L., ElHay, T., Olivieri-Mui, B., Bivas-Benita, M., **Cavanaugh, R.**, Akiva, P., Wong, C. N., & Orkaby, A. (2023). Validation and Comparison of Frailty Indexes: An OHDSI Network Study. Poster presented at the 2023 OHDSI Symposium, East Brunswick, NJ.
- **Cavanaugh, R.**, Are there research - practice dosage gaps in neurorehabilitation? Invited talk presented at the Monthly Brain Injury Team Meeting, Carolinas Rerhabilitation, September 12, 2023, Charlotte, NC
- 2022 ● **Cavanaugh, R.**, Dalton, S., & Richardson, J. (2022). Novel Web Applications to Facilitate Discourse Analysis in Everyday Clinical Practice. Paper presented at the American Speech-Language-Hearing Association Annual Convention. Friday, November 18, 2022, New Orleans, Louisiana.
- 2022 ● **Cavanaugh, R.**, & Swiderski, A., Steel, S., Fergadiotis, G., Hula, W.D. (2022). Computer Adaptive Naming Assessment for Aphasia: A New Tool for SLPs. Paper presented at the American Speech-Language-Hearing Association Annual Convention. November 18, 2022, New Orleans, Louisiana.
- Goldberg, E., Dickey, M., Hula, W., **Cavanaugh, R.**, Swiderski, A., & Autenreith, A. (2022). Cognitive Functions Supporting Learning Over Time in Naming Treatment for Aphasia. Paper presented at the American Speech-Language-Hearing Association Annual Convention. Friday, November 18, 2022, New Orleans, Louisiana.
- Smith, A., Williams, C., Hambridge, T., Harmon, T., Wallace, S., Brancamp, T., Biel, M., Evans, W., & **Cavanaugh, R.** (2022). Basic Psychological Need Satisfaction and Frustration in Aphasia: Correlations With Aphasia Severity and Mood. Poster presented at the American Speech-Language-Hearing Association Annual Convention, Friday, November 18, 2022, New Orleans, Louisiana.
- **Cavanaugh R.**, Swiderski, A., Goldberg, E., Hula, W.D., Evans, W.S., Dickey, M.W., (2022) Within-trial evidence for the Importance of Feature Generation during Semantic Feature Analysis. Platform accepted at Academy of Aphasia (October 2022).
Note: Awarded Best Student Presentation
- **Cavanaugh R.**, Swiderski, A., Hula, W.D., Fergadiotis, G., Steel, S., (2022) The PNT-CAT: A Computer Adaptive Test Version of the Philadelphia Naming Test. Poster presented at the International Aphasia Rehabilitation Conference (June 2022).
- **Cavanaugh, R.**, Brancamp, T, Harmon, T, Wallace, S, Biel, M, Hambridge, T, Caputo, M, Evans, WS (2022). Measuring Post-traumatic Growth in People with Aphasia. Abstract for poster presentation, annual Clinical Aphasiology Conference (May 2022). Wrightsville Beach, NC
- Brancamp, T, **Cavanaugh, R.**, Harmon, T, Wallace, S, Biel, M, Hambridge, T, Caputo, M, Evans, WS (2022). Individual-level predictors of post-traumatic growth and depreciation in aphasia. Abstract for platform presentation, annual Clinical Aphasiology Conference (May 2022). Wrightsville Beach, NC
- Goldberg, E, Dickey, M.W., Hula, W.D., **Cavanaugh, R.** Swiderski, A., Autenreith, Alyssa. (2022). Cognitive functions supporting learning over time in naming treatment for aphasia. Abstract for platform presentation, annual Clinical Aphasiology Conference (May 2022). Wrightsville Beach, NC
- Schliep, M., **Cavanaugh, R.**, , Tierney-Hendricks, C., Schnek, S., Douglas, N., (2022). Leveraging Implementation Science to Advance the Reach of Aphasia Best Practices. Abstract for roundtable presentation, annual Clinical Aphasiology Conference (May 2022). Wrightsville Beach, NC

- Evans, WS, Kelly, A, Meyer, E, Skidmore, E, Pompon, R, Flowers, R, Cavanaugh, R (2022). Adapting acceptance and commitment therapy for stroke survivors with aphasia. Abstract for platform presentation, annual Clinical Aphasiology Conference (May 2022). Wrightsville Beach, NC.
- Steel, S., **Cavanaugh R.**, Fergadiotis, G., Hula, W.D., (2022) Bridging the gap: Measuring perceived barriers and facilitators of a novel anomia assessment tool. Lightning talk, Implementation Science is for All: A CSD Practice-Research Exchange (April 2022).
- 2021 ● Evans, W.S., Quique, Y.M., **Cavanaugh, R.**, Lescht, E. (2021). Effects of adaptive distributed practice and stimuli variability in flashcard-based anomia treatment. Abstract for poster presentation, 59th Academy of Aphasia, Online
- **Cavanaugh, R.** Quique, Y, Boss, E, Hula, W.D., and Evans, W.S. (2021). Practicing with BEARS: Active Ingredients in Semantic Feature Analysis. Abstract for poster presentation, 51st annual Clinical Aphasiology Conference, Online
- Evans, W.S., **Cavanaugh, R.**, Quique, Y., Boss, E., Dickey, M.W., Doyle, P, Starns, J.J., and Hula, W.D., (2021). BEARS-Balancing Effort, Accuracy, and Response Speed in semantic feature verification anomia treatment. Abstract for platform presentation, 50th annual Clinical Aphasiology Conference, Online..
- Quique, Y., **Cavanaugh, R.**, Starns, J.J., Boss, E., Hula, W.D., and Evans, W.S. (2021). Estimating the speed-accuracy tradeoff "Sweet Spot" in language performance for people with aphasia: replication and extension of a diffusion-model based approach. Abstract for poster presentation, 50th annual Clinical Aphasiology Conference, Online.
- Boyle M, Akers C, **Cavanaugh R.**, Hula WD, Swiderski A, Elman R. (2021) Changes in informativeness following communication-based group treatment for chronic aphasia . Abstract for platform presentation, 50th annual Clinical Aphasiology Conference, Online.
- Akers, C, Boyle M, Swiderski A, Hula WD, **Cavanaugh R.**, Elman R. (2021) Using complete utterances to measure change in conversational discourse following communication- based group treatment. Abstract for poster presentation, 51st annual Clinical Aphasiology Conference, Online
- **Cavanaugh, R.**, Kravetz, C., Jarold, L., Quique, Y., Turner, R., Evans, W.S. (2021). Is there a research-practice dosage gap in aphasia rehabilitation? Abstract for poster presentation, Aphasia Access Leadership Summit, online.
- Nguy, B, **Cavanaugh, R.**, Quique, Y, Evans, WS. (2021). Are Aphasia Research Participants Representative of the Post-Stroke Aphasia Population in the US? Abstract for poster presentation, Aphasia Access Leadership Summit. Online conference.
- 2020 ● **Cavanaugh, R.**, Kravetz, C., Jarold, L., Quique, Y., Turner, R., Evans, W.S. (2020). Is there a research-practice dosage gap in aphasia rehabilitation? Abstract for poster presentation, 16th Annual Rehabilitation Institute Research Day. Pittsburgh, PA
- **Cavanaugh, R.**, Terhorst, L., Swiderski, A.W., Hula, W.D., Evans, W.S. (2020). A Systematic Appraisal of Individual Effect Sizes in Aphasia Single-Case Designs via Simulation. Abstract for poster presentation, 58th Academy of Aphasia, Philadelphia PA.
- Evans, WS, **Cavanaugh, R.**, Quique, Y, Boss, E, Dickey, MW, Doyle, P, Starns, J, and Hula, W (2020). BEARS- Balancing Effort, Accuracy, and Response Speed in semantic feature verification anomia treatment. Abstract for platform presentation, annual Academy of Aphasia Conference (virtual online conference).
- **Cavanaugh, R.**, Kravetz, C., Evans, W.S. Utilization and Disparities in Outpatient Aphasia Rehabilitation in Western Pennsylvania. Abstract for poster presentation, Pennsylvania Speech-Language Hearing Association Annual Conference, Pittsburgh, PA (Conference Canceled).

- 2019 ● **Cavanaugh, R.**, Evans, W.S., Gravier, M., Autenreith, A., Ashmore, E., Doyle, P., Hula, W., Dickey, M.W., (2019). Do the kinds of features that patients generate during Semantic Feature Analysis affect treatment outcomes? Poster presented at the 2019 Clinical Aphasiology Conference in Whitefish, MT.
- 2018 ● **Cavanaugh, R.B.**, Haley, K.L. (2018) Subjective communication difficulties in very mild aphasia. Abstract for poster presentation, 48th annual Clinical Aphasiology Conference, Austin, TX.
- 2014 ● **Cavanaugh, R.B.**, & Haley, K. (2014, April) Accounting for Aphasia-Related Language Deficits in Verbal Working Memory Assessments: A Literature Review. Poster presented at the 2014 SPHS Student Research Day in Chapel Hill, NC.



Technology

- 2023 ● Smith, L.H., **Cavanaugh, R.** (2023). allofus: An R package to streamline use of the AllofUs Research Workbench. Version 0.0.0.9. Available from <https://github.com/roux-ohdsi/allofus>
- 2022 ● **Cavanaugh, R.**, Smith, L.H. (2023). ohdsilab: Tools for using Roux OHDSI Lab at Northeastern University Version 0.0.0.9. Available from <https://github.com/roux-ohdsi/ohdsilab>
- 2022 ● **Cavanaugh, R.**, Aphasia Rehabilitation Research Technology Mapping Project <https://robcavanaugh.com/aphasia-tech-map/>
- 2022 ● **Cavanaugh, R.**, Dalton, S.G., Richardson, J, (2022). mainConcept. Available from: <https://rb-cavanaugh.shinyapps.io/mainConcept>
- 2022 ● **Cavanaugh, R.**, Dalton, S.G., Richardson, J, (2022). coreLexicon. Available from: <https://rb-cavanaugh.shinyapps.io/coreLexicon>
- **Cavanaugh, R.**, Swiderski, A.M., Hula, W.D. (2022). acom: The Aphasia Communication Outcome Measure. Version 0.4.0.2 Available from <https://github.com/rbcavanaugh/acom>.
- 2022 ● **Cavanaugh, R.**, Aphasia Research Finder. <https://aphasiaresearch.org>
- **Cavanaugh, R.**, Swiderski, A.M., Fergadiotis, G. & Hula, W.D. (2022). pnt: Computer adaptive forms of the Philadelphia Naming Test. Version 0.1.1 Available from <https://github.com/rbcavanaugh/pnt>.
- 2021 ● Kowalski, J., and **Cavanaugh R.** (2021). TBDBr: Easy Access To TalkBankDB via R API. <https://github.com/TalkBank/TalkBankDB-R>



Media

- 2023 ● Determinants of Multilevel Disource Outcomes in Anomia Treatment for Aphasia. The Language Neuroscience Podcast (Dr. Stephen Wilson) episode #28, October 14, 2023
- 2021 ● Voltage Drop and Aphasia Treatment: Thinking About the Research-Practice Dosage Gap in Aphasia Rehabilitation: A Conversation with Rob Cavanaugh” Aphasia Access Conversations podcast, episode #77, October 28, 2021.



Scholarships and Awards

- 2022 ● NIH-NIDCD Academy of Aphasia conference grant (R13 DC017375-01)
- Plural Publishing Research Scholarship

- 2020 ● ANCDs Conference Student Fellowship
- NIH-NIDCD Academy of Aphasia conference grant (R13 DC017375-01)
- 2019 ● NIH-NIDCD Fellowship: Research Symposium in Clinical Aphasiology
- 2014 ● Adult Communication Disorders Annual Scholarship, UNC-Chapel Hill
- Robert W. Peters Award for excellence in research, UNC-Chapel Hill

Professional Memberships

- 2021 — ● Member, Collaboration of Aphasia Trialists: Effectiveness of Aphasia Interventions, Implementation Science
- 2016 — ● CCC-SLP: American Speech-Language and Hearing Association (ASHA)
- 2015 — ● SLP: Board of Examiners in Speech-Language Pathology, North Carolina
- 2015 — ● Member, ASHA SIG 2: Neurogenic Communication Disorders

Teaching

- 2023 ● Mentor, The All of Us Research Scholar Program
- 2022 ● Introduction to R: Workshop for incoming PhD students in CSD - University of Pittsburgh
 - Led, organized, and co-designed 3-day hybrid-remote workshop
- Introduction to R: Workshop for faculty, staff, and students in CSD - University of Pittsburgh
 - Led, organized, and co-designed 3-day hybrid-remote workshop
- CSD M.S. Clinical Integration Project
 - Review and feedback for M.S. - SLP students 1st year projects
- 2021 ● SPHS-S 685: Research and Ethics in Speech, Language, and Hearing Sciences (University of Indiana Bloomington; Dr. Brielle Stark)
 - Guest Lecture: Writing an NIH NRSA F31 Fellowship Application
- CSD M.S. Summative Assessment Project
 - Review and feedback for M.S. - SLP students comprehensive exams
- 2020 ● CSD 2230: Neurogenic Language and Cognitive Communication Disorders
 - Guest Lecture 1: TBI: Pathophysiology and Medical Considerations
 - Guest Lecture 2: Case studies in adult neurological communication disorders
- SPHS 742: Aphasia (University of North Carolina at Chapel Hill; Dr. Katarina Haley)
 - Guest Lecture: Applying treatment research in clinical practice settings
- CSD M.S. Summative Assessment Project
 - Review and feedback for M.S. - SLP students comprehensive exams
- 2019 ● CSD 2230: Neurogenic Language and Cognitive Communication Disorders
 - Guest Lecture 1: TBI: Pathophysiology and Medical Considerations
 - Guest Lecture 2: Case studies in adult neurological communication disorders

- CSD M.S. Summative Assessment Project
 - Review and feedback for SLP students comprehensive exams