



ICPPA

International Conference on
Primary Progressive Aphasia



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International Conference on Primary Progressive Aphasia

**ADVANCING INTERDISCIPLINARY
PPA RESEARCH AND CARE**

**LONDON, UNITED KINGDOM
16TH – 17TH JULY 2026**



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International Conference on
Primary Progressive Aphasia



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Day 1 – Thursday 16th July 2026

8:30	AM	-	9:10	AM	Conference registration
9:10	AM	-	9:30	AM	Opening remarks
9:30	AM	-	10:40	AM	Keynote speaker: Professor Maria Luisa Gorno-Tempini Primary Progressive Aphasia: From Bench to Bedside
10:40	AM	-	11:00	AM	Morning refreshments
Platform 1 – Advances in Neurobiology and Brain Imaging– Moderator: Zachary Miller (1) Ultra-low field MRI to evaluate associations between regional atrophy and language in primary progressive aphasia <i>Presenter: Professor Argye Hillis</i> (2) Contributions of the right anterior temporal lobe and insula to self-transcendent experiences <i>Presenter: Dr Virginia Sturm</i> (3) Integrating evidence review and electric field modelling to advance tDCS for PPA <i>Presenter: Professor Jessica Richardson</i> (4) Machine learning-derived structural neuroimaging signatures discriminate neuropathologies in agrammatic primary progressive aphasia <i>Presenter: Dr Jane Stocks</i>					
11:00	AM	-	12:20	PM	
12:20	PM	-	1:00	PM	Lunch
1:00	PM	-	2:00	PM	Poster session 1
Platform 2 – Treatment Approaches – Moderator: Regina Jokel (1) Transcranial magnetic stimulation in primary progressive aphasia: Changes in connected speech and predictors of response <i>Presenter: Dr Jordi Matías-Guiu</i> (2) The Communication Bridge research program: Advancing implementation readiness of person-centred interventions for primary progressive aphasia <i>Presenter: Dr Angela Roberts</i> (3) Clinical and neural predictors of a tailored speech and language therapy intervention for Italian individuals with primary progressive aphasia <i>Presenter: Dr Petronilla Battista</i> (4) Advancing assessment and intervention for primary progressive aphasia in bilingual and Spanish-speaking populations <i>Presenter: Dr Stephanie Grasso</i>					
2:00	PM	-	3:20	PM	
3:20	PM	-	3:40	PM	Afternoon tea
3:40	PM	-	4:40	PM	Poster session 2
<i>Drinks reception</i> Sponsored by:					
4:40	PM	-	5:40	PM	
 The Association for Frontotemporal Degeneration FIND HELP • SHARE HOPE					

Day 2 – Friday 17th July 2026

8:15	AM	-	8:30	AM	Opening of Day 2
8:30	AM	-	9:10	AM	Invited speaker: Dr Cathy Taylor-Rubin Research and clinical practice in PPA: Reflections from the last two decades, and aspirations for the future
9:10	AM	-	10:10	AM	Platform 3 – Innovative Models of Care – Moderator: Jackie Kindell (1) A clinical multidisciplinary virtual program for families: The strategy training and education program for persons living with primary progressive aphasia <i>Presenter: Dr Sharon Antonucci</i> (2) “The hands-on learning... taught me the most”: Preparing speech-language pathology students for supporting people with primary progressive aphasia <i>Presenter: Ms Eavan Sinden</i> (3) PPA/PPAOS Together! A community partnership for supporting people Living with PPA/PPAOS <i>Presenter: Ms Megan Caldwell</i>
10:10	AM	-	10:30	AM	Morning refreshments
10:30	AM	-	11:30	AM	Platform 4 – Pathology and Imaging – Moderator: Jordi Matías-Guiu (1) Spatially resolved cell-type-specific molecular drivers of anterior temporal pole neuropathology in frontotemporal lobar degeneration with TDP-43 Type C <i>Presenter: Mr Brian Druciak</i> (2) Left-sided ventral occipito-temporal hypoactivity in PPA with history of reading disability <i>Presenter: Dr Zachary Miller</i> (3) Neuropathological fingerprints of language in primary progressive aphasia – Revisited <i>Presenter: Ms Michelle Los</i>
11:30	AM	-	12:30	PM	Poster session 3
12:30	PM	-	1:10	PM	Lunch
1:10	PM	-	1:50	PM	Invited speaker: Dr Chris Hardy From hearing to listening: Understanding PPA through auditory cognition and lived experience
1:50	PM	-	2:20	PM	Triptych: Living with primary progressive aphasia – Short film & panel discussion - Rosemary Townsend, Chris Hardy, William Lindley
2:20	PM	-	3:30	PM	Poster session 4
3:30	PM	-	4:10	PM	Afternoon tea
4:10	PM	-	5:10	PM	Platform 5 – Natural History and Clinical Characterisation – Moderator: Rene Utianski (1) The impact of sociodemographic factors on clinical profiles of patients with primary progressive aphasia <i>Presenter: Parsa Afrooz</i> (2) Detecting presymptomatic speech and language changes in genetic frontotemporal dementia with natural language processing <i>Presenter: Dr Arabella Bouzigues</i> (3) Divergent cognitive and behavioural timelines across primary progressive aphasia syndromes <i>Presenter: Professor Muireann Irish</i>
5:10	PM	-	5:40	PM	Awards ceremony and close



The Association for
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Day 1 – Thursday 16th July 2026

Keynote Speaker

9:30	AM	-	10:40	AM
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Professor Maria Luisa Gorno-Tempini

Primary Progressive Aphasia: From Bench to Bedside

Dr. Maria Luisa Gorno-Tempini is a behavioral neurologist with a PhD in cognitive neuroscience, and directs the Language Neurobiology laboratory of the University of California San Francisco Memory and Aging Center (UCSF MAC). For the past 20 years she has applied her expertise in cognitive neurology and neuroimaging to the study of language impairments caused by various neurological conditions, with a specific emphasis on Primary Progressive Aphasia (PPA), Alzheimer's disease and frontotemporal dementia-spectrum disorders (FTD). Her multidisciplinary expertise and collaborative efforts have allowed her to conduct translational research that combines cognitive neuroscience, advanced multimodal neuroimaging and state of the art therapeutic interventions. Her NIH-funded research has resulted in innovations in diagnosis, care and treatment of PPA and in discoveries about the neural basis of specific cognitive, linguistic and behavioral functions.

Day 1 Platform Session 1 – Advances in Neurobiology and Brain Imaging

11:00 AM - 12:20 PM

1.1 Ultra-low field MRI to evaluate associations between regional atrophy and language in primary progressive aphasia

Professor Argye E. Hillis, Dr. Shun Liu, Mr. Voss Neal, Ms. Isidora Diaz-Carr, Dr. Melissa D Stockbridge, Dr. Andreia V. Faria

Johns Hopkins Medicine, Baltimore, MD, United States

Introduction: Previous studies have shown that the degree of atrophy in particular regions is associated with language performance in individuals with PPA. However, there are limitations in assessing degree of atrophy in comparison with age-matched controls, due to differences in brain shape and volume. Ideally, focal atrophy should be measured by change in volume within an individual over time. This can be accomplished by registering a later MRI scan to a baseline MRI scan (Faria et al., 2014). However, repeat MRI scans are very expensive and often not well tolerated. **Aims:** To provide preliminary evidence that images obtained with an ultra-low field (0.064 Tesla) portable MRI (pMRI) scanner, which are obtained with minimal cost and high tolerability, can be useful for studying associations between atrophy and language performance in PPA. **Method:** We obtained a 0.064 Tesla pMRI scanner for less than \$500,000 (Figure 1). Because the scanner can be run by a research assistant and analyzed by the PI, there is no cost for any of the scans. Noise and discomfort during scanning are minimal, so participants are generally willing to have multiple scans. We first evaluated reliability of repeated scans in 20 healthy controls age 29 to 71, showing that Intraclass correlation coefficients (ICC) for volumes of major brain structures obtained from T1 weighted scans were nearly identical to the ICCs obtained with 3 Tesla MRI (0.996 to 0.997 for grey matter and 0.985-0.995 for white matter; reported separately; Stockbridge et al., submitted). Then we obtained baseline MRI scans for 17 individuals with PPA (5 logopenic, 6 nonfluent, and 2 semantic; 4 unclassifiable) and administered tests of oral and written naming of nouns and verbs matched in frequency and length at the same time (see Lambert et al, 2025 for details regarding stimuli). We examined baseline correlations between language scores and regions of focal atrophy estimated by the difference between volume in the left region of interest (ROI) and volume in the homologous right ROI. ROIs included: Inferior frontal gyrus pars opercularis (IFGoper), pars orbitals (IFGorb), pars triangularis (IFGtri), precentral gyrus (PrCG), post-central gyrus (PoCG), superior, middle, and inferior temporal gyri, temporal pole, and thalamus, based on previous studies of areas associated with oral or written naming of nouns or verbs (e.g. Breining et al., 2022). Given the small number of participants, non-parametric Spearman correlations were evaluated. **Results:** Oral naming of nouns correlated with asymmetry of IFGoper ($p=0.013$) and thalamus (0.015). Written naming of nouns correlated with asymmetry of PoCG ($p=0.009$) and thalamus (0.033). Oral naming of verbs showed no significant correlations with estimated regional atrophy. Written naming of verbs correlated with asymmetry of IFGtri ($p=0.033$) and PoCG ($p=0.024$). **Discussion:** Results provide preliminary evidence for the usefulness of pMRI for evaluating deficit-atrophy correlations in PPA. We are currently in the process of obtaining longitudinal imaging every 6 months in PPA, to examine correlations between change in language and change in more accurate measures of atrophy based on change in the individual's volume in each ROI over time.

1.2 Contributions of the right anterior temporal lobe and insula to self-transcendent experiences

Dr. Anna Gilioli¹, Mr. Ashlin R.K. Roy¹, Dr. Amie Wallman-Jones², Ms. Amanda Gerenza¹, Dr. Hulya Ulugut¹, Ms. Joyce Do¹, Dr. Katherine P Rankin¹, Dr. Maria Luisa Mandelli¹, Dr. David C. Perry¹, Dr. Howard J Rosen¹, Dr. William W Seeley¹, Dr. Bruce L. Miller¹, Dr. Zachary A. Miller¹, Dr. Maria Luisa Gorno-Tempini¹, Dr. Virginia E. Sturm¹

¹University of California, San Francisco, San Francisco, CA, United States. ²Wallman-Jones, Amie, San Francisco, CA, United States

Introduction: Alterations in behavior and emotions are common in semantic dementia, a neurodegenerative syndrome that targets the anterior temporal lobes. Although many studies have investigated how word and object knowledge degrade in relation to left anterior temporal lobe degeneration, much remains unknown about the emotional changes that arise when there is prominent atrophy in the right anterior temporal lobe. The right anterior temporal lobe integrates information from the internal and external worlds into socioemotional concepts and is critical for comprehending and responding to affective information. People with semantic dementia often display gains in positive emotional behavior despite a diminished understanding of social and non-social information. **Aims:** We examined whether these changes may manifest as self-transcendent experiences—joyful feelings of connectedness with living creatures, objects, or even the world or universe. **Method:** We conducted a retrospective chart review of 228 people with semantic dementia: 80 people with the semantic behavioral variant of frontotemporal dementia (sbvFTD), a form of semantic dementia that targets the right anterior temporal lobe, and 148 with the semantic variant of primary progressive aphasia (svPPA), a semantic dementia syndrome that predominantly affects the left anterior temporal lobe. Individuals with self-transcendent

experiences were defined as those who exhibited gains in at least two of the following three domains at their initial research visit: (1) positive affect (i.e., awe, euphoria, or expansiveness), (2) mysticism (i.e., spirituality, unity, or magical thinking), and (3) religiosity (i.e., hyper-religious beliefs or hyper-religious practices). A total self-transcendent experience score was also computed and used in the structural neuroimaging analyses. **Results:** Chi-square tests revealed that a larger percentage of the sbvFTD (28%) than the svPPA (7%) group had self-transcendent experiences, $p < .001$. Elevated positive affect was a common feature of all the participants with self-transcendent experiences, but there was variation in whether individuals also had gains in mysticism, religiosity, or both. Whole-brain voxel-based morphometry analyses revealed that self-transcendent experiences were related to selective atrophy in right-sided structures, most notably the right insula and right anterior temporal lobe ($p_{FWE} < .05$). **Discussion:** In sbvFTD, focal degeneration in the right insula and right anterior temporal lobe can produce pleasant experiences that, as the social world loses its significance, lead to feelings of oneness with the natural, manmade, and supernatural worlds. The present study not only expands current conceptualizations of the clinical manifestations of sbvFTD but also extends the neuroanatomical frameworks of similar phenomena in other disorders, such as temporal lobe epilepsy.

1.3 Integrating evidence review and electric field modeling to advance tDCS for PPA

Professor Jessica D. Richardson¹, Doctoral Candidate Christie Carroll-Duhigg¹, Doctoral Student Julian David¹, Data Analyst Joel Upston¹, Doctoral Student Anum Amin¹, Associate Professor Maya Henry², Endowed Professor Davin Quinn¹, Associate Professor Rick Arenas¹

¹University of New Mexico, Albuquerque, NM, United States. ²University of Texas - Austin, Austin, TX, United States

Introduction: Primary progressive aphasia (PPA) is a neurodegenerative dementia syndrome that causes a gradual decline in speech and language abilities. Symptom profiles differ greatly across individuals because of variation in atrophy, underlying pathology, and compensatory mechanisms. Transcranial direct current stimulation shows potential for improving language performance for people with PPA. The effectiveness of stimulation depends on the distribution and magnitude of brain electric fields which vary with electrode placement, neuroanatomy, and tissue conductivity. Prior tDCS work in PPA rarely reports detailed stimulation parameters and seldom incorporates individualized modeling which limits the ability to optimize targeting for this population. **Aims:** The project had two aims. The first aim was to characterize current design and reporting practices in tDCS studies involving people with PPA through a systematic scoping review. The second aim was to model electric field distributions for commonly used electrode montages using individualized MRI-based head models from people with PPA and age-matched controls. The goal was to evaluate the extent to which montage choice and neuroanatomical variation influence effective targeting of regions of interest. **Methods:** A preregistered scoping review (Open Science Framework) identified 532 references through Embase, CINAHL, PubMed, and Google Scholar. Forty articles met inclusion criteria. Montage characteristics, stimulation parameters, and reporting practices were extracted. For the modeling component, individualized head models were generated using Freesurfer from T1 scans for six individuals per PPA variant and four matched controls. Finite element meshes were created using CHARM and refined in Gmsh (in SimNIBS), and neuroanatomical labels were mapped using the Brainnetome atlas. Three commonly used montages and one additional montage were simulated at one mA (for easy scaling to higher dosages) in SimNIBS. Electric field metrics (E-magnitudes, E-norms, and focality) were calculated in MATLAB. **Results:** The review identified thirty-two unique montage configurations in forty studies. Only four montages were used more than twice. Many studies applied the same montage across PPA variants, and few identified regions of interest or conducted individualized modeling. Simulations demonstrated substantial variability in electric field patterns across individuals with PPA and between people with PPA and controls. Electric field distribution and peak stimulation sites differed by montage and by PPA subtype. These data, including 100% inter-subject variability, indicates that standard montage designs do not reliably target intended regions for all individuals, nor do they provide comparable cortical dosage. **Discussion:** Findings highlight a critical need for individualized targeting approaches in tDCS research and clinical application for PPA. The inconsistency in reported stimulation parameters across published studies and the high variability observed in modeled electric fields suggest that current practices significantly limit reproducibility and treatment optimization. Incorporating personalized modeling into stimulation design has strong potential to improve targeting of language-relevant networks and to advance precision intervention approaches for people with PPA. More extensive modeling and analyses will be presented.

1.4 Machine learning derived structural neuroimaging signatures discriminate neuropathologies in agrammatic primary progressive aphasia

Dr. Jane Stocks, Dr. Elena Barbieri, Dr. Rachel Keszycki, Dr. Tamar Gefen, Dr. M-Marsel Mesulam

Northwestern University, Chicago, IL, United States

Background: Agrammatic/non-fluent primary progressive aphasia (agPPA) is a clinical dementia syndrome characterized by morpho-syntactic impairment and motor speech abnormalities. agPPA can arise from distinct underlying neuropathologies, most commonly tauopathy of four-repeat (4R-tau) or three-repeat (3R-tau; Pick's disease) subtypes, and Alzheimer's

disease (AD). Identifying in vivo markers that distinguish these neuropathologic substrates remains a major challenge. Machine-learning (ML) approaches applied to neuroimaging and language data offer a principled framework for disentangling shared versus pathology-specific features of agPPA. **Aims:** The primary aim of this study was to identify structural neuroimaging features that best distinguish the neuropathologic causes of agPPA using an interpretable ML framework. Secondary aims were to evaluate the discriminatory utility of language measures alone and to examine relationships between regional brain atrophy and neuropsychological and narrative language performance across neuropathologic groups. **Methods:** Longitudinal structural MRI data were derived from a cohort including 58 control scans and autopsy-confirmed agPPA patients: 18 with 4R-tau (30 scans), 10 with 3R-tau (16 scans), and 15 with AD (24 scans). Neuroimaging features included cortical volumes from the Schaefer 400 atlas, subcortical volumes from the Tian atlas, and brainstem structures derived from FreeSurfer. Regularized classification models were trained to discriminate each pathology from cognitively normal controls and from one another using repeated cross-validation, permutation testing, and bootstrap-based feature stability analyses. In parallel, we trained analogous models using standardized neuropsychological language measures and quantitative features extracted from narrative speech. Finally, we examined relationships between regional atrophy and language performance across groups. **Results:** The models demonstrated strong classification performance for all pathology versus control comparisons (all AUCs > 0.90) and for direct pathology-to-pathology discrimination (all AUCs > 0.86). For 3R-tau, the most discriminative regions included the frontal operculum and temporopolar regions, whereas for 4R-tau, discriminative features were concentrated in putamen and thalamus. AD-related agPPA was distinguished by aspects of posterior superior temporal gyrus. In contrast, models based on language features alone showed limited ability to reliably distinguish among neuropathologic groups. Atrophy-language analyses revealed modest associations between measures of agrammatism and regional atrophy, though notably with prefrontal, frontal opercular, and striatal atrophy in 3R-Tau and with frontal opercular atrophy in 4R-Tau. **Conclusions:** Multivariate neuroimaging features effectively distinguish the underlying pathologies of agPPA. These findings suggest that while agPPA subtypes share a clinical phenotype, they are driven by distinct anatomical patterns and that automated MRI analysis offers a viable tool for predicting pathology in clinical settings.



P1.1 Development of digital speech and language therapy resources for patients with language led syndromes

Ms Megan Ryan, Ms Lisa Sheridan, Professor Sean Kennelly

Institute of Memory and Cognition, Tallaght University Hospital, Dublin, Ireland

Introduction: This project involved the development of digital resources for patients with communication deficits on the post diagnostic pathway within the Regional Specialist Memory Clinic at Tallaght University Hospital, Dublin. The goal was to identify a sustainable cost effective first line method of intervention that aims to improve access to information and communication strategies for patients and families/caregivers following a diagnosis of a Language Led syndrome such as Primary Progressive Aphasia (PPA) or language predominant cognitive impairment or dementia. **Method:** The DMAIC (Define–Measure–Analyze–Improve–Control) quality improvement framework was used to examine the discrepancy in wait times between new and return appointments for Speech and Language Therapy (SLT) patients on the assessment and post diagnostic pathway within a specialist memory clinic in the Irish healthcare system. A waitlist audit was conducted to measure wait times for SLT intervention per person diagnosed with a Language Led Syndrome. Qualitative data was collected using a questionnaire administered to patients and their primary communication partner about their perceptions of their diagnosis, and experience of their own communication impairment and how it impacts their lives. The data collected from the Measure and Analyse phase of the framework was used to inform and design video resources. **Results:** Identified a sustainable cost effective first line method of intervention that aims to improve access to information and communication strategies for patients and families/caregivers. Established a funding source that enabled development of high quality educational video resources. Anticipated reduced demand for return appointments and improved wait times. Preliminary findings indicate positive patient/family/caregiver feedback particularly for communication strategies. **Discussion:** The newly developed videos are currently in the piloting stage (January 2026) where they will be made available to patients on the post diagnostic pathway within the specialist memory clinic. **Outcomes** will be evaluated using patient reported measures e.g. pre intervention questionnaire. Appointment efficiency will be monitored by reviewing waiting times between new and return appointments within the SLT service. The intended aim is that these video resources will embedded within standard care pathway of the memory service and act as a first line intervention for patients who have received a diagnosis of a Language Led Syndrome. Successful outcomes may also enable the SLT team or other clinical disciplines to use this method of intervention across other topics within the field of memory and cognition. Final results and discussion of these will be available at the time of the conference in July 2026.

P1.2 AI-powered analysis of affective dimensions in speech and its relevance for FTD diagnosis

Dr Agnès Denève, Mme Rosalie Dauchez, Dr Maxime Bertoux

Inserm Lille Neuroscience & Cognition, France, Lille, France

Introduction: Affective disturbances are a hallmark of behavioral variant frontotemporal dementia (bvFTD) and primary psychiatric disorders (PPD), being also frequent in Alzheimer's disease (AD). Despite their clinical relevance, affective changes remain difficult to assess reliably: traditional tasks capture recognition of emotions rather than their expression. We investigated whether artificial intelligence (AI) applied to natural speech could provide dimensional affective markers useful for differential diagnosis and transdiagnostic characterization. **Methods:** We included 112 participants with bvFTD (n=31), AD (n=28), PPD (n=15), and 39 matched healthy controls. Speech was elicited through a narrative task and analyzed using a fine-tuned Speech Emotion Recognition (SER) model predicting valence, arousal, and dominance. Entropy was also computed to quantify variability of affective expression. Analyses of covariance (ANCOVAs) explored group differences. Logistic regression assessed diagnostic utility. Voxel-based morphometry with ComBat harmonization identified neuroanatomical correlates, controlling for multiple comparisons with TFCE. **Results:** Group-specific affective profiles emerged. Compared with controls, bvFTD showed lower arousal ($\eta^2=.139$, 95% CI $[-0.143, -0.034]$) and higher dominance ($\eta^2=.191$, $[0.020, 1.50]$), as well as higher valence ($\eta^2=.207$, $[0.025, 0.104]$) and dominance ($\eta^2=.293$, $[0.032, 0.095]$) than PPD, consistent with behavioral disinhibition and inappropriate reactivity. AD displayed reduced arousal ($\eta^2=.109$, $[-0.175, -0.007]$) but increased dominance ($\eta^2=.147$, $[0.009, 0.076]$) relative to PPD and controls (arousal $\eta^2=.208$, $[-0.160, -0.054]$; dominance $\eta^2=.095$, $[0.006, 0.046]$), suggesting blunted responsiveness combined with excessive assertiveness. PPD exhibited lower valence than all groups (bvFTD $\eta^2=.207$, AD $\eta^2=.200$, controls $\eta^2=.079$), coherent with a negative bias. Across patient groups, entropy was consistently elevated (bvFTD $\eta^2=.201$, AD $\eta^2=.115$, PPD $\eta^2=.155$), indicating less coherent and more unstable affective expression. Affective dimension estimates predicted bvFTD, yielding 80.4% accuracy

(AUC=0.732; sensitivity=96.3%; specificity=36.7%). Neuroimaging analyses revealed that valence, arousal, dominance, and entropy mapped onto partially overlapping but distinct fronto-insular and temporal networks. **Conclusion:** AI-derived analysis of natural speech identified disorder-specific and transdiagnostic alterations in affective prosody. Entropy emerged as a robust marker of affective dysregulation across conditions, resonating with dimensional and transdiagnostic frameworks. This short, ecological speech task combined with AI provides objective and scalable biomarkers with potential applications for bvFTD differential diagnosis, disease monitoring, and remote digital health.

P1.3 Utility of a machine learning–based Addenbrooke’s Cognitive Examination-III subtyping tool for primary progressive aphasia and Alzheimer’s disease

Dr David Foxe¹, Ms Lana Ilic¹, Ms Katie Yau¹, Ms Jody Huynh¹, Dr Ananthan Ambikairajah^{1,2,3}, Prof Rebekah M. Ahmed¹, Dr Manisha Narasimhan¹, Dr Yun Tae Hwang¹, Ms Nicole Mueller¹, Prof Glenda M. Halliday¹, Prof Muireann Irish¹, Prof Olivier Piguet¹

¹The University of Sydney, Sydney, NSW, Australia. ²University of Canberra, Canberra, ACT, Australia. ³Australian National University, Canberra, ACT, Australia

Introduction: The Addenbrooke’s Cognitive Examination-III (ACE-III) is a widely used cognitive screening tool for patients with suspected dementia. Our previous work demonstrated that item-level ACE-III profiles can differentiate the primary progressive aphasia (PPA) variants using a clinician-led multinomial regression tool. That tool’s development, however, was limited to single time-point data and excluded right temporal semantic dementia (right SD) and Alzheimer’s disease (AD), restricting its clinical applicability. **Aims:** We present a machine learning–based ACE-III subtyping model trained on longitudinal data that generates differential diagnoses from a single ACE-III performance. The model includes canonical PPA variants, right SD, and typical AD and is available as an interactive decision-support tool. **Methods:** Thirty-eight patients with logopenic variant PPA (lvPPA; 63 ACE-III assessments), 26 with nonfluent variant PPA (nfvPPA; 41), 44 with (left) semantic variant PPA (svPPA; 79), 18 with right SD (41), and 91 with AD (135), as well as 110 cognitively normal controls (110), were included (September 2011–December 2023; FRONTIER Research Group, University of Sydney). A random forest model was trained on dementia patient assessments (n = 359). Performance was evaluated using 10 repetitions of five-fold cross-validation with upsampling applied to training folds only. Model testing was conducted in an independent FRONTIER cohort of 79 patients with *in vivo* amyloid PET and/or autopsy confirmation. **Results:** Cross-validation demonstrated robust performance, with a macro-averaged F1 score of 68.3%. Per-class F1 scores were highest for AD (84.4%) and svPPA (76.1%), followed by nfvPPA (72.5%), lvPPA (56.9%), and right SD (51.6%). In the independent cohort, correct classifications were observed in 16/17 (94%) svPPA, 18/23 (78%) nfvPPA, 2/3 (67%) right SD, 12/18 (67%) AD, and 11/18 (61%) lvPPA canonical cases. Misclassifications typically occurred within shared clinical or neuropathological spectra (e.g., lvPPA classified as AD; right SD as svPPA) and were frequently associated with low-confidence predictions, cautioning clinicians against over-interpreting outputs in these situations. **Discussion:** This machine learning–based ACE-III PPA and AD subtyping tool improves upon our previous tool, offering improved accuracy and broader diagnostic coverage. It represents a new frontier in using data-driven approaches to differentiate rare dementias.

P1.4 APP4PPA: A web-based speech and language rehabilitation app for people with primary progressive aphasia

Ms. Simona Aresta¹, Dr. Paola Santacesaria¹, Mr. Alberto Mosconi², Ms. Roberta Tomasoni¹, Ms. Allegra Benzi¹, Mr. Francesco Da Pont², Dr. Gaia C. Santi¹, Ms. Cinzia Palmirotta¹, Ms. Serena Tagliente¹, Prof. Christian Salvatore^{2,3}, Dr. Petronilla Battista¹

¹Istituti Clinici Scientifici Maugeri IRCCS, Laboratory of Neuropsychology, Bari, Italy. ²DeepTrace Technologies, Milan, Italy. ³Ailice Labs, Department of Science, Technology and Society, University School for Advanced Studies IUSS Pavia, Pavia, Italy

Introduction: In Italy, it is estimated that around 1,000 people receive a diagnosis of Primary Progressive Aphasia (PPA) every year, and they are rarely offered treatment options [1]. With the booming advances in technology, telerehabilitation opens up possibilities for improving access to care. **Aims:** Here we introduce a web-based application for speech-language assessment and therapy that targets articulation, lexical retrieval and semantic deficits, grammatical, and speech motor difficulties. **Method:** APP4PPA was developed by experts in speech-language therapy, brain health, neuropsychology, and software engineers. The platform enables online remote interaction between patients and clinicians, delivering instant visits, examination, consultation, advice, treatment, and monitoring from anywhere. Its current version (v.1.0) was designed to be operated by both clinicians and patients with dedicated web interfaces and supports multiple concurrent sessions. APP4PPA provides a shared interactive canvas for assessment and therapy administration with real-time feedback. It was built by leveraging open-access tools such as React, the NextJS web framework, and WebSockets. It is entirely web-based and OS-independent, thus requiring no downloads or installations. The app was built on the NextJS full-stack framework, handling both frontend and backend resources, and uses WebSockets for real-time clinician-patient interaction. Amazon Web Services provides the underlying infrastructure. APP4PPA was developed to meet GDPR and ISO 27001 standards for data storage and application security. Access to APP4PPA is requested through the website’s contact form (<https://app4ppa.icsmaugeri.it/login>). The app is currently available in Italian. This study was supported by

PNRR-MCNT2-2023-12378220. **Results:** Upon accessing APP4PPA, clinicians can create new users by entering their names or identification codes. Demo-clinical information can be entered in specific fields as well as speech-language tests. Clinicians can schedule an online appointment for speech-language evaluation or treatment. The assessment is split into 2 or 3 sessions, ranging from 45 to 60 minutes, which includes the Screening for Aphasia in Neurodegeneration (SAND), the Motor Speech Examination (MSE), the Northwestern Anagram test (NAT), the Northwestern assessment of verbs and sentence (NAVS), a naming task, and other Esame Neuropsicologico per l'Afasia (ENPA) subtests. The app provides a report automatically generated that includes scores for each test. Two types of tailored impairment-based training have been implemented: Lexical retrieval training (LRT) and Video-implemented Script Training (VISTA). The former was developed to address the lexico-semantic disorders in people with logopenic and semantic variants of PPA, while the latter targets articulation and morphosyntactic disorders typically affecting people with non-fluent/agrammatic variant of PPA. Patients can also perform their homework on the app, tracked by clinicians from initial assessment to post-treatment monitoring. **Discussion:** We developed a web-based application tailored for speech-language assessment, therapy, and monitoring of patients affected by PPA variants, facilitating the access of vulnerable populations to speech-and-language rehabilitation.

P1.5

Automated multidimensional analysis of written language in Italian non fluent and logopenic variants of primary progressive aphasia

Dr. Gaia C. Santi¹, Ms. Simona Aresta¹, Ms. Cinzia Palmirotta¹, Ms. Allegra Benzini¹, Ms. Elisabetta Fiume², Ms. Serena Tagliente¹, Dr. Paola Santacesaria¹, Ms. Roberta Tomasoni¹, Ms. Arianna Frijo³, Prof. Patrizia Soriano², Dr. Maria Salzone³, Dr. Salvatore Mazzeo³, Dr. Petronilla Battista¹

¹Istituti Clinici Scientifici Maugeri IRCCS, Laboratory of Neuropsychology, Bari, Italy. ²Dipartimento di Ricerca e Innovazione Umanistica, University of Bari Aldo Moro, Bari, Italy. ³Neurology Unit, IRCCS Policlinico San Donato, Vita-Salute San Raffaele University, San Donato Milanese, Italy

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative condition characterized by language impairment, affecting both oral and written communication. While speech deficits have been extensively investigated, writing abilities have received comparatively limited attention. The assessment of written production offers a valuable opportunity to identify patients, such as non-fluent PPA (nfvPPA) and logopenic PPA (lvPPA). Phonemic and phonetic speech sound disorders can be present in both variants and remain the most significant challenge to distinguish lvPPA from nfvPPA, even for experienced clinicians. The analysis of written production has the potential to overcome this limitation and to unveil grammatical, linguistic, and graphomotor impairments that may be less evident in spoken language. **Aims:** This work aims to characterize the written profile of nfvPPA and lvPPA, and to identify written features capable of distinguishing patients from healthy controls (HC) and differentiating the two variants. **Methods:** Forty-eight Italian individuals with PPA (25 nfvPPA; 23 lvPPA) and 48 matched Italian HC completed the writing assessment from the SAND battery. Twenty-three features were coded and automatically extracted using a Python-based pipeline and CLAN. Features, tailored to the Italian language, spanned multiple domains, including graphomotor, orthographic, lexico-semantic, morpho-syntactic, and informativeness. Group differences were assessed using the Mann-Whitney U test or t-test, depending on data distribution evaluated. P-values were adjusted using the False Discovery Rate. Feature selection was performed via LASSO regression, and Firth's logistic regression models were used to identify the most informative features discriminating PPA vs. HC, nfvPPA vs. HC, lvPPA vs. HC, and nfvPPA vs. lvPPA. **Results:** Compared to HC, the PPA group showed reduced words and utterances, increased letter spacing, abandoned words, retracing, unintelligible words, and agrammatic utterances. Total and agrammatic utterances were selected from LASSO regression and statistically significant predict PPA (OR=0.70, $p<0.01$; OR=13.41, $p<0.001$, respectively). The lvPPA group showed a reduced number of utterances, a greater number of retracing and agrammatic utterances compared to HC. LASSO regression selected agrammatic and total number of utterances, and morphological errors, but only the last two significantly contributed to the lvPPA prediction (OR=0.58, $p<0.01$; OR=7.01E15, $p=0.04$, respectively). The nfvPPA group showed a reduced number of words, utterances, and conjunctions, and a greater number of agrammatic and verbless utterances compared to HC. LASSO regression selected letter spacing, total and agrammatic utterances; only the latter statistically significantly contributed to the nfvPPA prediction (OR=8.86, $p=0.01$). Finally, nfvPPA, compared to lvPPA, showed greater word spacing and reduced conjunction production. LASSO regression selected tremor, size, word spacing, mean length of utterances, and conjunctions, but none of these significantly contributed to PPA variants differentiation. **Discussion:** We implemented an automated pipeline to analyze graphomotor and linguistic features and characterized the written profile of Italian patients with PPA. This approach represents the first applications of an automated, multidimensional analysis of writing in the PPA population and highlights the value of writing assessment in characterizing the language profiles of nfvPPA and lvPPA beyond speech assessment.

P1.6

Development of an interview-based inventory for acquired deficits in language and communication in primary progressive aphasia

Mr Antoine Renard, Dr Steve Majerus

Unité PsyNCog, Liège, Belgium

Introduction: Language disorders are frequent in the major neurodegenerative diseases and are a core feature of primary progressive aphasia (PPA). Language assessment is traditionally based on standardized tools, including language batteries and specific tasks such as picture naming, auditory comprehension, word repetition, and semantic matching. Although these assessments allow a detailed characterization of linguistic impairments, they do not fully capture the functional impact of language and communication difficulties as experienced by patients in their daily lives and perceived by their relatives. **Aims:** To address this limitation, we developed the ITALC (Inventory of Language and Communication Disorders), a functional assessment tool designed to quantify impairments in communication, oral language, written language, and speech, based on both patient self-report and informant-based evaluation. **Method:** The ITALC was normed in a cohort of 251 healthy control participants, allowing the establishment of cutoff scores. The instrument was then administered to 23 patients with primary progressive aphasia, including the logopenic ($n = 9$), nonfluent/agrammatic ($n = 8$), and semantic ($n = 6$) variants. The groups did not differ in age or in overall language severity. **Results:** Results showed significantly greater impairment in patients with PPA compared with healthy controls. No significant differences were observed across PPA variants or across the assessed domains (communication, oral language, written language). In addition, a strong correlation was found between self-ratings and informant ratings, suggesting that patients are able to provide a reliable estimation of their own language and communication difficulties. **Discussion:** These findings support the relevance of the ITALC as a functional tool for assessing language and communication impairments in primary progressive aphasia. They highlight the pervasive impact of the disease on everyday communication and emphasize the importance of interventions that involve both patients and their caregivers to improve communication and quality of life. Future studies will be needed to confirm these findings in larger patient samples drawn from multicenter cohorts.

P1.7

Verbal tense at crossroads of mental time travel and morphological processing: Lessons from Alzheimer's disease and post-stroke aphasia for PPA

PhD Marion Fossard, PhD Evodie Schaffner, PhD Natacha Cordonier, PhD Mélanie Sandoz

Institut des Sciences Logopédiques, UNINE, Neuchâtel, Switzerland

Introduction: Verbal tense impairments are common in both neurodegenerative and vascular aphasias, yet their underlying cognitive determinants remain unclear, particularly as performance patterns may vary substantially depending on the type of task administered. Several functional accounts have been proposed, ranging from low-level morphophonological processes to higher-level mechanisms involving memory and mental time travel (MTT; see Figure 1). These distinct sources of impairment are thought to be differentially reflected across task types: constrained verb inflection tasks primarily engage lower-level morphological processes, whereas narrative tasks require the construction of temporally displaced events through memory-based processes, including MTT [1]. **Aims:** Within this task-based framework, the present study aims to explore performance patterns in verbal tense production in Alzheimer's disease (AD) and post-stroke aphasia (PSA). By identifying task-specific profiles linked to morphological vs MTT demands, the study seeks to provide clinically relevant benchmarks for the assessment and differential characterization of primary progressive aphasia (PPA). **Methods:** Verbal tense production was assessed in two clinical groups of 21 French-speaking participants: one with biologically probable AD and one with PSA (10 fluent, 11 non-fluent), each examined relative to an age- and education-matched healthy control group. Two task types were administered. In the first task (T1: verb inflection production), participants completed sentences by producing an inflected verb form in the past, present, or future tense, guided by temporal adverbials. In the discourse-based task (T2: storytelling-in-sequence), participants produced narratives within a specified temporal frame (past, present, or future), based on picture sequences depicting everyday activities. In contrast to constrained inflection (T1), the discourse-based task (T2) allowed the examination of tense production under conditions requiring the construction of temporally displaced narratives. In both tasks, generalized linear mixed models were used to analyze the effects of group (clinical groups vs control) and time condition (past, present, and future) on the number of inflected verb forms produced in each target tense. **Results: T1 – Verb inflection production.** PSA participants showed reduced accuracy relative to controls (45% vs. 95%), with comparable performance in fluent and non-fluent subgroups. Past time conditions were most affected (28%) compared with present (56%) and future (52%). In contrast, AD participants performed similarly to controls (91% vs. 96%), indicating preserved performance in the constrained task. **T2 – Storytelling-in-sequence.** In PSA participants, tense distribution across narratives closely resembled that of controls, with appropriate adherence to the temporal framework of the stories. By contrast, AD participants showed a marked tendency to overuse present tense forms in non-present conditions, particularly in future narratives. **Discussion:** Together, these findings reveal task-specific profiles of verbal tense production: PSA is primarily associated with difficulties in constrained verb inflection (T1) [2], whereas AD

shows selective vulnerability in discourse contexts requiring the projection of events into a temporal perspective other than the moment of utterance (past or future; T2) [3]. This task-related dissociation provides a clinically informative framework for assessment and differential PPA characterization, with non-fluent PPA expected to show greater impairment in constrained inflection, and logopenic or semantic variants greater vulnerability in discourse-based production.

P1.8 Effects of Personalised Observation, Execution and Mental Imagery therapy in a patient with logopenic primary progressive aphasia in telepractice

Dr Sandrine Basaglia-Pappas¹, Mrs Hina Solignac², Pr Laurent Lefebvre¹, Pr Édith Durand³

¹Cognitive psychology and neuropsychology department, University of Mons, Mons, Belgium. ²University of Montpellier, Montpellier, France. ³University of Trois-Rivières, Trois-Rivières, Canada

Introduction: Verb anomia is a frequent symptom observed in the clinical profile of people with primary progressive aphasia (PPA), particularly in the logopenic variant (lvPPA). Despite the central role of verbs in sentence construction, therapeutic approaches specifically targeting verb anomia remain limited. POEM therapy (Personalized Observation, Execution, and Mental Imagery) was developed based on evidence supporting the involvement of sensorimotor processes in language processing, especially for action verbs. This therapy relies on three sensorimotor strategies –action observation, motor execution and mental imagery – and has demonstrated beneficial effects on verb naming in people with chronic vascular aphasia. It is therefore relevant to investigate the efficacy of POEM in individuals presenting with neurodegenerative verb anomia, particularly people with lvPPA. Telepractice offers a promising mode of service delivery for older adults with neurodegenerative diseases such as PPA. Previous studies evaluating remote speech-language therapy in this population have reported encouraging outcomes. **Aims:** The present study aimed to examine the potential benefits of the POEM therapy in a participant diagnosed with lvPPA, presenting with verb anomia. **Methods:** A 74-year-old woman with APPV was recruited. She underwent pre- and post-therapy assessments (i.e., language, cognitive, executive and motor tasks) and POEM therapy delivered via telepractice. **Results:** Results following POEM administration did not reveal a significant increase in verb production in naming tasks, spontaneous speech, or functional communication contexts. However, an improvement in gesture use was observed: gestures became more frequent and better executed during the naming of untrained verbs, suggesting a generalization of the gesture execution strategy. A delayed effect of the therapy was also noted, raising questions about the recommended duration of POEM administration for maximum effectiveness in patients with neurodegenerative diseases affecting language. **Discussion:** Overall, several positive outcomes were identified: i) maintenance of performance, which constitutes a primary goal in speech therapy for patients with neurodegenerative diseases; ii) increased gesture production during naming tasks, reflecting generalization of the motor execution strategy; iii) improvements in narrative discourse tasks, with longer, more substantial, and more complex utterances in terms of semantics and syntax; iv) no change in the participant's self-perceived communication abilities, but a positive change in her partner's perception, suggesting greater ease in everyday communication; and (v) a reduction in anxiety levels. Future research is warranted. Investigating POEM therapy in a larger cohort of individuals with PPA, using adapted administration protocols over longer intervention periods and/or combined with home-based training, would be particularly valuable. Additionally, comparing in-person and remotely delivered POEM interventions would further clarify the effectiveness of telepractice for this therapeutic approach.

P1.9 Evolution of language profiles in primary progressive aphasia: a bicentric longitudinal study

PhD Student Aurore Mahut Dubos¹, PhD Student Sarah Maso^{2,3}, PhD Perrine Siguier^{4,3}, Student Emma Bagnaud², PhD Student Agnès Denève^{1,5}, Speech therapist Coline Carpentier⁵, Speech therapist Nathalie Forestier⁵, Speech therapist Stéphanie Delrutte², Speech therapist Anaëlle Manteaux², Inserm Research Associate Professor Maxime Bertoux^{1,5}, Associate Professor Mélanie Jucla⁶, Professor Jérémie Pariente^{2,3}, Associate professor Lola Danet^{2,3}, Professor Thibaud Lebouvier^{1,5}, Professor Thi Mai Tran¹

¹Lille Neuroscience & Cognition, U1172, Inserm, University of Lille, University Hospital of Lille, Lille, France. ²Neuropsychology Unit, Resource and Research Memory Centre, University Hospital of Toulouse, Paul Sabatier University of Toulouse, Toulouse, France. ³Toulouse NeuroImaging Center, UMR1214, Inserm, University of Toulouse, Toulouse, France. ⁴Neuropsychology Unit, Resource and Research Memory Center, University Hospital of Toulouse, Paul Sabatier University of Toulouse, Toulouse, France. ⁵Resource and Research Memory Centre, University Hospital of Lille, University of Lille, Lille, France. ⁶NeuroPsychoLinguistics Lab, UR 4156, University of Toulouse Jean Jaurès, Toulouse, France

Introduction: Primary progressive aphasias (PPA) are heterogeneous syndromes characterized by a progressive loss of language functions due to focal degenerative changes. To date, 3 main variants have been identified (semantic, non-fluent/agrammatic, and logopenic - svPPA, nfvPPA and lvPPA). Primary progressive apraxia of speech (PPAoS) is considered a fourth variant by some authors. Although PPA variants are well defined using specific diagnostic criteria, their clinical progression remains poorly studied, even though it could inform prognosis and have an impact on therapy. In fact, only a few longitudinal studies involving small samples are currently available. **Aim:** To characterize the evolution of language profiles of patients with PPA through a bicentric longitudinal analysis using a common language assessment tool specifically

designed to detect neurodegenerative language disorders. **Methods:** We retrospectively included 83 patients, including 51 patients with PPA, who underwent an initial and a follow-up language assessment (GRÉMOTs battery) at the Memory Centres of Lille and Toulouse. Our population also includes 20 patients with amnesic syndrome due to Alzheimer's disease (AD) and 12 patients with behavioural variant due to frontotemporal dementia (bvFTD). AD and bvFTD patients were included to compare the evolution of PPA patients with syndromes that do not primarily involve language disorders. We performed comparisons between groups at initial and follow-up assessment, as well as paired tests by group for the scores obtained between the two assessments. **Results:** The results show specific initial and follow-up profiles, as well as different progression of impairment for each type of PPA. Interestingly, the profile of lvPPA at follow-up tends to become closer to that of svPPA in lexical processing tasks (production and comprehension). In comparison, AD and bvFTD show only a slight worsening in scores on tasks involving lexical processing. These observations are consistent with the language disorders that may be present in these syndromes, without being at the forefront. Furthermore, lexical comprehension appears to be particularly vulnerable to neurodegenerative processes. **Discussion:** These findings show the persistent predominance of language disorders in the main variants of PPA compared to AD and bvFTD. A specific progression for each type of PPA appears to be present from the early stages of the disease. These results pave the way for tailored speech therapy to implement an appropriate care plan and anticipate the future needs of patients with PPA, which may differ from other neurodegenerative syndromes.

P1.10 A survey of communication partner training practices to inform Better Conversations with Primary Progressive Aphasia in Italy

Ms Roberta Tomasoni^{1,2}, Ms Ludovica Onofri¹, Prof Suzanne Beeke¹, Dr Anna Volkmer¹

¹Division of Psychology and Language Sciences, University College London, London, United Kingdom. ²Istituti Clinici Scientifici Maugeri IRCCS, Laboratory of Neuropsychology, Bari, Italy

Introduction: Communication Partner Training (CPT) aims to improve everyday interactions by shaping conversational behaviours in dyads involving people with communication disorders and their communication partners. Evidence indicates that CPT facilitates communication in individuals with Primary Progressive Aphasia (PPA), for example, through the Better Conversation with PPA (BCPPA) programme (Volkmer et al., 2023); however, its clinical implementation remains under-researched internationally. Barriers extend beyond clinicians' skills to organisational and cultural service factors. In Italy, no published data describe CPT delivery. Understanding CPT knowledge, practice and attitudes among Italian Speech and Language Therapists (SLTs), together with system-level characteristics, is fundamental to developing culturally responsive CPT. **Aims:** To characterise current CPT knowledge, practice, and attitudes among Italian SLTs, alongside relevant system-level characteristics, to inform the cultural adaptation of BCPPA to Italian (BCPPA-Italia). **Methods:** The Chang et al. (2018) survey was adapted for the Italian context through a team process that involved item refinement, dual forward translation, and reconciliation to ensure conceptual equivalence, avoid loss of system-level differences, and reduce respondent burden. Back translation and pilot testing followed, with the FRAME and CHERRIES frameworks guiding rigour. The adapted survey will be disseminated via Qualtrics to an anticipated sample of 80–100 SLTs working in Italy with adults with acquired communication disorders, recruited through professional networks, associations, university departments, and social media groups. Data will be analysed using descriptive statistics and content analysis mapped to the Theoretical Domains Framework (TDF) (Cane, O'Connor & Michie, 2012). **Results:** The study is expected to provide a structured overview of CPT knowledge, practices and attitudes among Italian SLTs, with responses mapped to TDF domains. Quantitative data will characterise patterns of CPT exposure and delivery across different service contexts, while qualitative responses will offer insight into perceived barriers and facilitators. These analyses will support the interpretation of system-level influences on CPT provision in Italy. **Discussion:** Results will offer insight into Italian-specific contextual factors (e.g. service delivery characteristics such as reimbursement-linked provision, SLTs' knowledge) likely to shape CPT implementation in Italy. These findings will inform subsequent phases, combining this data with qualitative input from SLTs and with focus groups from multidisciplinary stakeholders to further define implementation barriers and service-level constraints relevant to the development of a clinically relevant version of BCPPA-Italia.

P1.11 The German adaptation of the DTLA-DE: Development and case study in primary progressive aphasia

MSc. Yvonne Fahrni^{1,2}, Dr. Robert Reinecke³, Prof. Dr. Joël Macoir⁴, MA Rahel Luescher⁵, MA Marie Bosch⁶, Prof. Dr. Priska Hagmann-von Arx², Dipl. Monica Koenig-Bruhin⁷, Prof. Dr. Marion Fossard¹

¹Institut des Sciences logopédiques, Université de Neuchâtel, Neuchâtel, Neuchâtel, Switzerland. ²University of Teacher Education in Special Needs, Zurich, Zurich, Switzerland. ³FORS, Swiss Center of Expertise in the social Sciences, Lausanne, Vaud, Switzerland. ⁴Faculté de Médecine – École des Sciences de la Réadaptation Université Laval, Québec, Québec, Canada. ⁵Spitalzentrum Biel, Biel, Bern, Switzerland. ⁶Kantonsspital Olten, Olten, Solothurn, Switzerland. ⁷Neurocenter, Luzerner Kantonsspital, Luzern, Luzern, Switzerland

Introduction: Language impairments are among the early symptoms of various neurodegenerative diseases. In primary progressive aphasia (PPA), progressive language decline is the defining clinical characteristic [1]. Early identification and

accurate assessment of language impairments are essential for providing timely support for those affected [2]. The Detection Test for Language Impairments in Adults and the Aged (DTLA) is a short, valid screening tool comprising nine tasks to assess key language domains. It was originally developed, validated, and normed in French for individuals over 50 years of age [3]. Specific screening tools for language impairment in neurodegenerative diseases, including in people with PPA, are currently lacking in the German-speaking region. To address this gap, we adapted the DTLA into German (DTLA-DE). **Aims:** This poster presents (1) the newly adapted DTLA-DE as a screening tool for language impairment in neurodegenerative disease, and (2) an initial evaluation of its applicability and clinical feasibility in primary progressive aphasia (PPA) based on a clinical case study. **Method:** The structure of the subtests, task constructs and psycholinguistic item selection criteria – including word frequency, length, and morphological as well as syntactic complexity – were adapted from the French DTLA. A total of 74 healthy, German-speaking volunteers aged 50–80 years participated in the pilot study. They completed a preliminary version of the DTLA-DE containing four times the number of stimuli required for the final version. All participants completed a health questionnaire and the Montreal Cognitive Assessment (MoCA) to ensure eligibility. Based on the results of the pilot study, the final version of the DTLA-DE was developed through a systematic reduction of test items. In addition, the instrument was administered to a 78-year-old patient with the logopenic variant of primary progressive aphasia (lvPPA) as a clinical case study to examine its clinical applicability. **Results:** Item-level means and standard deviation were calculated. A structured expert consensus procedure was then applied, resulting in the selection of items with high success rates among healthy participants (>79% correct responses). The number of items retained per subtest is identical to that of the French DTLA, namely: Naming (6), word repetition (3), non-word repetition (3), sentence repetition (3), lexical fluency (1), reading aloud words (3), reading aloud non-words (3), writing to dictation words (3), writing to dictation non-words (3), spontaneous sentence writing (1), semantic matching of written words (4; pairs of 3), sentence comprehension (3; auditory sentence-picture matching), verbal short-term / working memory span (1; Alphaspan, three-word list). The patient with lvPPA showed typical impairments in naming, repetition—particularly sentence repetition—and lexical fluency, supporting the clinical sensitivity of the DTLA-DE (56/100 points). **Discussion:** The final DTLA-DE comprises a reduced set of high-discrimination items per subtest, selected based on performance variability in healthy participants. Its practical applicability and clinical feasibility were demonstrated in a clinical case of lvPPA, supporting the potential use in neurodegenerative language disorder. Next steps include psychometric validation and the collection of normative data.

P1.12 Improving diagnosis and care in primary progressive aphasia and apraxia of speech through a multidisciplinary clinic

Dr Rene L Utianski, Dr Jonathan Graff-Radford, Dr Hugo Botha

Mayo Clinic, Rochester, MN, United States

Introduction: Primary progressive aphasia (PPA) and primary progressive apraxia of speech (PPAOS) are neurodegenerative disorders characterized by progressive deterioration of language and speech motor planning. These conditions are relatively uncommon, clinically heterogeneous, and frequently misdiagnosed or diagnosed late, delaying access to appropriate counseling, therapeutic services, and research participation. The complexity of clinical presentations and evolving care needs necessitates a coordinated, multidisciplinary approach. The Primary Progressive Aphasia and Apraxia of Speech (PPA-AOS) Clinic at Mayo Clinic was established in 2024 to provide comprehensive diagnostic evaluation and individualized care for patients with suspected PPA and PPAOS. **Aims:** To describe the clinical structure, triage pathways, and individualized care processes implemented within a multidisciplinary PPA-AOS specialty clinic designed to optimize diagnostic accuracy and patient-centered management. **Method:** At present, the PPA-AOS clinic (<https://www.mayoclinic.org/departments-centers/primary-progressive-aphasia-apraxia-of-speech-clinic-minnesota/overview/ovc-20591205>) convenes the first Tuesday of each month. Patients referred with suspected PPA or PPAOS undergo a structured triage process to determine individualized evaluation needs prior to the clinic visit; this is increasingly utilizing a remotely captured speech-language evaluation to supplement the electronic medical record. In-person evaluations include neurologic examination by subspecialty-trained behavioral neurologists, comprehensive speech-language pathology assessment, and neuroimaging (e.g., FDG-PET, AD biomarkers). Additional targeted services are incorporated based on individual clinical profiles and case histories, including genetic testing and counseling, swallowing evaluations, occupational and physical therapy consultations, neuropalliative care referral, and sub-specialized social work support. Day-of-care touchpoints between the lead MD and SLP are used to integrate clinical, imaging, and speech-language findings to establish diagnosis and formulate personalized management plans. The neurologist does a follow-up visit on Friday following completion of other testing. Care recommendations emphasize communication strategies, patient and caregiver education, advance care planning, and referral to appropriate therapy and community resources. **Results:** The clinic's structured triage model facilitates efficient coordination of multidisciplinary services tailored to patient-specific needs. Individualized evaluation pathways enable early identification of considerations for the broader evolving neurologic syndromes. Social work involvement supports care coordination, education, and access to local community and national patient advocacy organization resources. Patients and caregivers are provided with

diagnosis-specific counseling and individualized management plans, enhancing understanding of disease trajectory and available supports. Patient education materials are continuously being developed to reflect the frequently encountered questions and challenges. The clinic structure has allowed flexible incorporation of emerging diagnostic tools (e.g., remotely captured speech-language exam) and facilitated streamlined referral to research programs. **Discussion:** A multidisciplinary clinic model emphasizing individualized care delivery addresses the diagnostic and management complexities inherent in PPA and PPAOS. By integrating neurology, speech-language pathology, genetic counseling, swallowing evaluation, palliative care, and social work, the PPA-AOS Clinic provides coordinated, patient-centered care across the disease continuum. This model promotes timely diagnosis, anticipatory guidance, and comprehensive support for patients and caregivers. Such structured specialty clinics may serve as a template for optimizing care delivery for speech-language led neurodegenerative disorders.

P1.13 Translating and adapting the PACT for Francophone contexts: A collaborative and international effort across Switzerland, France, Belgium, and Canada

- Alessa Hausmann¹, Ph.D. Sandrine Basaglia-Pappas², Ph.D. Marion Castera^{3,4}, Ph.D. Guillaume Duboisindien^{5,6}, Ph.D. Monica Lavoie^{7,8}, - Antoine Renard^{9,10}

¹Department of Psychology, University of Geneva, Geneva, Switzerland. ²Cognitive psychology and neuropsychology department, University of Mons, Mons, Belgium. ³EMC Laboratory (EA 3082), Université Lyon 2, University of Lyon, Bron, France. ⁴CHU de Saint-Étienne, Hôpital Nord, Saint-Priest-en-Jarez, France. ⁵Unité de Formation et de Recherche en Sciences de la santé, Département des sciences de la réadaptation, Université Marie et Louis Pasteur, INSERM, UMR 1322 LINC, Besançon, France. ⁶Département de Psychologie, Neuropsychologie de l'adulte, Université de Liège, Liège, Belgium. ⁷Clinique Interdisciplinaire de Mémoire, Département des Sciences Neurologiques du CHU de Québec, Québec, Canada. ⁸Chaire de recherche sur les aphasies primaires progressives - Fondation de la famille Lemaire, Université Laval, Québec, Canada. ⁹Psychologie et sciences de l'Éducation, Unité PsyNcog, Université de Liège, Liège, Belgium. ¹⁰Private practice, Amiens, France

Introduction: Primary progressive aphasia (PPA) is a neurodegenerative syndrome characterized by progressive language and/or speech impairments that significantly affect communication for both patients and their communication partners¹. Speech and language therapists (SLTs) play a central role in assessment and intervention. However, the assessment process itself is often experienced by patients as demanding, exhausting, and emotionally confronting. The *Progressive Aphasia Communication Toolkit* (PACT) was developed within the R.A.I.S.E. framework² to support strengths-based, person-centered assessment and intervention in PPA. While its clinical utility has been demonstrated in English, linguistic and cultural adaptation is essential to ensure relevance and accessibility for French-speaking clinicians and patients across diverse francophone contexts. **Aims:** This study aims to: (1) Translate and culturally adapt the PACT into French while ensuring conceptual equivalence across diverse francophone contexts; (2) Evaluate the clinical acceptability of the French version among SLTs, focusing on clarity, usability, and relevance; (3) Explore clinicians' perceptions of the content validity of the adapted tool for routine clinical practice with individuals with PPA. **Methods:** An international consortium of researchers and clinicians from Switzerland, France, Belgium, and Canada conducted the translation and adaptation following International Test Commission (ITC) guidelines³, with minor methodological adaptations. The process included AI-assisted forward translation as an initial support, independent expert review, pairwise reconciliation across countries, anonymized synthesis, independent consensus review by a third expert pair and reconciliation of both anonymized versions, team validation meetings, selective back-translation and targeted cultural as well as content adaptations. The resulting French version will be pilot-tested with French-speaking SLTs and with people with PPA (PwPPA) and their communication partners. Feedback will be collected through structured questionnaires. Quantitative ratings of clarity, cultural appropriateness, and clinical utility will be summarized descriptively, while qualitative feedback will be analyzed using thematic analysis. **Results:** The translation process did not highlight major linguistic or clinical variations within the Francophone world, especially regarding professional terminology. Nevertheless, even after consensus has been reached among SLTs, the need for a shared glossary emerged, particularly to support other professionals who may use the tool but are not familiar with specific linguistic terminology. Clinicians working with PwPPA will be invited to evaluate the French PACT in terms of clarity, feasibility, cultural relevance, and clinical usefulness. Qualitative feedback will be used to examine the perceived value of the toolkit for psychoeducation, communication partner training, and individualized intervention planning. Pilot implementation with PwPPA and their communication partners will explore acceptability and perceived impact. Feedback from this pilot phase will inform potential minor refinements of the tool. **Discussion:** The French adaptation of the PACT demonstrates the feasibility and added value of early and structured cross-national collaboration for developing linguistically and culturally inclusive and clinically relevant tools. The study underscores the importance of involving multiple Francophone regions throughout the adaptation process and highlights how collaborative methodologies strengthen both methodological rigor and clinical utility, ultimately supporting more person-centered and meaningful assessment practices in PPA.

P1.14 Piloting ECoLoGiC Treatment, a conversational language intervention with people with primary progressive aphasia

Dr. Marion C. Leaman¹, Ms. Ishita Kapoor¹, Dr. Anna Volkmer²

¹University of Kansas Medical Center, Kansas City, KS, United States. ²University College London, London, United Kingdom

Introduction: ECoLoGiC Treatment (ECoLoGiC-Tx; Expanding Communication and Language Opportunities Generated in Conversation) is an intervention that uses a spontaneous conversational framework to improve the production of language during conversation in people with aphasia. Positive results, including generalization of improved language to unstructured conversation have been reported for 17 people with all severity levels of stroke-related aphasia (e.g., Leaman & Edmonds, 2024; a forthcoming accepted paper and conference presentation report additional results). People with Primary Progressive Aphasia (PwPPA), and their communication partners have shown promising improvements in quality of life and conversation behaviours in recent pilot studies of communication partner training (Volkmer et al., 2023). However, to our knowledge there are no 1:1 interventions that directly target *language* in a conversation-based treatment or measure *linguistic outcomes in conversation* (Wauters et al., 2024), despite the critical contribution of language to successful everyday interactions. **Aims:** To determine: a) feasibility and acceptability of ECoLoGiC-Tx for PwPPA and their families; b) outcomes of ECoLoGiC-Tx on: established measures for conversational discourse (listed below); aphasia test batteries, including functional communication; and patient/family-reported outcome measures (P/FROMs). **Methods:** Following Leaman & Edmonds' (2024) protocol, using a single-subject experimental design, two participants with mild or moderate PPA will participate in this preliminary work, as follows: Treatment: twice weekly for 60-min for 10 weeks. Assessment: at pre-treatment, post-treatment and at six weeks maintenance. Conversation samples will be collected 3x during each testing phase, with the SLP following the Social Conversation Collection Protocol (Leaman & Edmonds, 2024). Established conversation measures will evaluate communicative success, percent correct information units, complete utterances, grammaticality, and global coherence, using effect size metrics. Test batteries: the Western Aphasia Battery – Revised; Communication Activities of Daily Living – 3; and for assessment of baseline cognition: the Cognitive-Linguistic Quick Test – Plus. P/FROMs: Communicate Effectiveness Index; Communication Confidence Rating Scale; ASHA Functional Assessment of Communication Scales; Aphasia Communication Outcome Measure. Control task for single-subject design: Test of Nonverbal Intelligence – 4. Acceptability/Feasibility: Semi-structured qualitative interviews and Likert scales will be completed with each participant and a family member post-treatment. Interview data will be evaluated using Thematic Analysis; Likert scales will be evaluated with descriptive statistics. **Results:** This study is currently underway, and data collection will be completed and analyzed before the conference in July 2026. Results will include interrater reliability for transcription, for the linguistic measures of conversation and test battery outcomes, and or fidelity for speech-language pathologist adherence to the protocol. **Discussion:** We anticipate a stabilization of language skills and improved P/FROMs, which we expect based on previous ECoLoGiC studies, and on two case studies presented by the first author at the annual American Speech-Language Hearing Association Convention in 2015. Further, we anticipate the intervention will be acceptable and feasible, consistent with outcomes of the stroke-related studies. This person-centered, conversation-focused intervention addressing language skills adds to the repertoire of available interventions to meet the needs of PwPPA.

P1.15 The dynamics of auditory verbal short-term memory impairment in primary progressive aphasia and Alzheimer's disease

Dr Benjamin A Levett, Dr Jessica Jiang, Dr Lucy B Core, Ms Sophie A Froud, Dr Anna Volkmer, Professor Sebastian J Crutch, Dr Chris JD Hardy, Professor Jason D Warren

University College London, London, United Kingdom

Introduction: Auditory verbal short-term memory function underpins the ability to carry out tasks of auditory cognition which require integration of information over periods of time such as auditory scene analysis (the ability to parse the auditory environment into its constituent components) and is essential for daily social tasks such as engaging in conversation. Impaired auditory verbal short-term memory is a diagnostic hallmark of typical Alzheimer's disease (AD), logopenic variant primary progressive aphasia (lvPPA) and non-fluent/agrammatic variant primary progressive aphasia (nfvPPA). However, to what extent this relationship is modulated by temporal dynamics is poorly understood. Here we addressed this in two connected experiments, varying the presentation rate and intertrial interval. **Aims:** We aimed to uncover how measures of auditory verbal short-term memory function differentiate patients with AD, lvPPA and nfvPPA and cognitively normal individuals, and how modifying dynamic temporal factors could better capture these differences. **Method:** In 17 patients with typical AD, 15 patients with lvPPA and nine patients with nfvPPA versus 23 cognitively normal older controls, we assessed how temporal manipulations of standard auditory verbal short-term memory tasks (forward digit span and phrase repetition) affected performance. We separately varied the tempo of spoken digit string delivery (presentation rate) and the gap between successive phrase repetition trials (intertrial interval). Participants also underwent pure tone audiometry and a comprehensive general neuropsychological assessment. **Results:** Cognitively normal controls performed consistently under different temporal conditions. However, lvPPA and AD groups showed poorer performance

when repeating more slowly presented digit strings, and this effect was particularly marked in the lvPPA group. The lvPPA group also performed worse at phrasal repetition in the condition with a shorter intertrial interval. Analysis of errors demonstrated different error profiles between groups. **Discussion:** Our findings open a novel window on short-term memory in dementia syndromes, and suggest a dynamic physiological lesion of the phonological buffer that is most marked in lvPPA and varies mechanistically between syndromes. Further work is warranted to better characterise this lesion and assess how it impacts communication in patients' daily lives, with a view to developing bespoke communication interventions.

P1.16 White matter damage in semantic dementia: Relationships with cortical atrophy and clinical features

Dr. Chiara Galligani^{1,2}, Ms. Dana Leichter², Dr. Yann Cobigo², Mr. Nick Wellman², Mr. Siddarth Ramkrishnan², Dr. Zachary A. Miller², Dr. Howard J. Rosen², Dr. Giovanna Zamboni¹, Dr. Maria Luisa Gorno-Tempini², Dr. Maria Luisa Mandelli²

¹Department of Biomedical, Metabolic, and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy. ²Edward and Pearl Fein Memory and Aging Center, Department of Neurology, University of California, San Francisco, San Francisco, California, United States

Introduction: Semantic dementia (SD) results from focal neurodegeneration of the anterior temporal lobes (ATLs) and manifests in two clinical variants: the left-predominant semantic variant primary progressive aphasia (svPPA) and the right-predominant semantic behavioral variant frontotemporal dementia (sbvFTD). Although both syndromes share selective ATL vulnerability, the mechanisms underlying their atrophy patterns and clinical presentation remain poorly understood. Recent evidence suggests that white matter (WM) disconnection plays a central role in shaping disease phenotype and progression. **Aims:** This study aimed to characterize WM degeneration in SD and examine its relationships with gray matter (GM) atrophy distribution and clinical-cognitive features. **Methods:** We included 46 individuals with SD (28 svPPA, 18 sbvFTD) and 60 healthy controls who underwent clinical and neuropsychological assessments, as well as structural and diffusion MRI. WM alterations were quantified using fixel-based analysis with whole-brain and tract-masked approaches targeting association and commissural pathways, including the anterior commissure (AC) and tapetum. GM atrophy distribution was assessed using W-score maps and two indices: a Laterality Index capturing interhemispheric asymmetry, and an Anterior-Posterior Index capturing intrahemispheric atrophy spread. Associations between WM damage, GM atrophy indices, and clinical measures were examined using beta regressions and partial correlation analyses. **Results:** Both SD variants showed widespread WM degeneration, with sbvFTD exhibiting more extensive and bilateral involvement. Commissural pathways, particularly the AC, were prominently affected. Individuals with sbvFTD exhibited a more bilateral distribution of ATL atrophy than those with svPPA. Greater AC damage was associated with more bilateral ATL atrophy, whereas damage to left association tracts was related to greater intrahemispheric anterior-posterior distribution of atrophy. WM damage in commissural tracts was associated with greater global cognitive and behavioral impairment. Left-lateralized WM damage correlated with global cognition, functional status, and verbal semantic impairment, while right-lateralized WM damage correlated with behavioral symptoms and visual-emotional semantic deficits. **Discussion:** In this study we showed that WM degeneration plays a key role in shaping both the spatial distribution of cortical atrophy and the clinical phenotype of SD. Differential involvement of association and commissural pathways contributes to the distinct patterns observed in svPPA and sbvFTD, highlighting WM disconnection as a central mechanism underlying disease heterogeneity.

P1.17 Exploring communication experiences of multilingual individuals with primary progressive aphasia and their support partners.

Miss Kiran Bansal, Miss Abigail Lawrence, Dr Emma Harding, Dr Anna Volkmer

Division of Psychology and Language Sciences, University College London, London, United Kingdom

Introduction: The personal experiences of multilingual individuals who live with a language led rare dementia are underrepresented in current research. A 2023 scoping review (Grasso et al.) identified 16 studies with bilingual people with PPA. All were quantitative studies focused on assessment and treatment and did not include qualitative accounts of the participants' experiences. To address the lack of personal perspectives Volkmer et al. (2025) explored personal experiences of barriers and facilitators in accessing support for people diagnosed with a rare dementia from the perspective of linguistically and ethnically-diverse individuals and their care partners. Whilst language was reported as a key barrier in participants' experience of diagnosis, the authors identified a gap in the research for a qualitative study which focuses on multilingual individuals with primary progressive aphasia and their experiences of communication difficulties. **Aims:** This study aims to explore personal experiences of multilingual people with primary progressive aphasia and their family members or support partners in regard to specific strategies they use to manage their communication difficulties and their experiences of accessing support for these. **Methods:** The study has recruited 10 participants, formed of 5 people with primary progressive aphasia and their care partners; these individuals are being recruited through purposive sampling via Rare Dementia Support and the UCL Communication Clinic. In person semi-structured dyadic interviews have been conducted by two speech and language therapy students. To support participation, communication supports are adapted

to each dyad based on their unique communication profile e.g. providing a written form of the questions on an iPad. Video-recorded interviews are transcribed and will be analysed using reflective thematic analysis (Braun & Clarke, 2006). **Results:** Themes identified from participant's views and experiences of navigating primary progressive aphasia as a multilingual person will be presented. **Discussion:** This study extends the current research on multilingualism in PPA to provide an account of the lived experiences of being multilingual with this condition. This research will inform speech and language therapists working with people with PPA to consider how to support them in a linguistically inclusive way. Understanding experiences of people who live with rare dementia can provide a more equitable, and client-centred approach to diagnosis, therapy and further research.

P1.18 Differential cognitive profiles in primary progressive aphasia and its variants

Dr. Lucia Fernandez-Romero, Dr. Silvia Oliver-Mas, Dr. Cristina Delgado-Alonso, Dr. Yadhira Barroso, Dr. María Valles, Dr. Maria Jose Gil, Dr. Pablo Abizanda, Dr. Jose Manuel Alcala, Dr. Maria Diez-Cirarda, Dr. Jordi Matias-Guiu

Hospital Clínico San Carlos, Madrid, Spain

Introduction: Primary progressive aphasia (PPA) is a neurodegenerative disorder with three main variants: non-fluent, semantic, and logopenic. Differentiating these variants is challenging due to overlapping language features and clinical variability. Although PPA is defined by language impairment, non-linguistic cognitive deficits also occur and differ across variants, highlighting the need for comprehensive cognitive profiling. **Aim:** This study aimed to define the cognitive profiles of the PPA its variants. **Methods:** We conducted a comparative, observational, cross-sectional study including 187 patients with primary progressive aphasia (68 nvPPA, 26 svPPA, 93 lvPPA) and 187 healthy controls matched 1:1 by sex, age, and education. All participants underwent an extensive neuropsychological assessment using the NeuroNorma battery to evaluate attention, working memory, executive functions, episodic memory, and visuospatial abilities, including Digit Span, Trail Making Test A and B, Rey–Osterrieth Complex Figure (copy and 3-minute recall), the Visual Object and Space Perception Battery, and the Tower of London. **Results:** All PPA variants performed significantly worse than healthy controls across almost all cognitive domains. Logopenic PPA showed poorer performance on visuoconstruction and memory tasks compared with the other variants. Semantic PPA exhibited greater memory impairment than the non-fluent variant and showed their poorest performance on tasks with higher language demands, while performing similarly to controls on visuospatial tasks with minimal language involvement. **Discussion:** This study highlights the impairment of non-linguistic cognitive domains in PPA and its variants, identifying distinct cognitive profiles across variants that may aid in the patient diagnosis, classification, and monitoring of disease progression.

P1.19 Word deaf variant primary progressive aphasia: An unusual presentation of unclassified fluent aphasia with right hemisphere language dominance.

Dr. Tanav A Popli^{1,2,3}, Ms. Karen J Kluin¹

¹University of Michigan, Dept. of Neurology, Ann Arbor, MI, United States. ²Veteran's Affairs Healthcare System, Ann Arbor, MI, United States. ³Michigan Alzheimer's Disease Research Center, Ann Arbor, MI, United States

Introduction: Consensus diagnostic criteria currently recognize three clinical variants of primary progressive aphasia (PPA): the nonfluent-agrammatic variant, the semantic variant and the logopenic variant. These are defined by characteristic patterns of language impairment and focal atrophy or hypometabolism in discrete regions of the perisylvian language network, but some patients are not classifiable and challenge current tripartite conceptualization of neurodegenerative PPA syndromes. **Aims:** Describe primary progressive language deficits in a left-handed patient with right hemisphere language dominance to highlight the importance of individualized assessment and management. **Methods:** Neurologic and speech-language evaluations, structural brain imaging with 1.5T MRI, metabolic imaging with 18FDG-PET, and CSF testing for Alzheimer disease biomarkers were performed. **Results:** A 73-year old, left-handed male with 16 years of education presented with a 3-year history of gradually progressive word-retrieval, word pronunciation, and comprehension deficits. He had mild-moderate bilateral hearing loss with good response when using hearing aids. Testing revealed aphasia with fluent output; pauses/hesitations for word-retrieval; omission of substantive words; phonemic & semantic paraphasic errors; paragrammatic and agrammatic errors; tendency to speak excessively; dysnomia with preserved object knowledge; markedly disordered repetition skills beyond the word level; significantly impaired understanding of spoken language beyond the word level with better reading comprehension skills at the sentence and simple short paragraph levels; and impaired narrative writing skills. BDAE Severity Rating was 2/5. He had no significant memory, visuo-perceptual or overall comportment problems and there was no report of difficulty recognizing environmental sounds. MRI Brain and FDG-PET Brain, acquired 1 year prior to presentation, demonstrated focal atrophy of hypometabolism of the right superior temporal gyrus (Fig 1). CSF amyloid-beta42 levels were slightly low (478.2 pg/mL, ref. >500 pg/mL), but total and phosphorylated tau levels were within normal limits, with a slightly reduced Amyloid-Tau Index of 0.9 (ref. >1.0). **Discussion:** This patient with a word deaf variant of fluent aphasia had deficits suggesting involvement of the dominant superior & middle temporal lobes (right hemisphere in this left-handed individual), affecting either Heschl's gyrus or fibers into primary auditory cortex as well as involvement of temporoparietal node region. Multimodal imaging was consistent with this. The severity of his

auditory comprehension deficits was not consistent with findings in logopenic variant PPA, though he exhibited core criteria such as impaired repetition and impaired word-retrieval. The imaging abnormalities throughout the right superior temporal lobe, particularly in posterior superior temporal auditory association cortex, were consistent with prior observations of word deaf variant of fluent aphasia in PPA [1]; the posterior superior temporal (auditory association) involvement was not bilateral as previously reported in cases of pure word deafness or generalized auditory agnosia [2]. CSF biomarker testing was not fully consistent with underlying Alzheimer's Disease, with mild reduction of amyloid-beta42 but normal levels of total and phosphorylated tau. Current criteria for clinical subtyping of PPA can help identify underlying pathologic correlates, but inadequately characterize linguistic functions beyond agrammatism, impaired semantic knowledge, and phonologic deficits – including communication strengths relevant to management, such as this patient's relatively spared oral reading and reading comprehension.

P1.20 Speech comprehension impairments in logopenic primary progressive aphasia and Wernicke's & conduction aphasia: A neuropsychological comparison

Ms. Tina DMello¹, Ms. Sophie Froud², Dr. Anna Volkmer¹, Dr. Chris J. D. Hardy², Dr. Holly Robson¹

¹Language and Cognition, University College London, London, United Kingdom. ²Dementia Research Centre, Queen Square Institute of Neurology, University College London, London, United Kingdom

Introduction: The left-temporoparietal junction supports successful speech comprehension through its role in auditory, phonological, semantic and sentence processing (Vigneau et al., 2006), as well as cognitive functions such as working memory and executive function. The dementia-led condition of Logopenic-variant Primary Progressive Aphasia (LvPPA) and stroke-related conditions of Wernicke's (WA) and Conduction (CA) aphasia involve atrophy or lesions to the left-temporoparietal junction, with impairments observed in these constituent functions that support speech comprehension. However, speech comprehension behaviours across these conditions are thought to be distinct, and are believed to be driven by different underlying processes. This hypothesis cannot be directly evaluated as comparison across conditions is not possible due to distinct testing approaches. Therefore, we use a unified approach to evaluate and compare the nature of speech comprehension in these groups. **Aims:** This study aims to: Describe and quantify speech comprehension abilities in dementia-led LvPPA and post-stroke WA and CA; Evaluate the auditory, linguistic, and cognitive functions that underpin speech comprehension; Compare the groups to establish whether the nature of speech comprehension is distinct or similar. **Methods:** We are using behavioural measures to characterise speech comprehension impairments at word, sentence and discourse levels. In addition, we use a unified, comprehensive and sensitive battery of neuropsychological tests to evaluate the auditory, linguistic and cognitive functions that underpin speech comprehension behaviours. Approximately 10 participants will be recruited per group. **Results:** Our case-series data suggests equivalent speech comprehension performance at word, sentence and discourse levels in LvPPA and WA participants. Similar performance is also observed in phonological and semantic control processes, aligning with previous findings in Johnson et al. (2020) and Henderson et al. (2025). However, LvPPA participants are disproportionately impaired relative to WA for cognitive processes such as auditory attention and episodic memory. We will present the results from inferential statistics, which will reveal if these patterns from the case-series are seen consistently across the groups, and evaluate associations between the constituent perceptual, linguistic and cognitive measures and speech comprehension behaviours. **Discussion:** Current data suggests that comprehension behaviours in LvPPA have similar perceptual and linguistic bases to stroke aphasia, but may differ in cognitive profiles. These results can contextualise and explain symptoms across these aphasia conditions and identify potential unmet need in these conditions. This may inform the basis for future investigations into sensitive clinical assessments and tailored management strategies, such as educational materials and environmental adaptations to support speech comprehension.

P1.21 Variant-specific noun and verb naming profiles in Spanish-speaking semantic and nonfluent primary progressive aphasia

Dr Florentina Morello-García¹, MSc Nicolas Corvalan², MD Juan Ignacio Bustos Zamora², MD Carolina Ardohain Cristalli², Ms Loana de Los Santos², Ms Vanina Banjsak², Dr Maria Eugenia Tabernero³, Dr Ricardo Allegri^{1,2}, Dr Lucia Crivelli^{1,2}, MD Nahuel Magrath-Guimet^{2,4}

¹Institute of Neurosciences (INEU), Fleni-CONICET, Buenos Aires, Argentina. ²Department of Cognitive Neurology, Fleni, Buenos Aires, Argentina. ³Cognitive Neurology Center, Buenos Aires British Hospital - CONICET, Buenos Aires, Argentina. ⁴Atlantic Fellow for Equity in Brain Health, Global Brain Health Institute (GBHI), University of California San Francisco (UCSF), San Francisco, California, United States

Introduction: Confrontation naming tasks are widely used in neuropsychological assessment and are central to the characterization of language impairment in primary progressive aphasia (PPA). While naming deficits are a core feature of the semantic variant (svPPA), they have also been reported in some cases of the nonfluent variant (nfvPPA). Importantly, noun and verb naming can be differentially impaired in PPA, reflecting partially distinct cognitive and neural mechanisms. Prior work suggests greater noun impairment in svPPA and greater verb impairment in nfvPPA. However, evidence remains mixed, often based on single-case reports or very small samples, and derives largely from English-speaking cohorts.

Moreover, assessment practices in Spanish-speaking settings often emphasize noun naming tasks, which may overlook verb-related difficulties. **Aims:** We aimed to examine whether noun and verb naming performance differed between nvfPPA and svPPA among Spanish-speaking patients. **Methods:** We assessed 28 patients (14 nvfPPA, 14 svPPA) from the Frontotemporal Dementia Clinic at Fleni (Buenos Aires, Argentina) using the noun and verb naming task from the UDS FTLD Module v3. Naming performance was analyzed using a linear mixed-effects model including word class (verbs vs nouns), PPA variant (nvfPPA vs svPPA), and their interaction as fixed effects, adjusting for age, sex and education, with a random intercept for participant. Estimated marginal means were obtained using emmeans. Model fit was compared with and without the interaction term using BIC, AIC, Bayes factor, and p-value. Analyses were conducted in R 4.3.2 (lme4, lmerTest, flexplot). **Results:** In nvfPPA, mean age was 67.7 ± 8.29 years, education 14.6 ± 4.11 years, and 64.3% were female; in svPPA, 69.9 ± 9.51 years, 15.4 ± 3.20 years, and 57.1% female. The mixed-effects model showed a significant word class $\times$ PPA variant interaction ($\beta = 3.43$, $SE = 1.13$, $t = 3.04$, $p = 0.005$; see Figure 1). Estimated marginal means showed that nvfPPA performed better in noun than verb naming (14.7 vs 13.0), whereas svPPA showed overall lower naming performance, with a reversed noun–verb profile (9.0 vs 10.6). Model fit metrics favored the interaction model. **Discussion:** Spanish-speaking patients diagnosed with nonfluent and semantic PPA showed dissociable noun/verb naming patterns, supporting variant-specific word-class profiles. nvfPPA patients showed overall higher naming scores than svPPA, but with lower verb than noun naming performance, whereas svPPA showed impaired naming across both word classes with relatively lower noun than verb naming scores. These findings underscore the value of including both word classes when characterizing language impairment within neuropsychological assessment. Importantly, given ceiling effects on the UDS naming task, even 1–2 errors may be clinically meaningful. Incorporating verb naming may provide additional clinical information beyond noun-only assessment approaches, particularly for capturing language difficulties in nvfPPA. Overall, this highlights the need to avoid direct extrapolation from other linguistic contexts and encourages larger studies across diverse populations.

P1.22 Multimodal intervention in primary progressive aphasia: Analysis of communicative functionality, quality of life, and communication partner perception

Ms Leyrick E Gonçalves de Souza Sales¹, Ms Nathiely T Gonçalves², Ms Danielly L Fernandes², Ms Amanda E Menezes Magalhães², Ms Caroline M De Araújo², Ms Thais H Machado²

¹UFMG, Santa Luzia, Minas Gerais, Brazil. ²UFMG, Belo Horizonte, Minas Gerais, Brazil

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative condition characterized by progressive language impairment, with significant impact on functional communication, quality of life, and social participation, as well as on communicative dynamics with communication partners. Speech-language pathology interventions have demonstrated positive effects on the optimization of communicative skills, quality of life, and the longitudinal maintenance of communicative confidence in individuals with PPA and their caregivers. Furthermore, the assessment and care of individuals with PPA and their caregivers should not be restricted exclusively to linguistic aspects; the inclusion of functional and psychosocial outcomes is essential. **Objective:** To investigate the feasibility of a multicomponent speech-language pathology intervention program for individuals with Primary Progressive Aphasia and to explore its effects on quality of life, communicative functionality, and communication partner perception. **Methods:** This is a quasi-experimental, descriptive, and exploratory study, approved by the Research Ethics Committee (COEP), involving two groups of individuals with PPA and their respective communication partners, totaling eight patients and eight caregivers. The program consisted of eight therapeutic sessions and two assessment sessions (pre- and post-intervention), integrating three main modalities: counselling, remediation, and compensation. Outcome measures included a Quality of Life in Dementia questionnaire, caregiver self-perception of the patient's communication, and communicative functionality assessed by the ASHA Functional Assessment of Communication Skills (ASHA-FACS). For intragroup statistical analysis, the nonparametric Wilcoxon signed-rank test was applied, adopting a significance level of 5%. **Results:** No statistically significant differences were observed between the pre- and post-intervention periods for quality of life measures perceived by patients ($p = 0.063$) and caregivers ($p = 0.47$), nor for caregiver self-perception of communication ($p = 0.64$). Communicative functionality assessed by the ASHA-FACS showed a statistically significant reduction in the post-intervention period ($p = 0.036$), indicating measurable functional communicative decline over time. **Discussion:** The findings suggest that, despite the expected progression of PPA, the multicomponent intervention program proved to be feasible and capable of promoting relative stability in quality of life and communication partner perception, outcomes considered clinically relevant in neurodegenerative conditions. However, a dissociation was observed between communicative functionality scores and subjective outcomes reported by patients and caregivers. This finding may be related to the assessment method, as well as to compensatory strategies and adjustments in social participation that allow for the maintenance of interactions and quality of life, even in the presence of measurable functional limitations. These data reinforce that functional and contextual outcomes assess distinct, yet complementary, dimensions of communication.

P1.23 A trajectory of spelling errors in semantic variant primary progressive aphasia

Ms. Nneka Watson, Mrs. Megan Quimby, Mrs. Daisy Hochberg, Mr. Bradford Dickerson

MGH, Boston, MA, United States

Introduction: Spelling difficulty is a well-documented symptom of the semantic variant of Primary Progressive Aphasia (svPPA). Notably, svPPA is the only PPA variant where impairment in written language is part of the formal diagnostic framework (M.L. Gorno-Tempini et al., 2011). These impairments are typically described as surface dysgraphia, characterized by phonologically plausible spelling of irregular words (Joseph-Hernandez et al., 2023). While this spelling pattern is described in previous work (Shim et al., 2012; Sepelyak et al., 2009), longitudinal characteristics of orthographic errors in svPPA have not been explored in depth. **Aims:** To categorize the longitudinal change in the types of spelling errors in svPPA using a novel orthographic error categorization system. **Methods:** We administered the Boston Diagnostic Aphasia Examination (BDAE) spelling subtest to 20 individuals with svPPA (Goodglass et al., 1983) across at least 3 timepoints. To categorize spelling patterns, we developed an error categorization system to add to previous work. Errors were classified into five categories: (1) **partial irregularity preservation errors (PI)**, defined as misspellings that retained some elements of the target word's atypical orthographic features (e.g., cough → caugh); (2) **regularization errors (R)**, defined as phonologically plausible spellings reflecting classic surface dysgraphia (e.g., cough → coff); (3) **whole word approximations (WW)**, defined as real-word substitutions that were phonologically or orthographically similar to the target but did not constitute plausible spellings of the target word (e.g., cough → coffee); (4) **other errors (O)**, including responses with partial or minimal correspondence to the irregular target word, or no response; (5) **regular word errors (RWe)**, or misspellings of words with regular, predictable spelling patterns. **Results:** Preliminary analyses revealed heterogeneity in error patterns across participants. Regularization errors were the dominant error type across the three timepoints for six of 20 participants, representing the most common longitudinal pattern. An additional three participants demonstrated dominant R errors at baseline and midpoint, followed by a shift to O error types at the final timepoint. Four participants shifted from R errors at baseline to predominantly WW errors at the midpoint, then to mixed error profiles at the final timepoint. Of the five patients who demonstrated PI errors at baseline, two demonstrated simultaneous R errors at baseline but maintained PI-only patterns across subsequent visits. Two participants shifted from baseline PI errors to R errors at later timepoints, while one transitioned to a mixed error profile at subsequent visits. Finally, one participant initially presented with a mixed error profile, shifted to predominantly PI errors at midpoint, and transitioned to R errors at the final visit. **Discussion:** In our cohort, some participants demonstrated predominant surface dysgraphia longitudinally while others showed a partial preservation of irregular orthographic patterns at various points during their trajectory. This suggests fluctuating access to lexical orthographic representations rather than a complete loss of knowledge of irregular spelling patterns. Characterizing these error patterns may help refine current models of spelling impairment and has potential implications for improved assessment and monitoring strategies. Future directions include examining relationships between error patterns and overall cognitive functioning measures such as CDR and PASS.

P1.24 Adapting Auditory-Perceptual Rating of Connected Speech in Aphasia (APROCSA) for primary progressive aphasia

Ms. Zoe Ezzes^{1,2}, Dr. Marianne Casilio³, Ms. Kiiya Shibata⁴, Dr. Michael de Riesthal⁵, Dr. R Ryan Darby⁵, Dr. Stephen M Wilson⁶

¹SDSU, San Diego, CA, United States. ²UCSD, San Diego, CA, United States. ³Portland State University, Portland, OR, United States. ⁴Vanderbilt University, Nashville, TN, United States. ⁵Vanderbilt University Medical Center, Nashville, TN, United States. ⁶University of Queensland, Brisbane, Queensland, Australia

Introduction: Connected speech samples constitute an easier to obtain, data-rich, and more ecologically valid approach to assessing structural linguistic deficits in aphasia. While linguistic features are essential for the accurate diagnosis of PPA and classification of its variants, the only current behavioral tools for systematically evaluating language samples elicited in this population require time-consuming manual transcription and quantitative analysis. Auditory-Perceptual Rating of Connected Speech in Aphasia (APROCSA; Casilio et al., 2019) is a comprehensive, validated system for evaluating language samples by listening to brief excerpts twice and rating 27 features (e.g., anomia, semantic paraphasias) on a five-point scale. APROCSA has demonstrated robust psychometric properties for use in post-stroke aphasia, including good-to-excellent interrater reliability and strong criterion validity (Casilio et al., 2019). APROCSA additionally produces discrete explanatory dimensions that are associated with distinct but overlapping neural correlates in individuals with acute post-stroke aphasia (Casilio et al., 2025). An APROCSA training module is outlined in Casilio et al. (2026) and openly available on AphasiaBank, and includes freely available connected speech samples with consensus ratings (Ezzes et al., 2022). APROCSA's dimensionality, ease of use, open access availability, and demonstrated ability to map features to behaviorally and neurally distinct profiles in post-stroke aphasia makes it an apt target for exploration for use in PPA. **Aims:** We conducted a content validity study with expert clinicians aiming to systematically identify necessary adaptations to APROCSA for novel use in PPA. **Methods:** Three expert clinicians (M.C., K.S., Z.E.) with significant experience with both post-

stroke aphasia and PPA worked in consultation with three aphasia and dementia researchers (S.M.W., M.d.R., R.R.D.). We followed an empirically-grounded, exemplar-based adaptation process involving systematic evaluation of existing APROCSA features against PPA connected speech samples, following the APROCSA rating protocol and using iterative consensus-based refinement and expansion of the feature set. Language samples were sourced from DementiaBank and constituted several individuals with diverse PPA presentations. **Results:** All 27 prior features were deemed appropriate and relevant for use in PPA. Through exemplar-based expert clinical observations, we identified and defined ten additional auditory-perceptual features that have particular relevance to the linguistic, behavioral, and motoric presentations commonly seen in PPA and FTD syndromes (i.e., circumlocution, dysexecutive paraphasias; formulaic utterances; rapid, blurred, or imprecise articulation; dysphonia; reduced prosody; exaggerated prosody; decreased initiation for speech; press of speech; binary reversals). **Discussion:** APROCSA shows promise for characterizing structural linguistic deficits in PPA, particularly with the addition of nine new features with specific clinical and phenotypic relevance to PPA and FTD syndromes. Work is presently underway to validate these features, including consensus ratings for larger samples representative of the full severity spectrum of each new feature and the assessment of feature reliability. Future work will require obtaining new training data for use in a PPA version of APROCSA, and/or finalizing consensus ratings for the existing samples in open data sources like DementiaBank.

Day 1 Platform Session 2 – Treatment Approaches

2:00 PM - 3:20 PM

2.1	Transcranial magnetic stimulation in primary progressive aphasia: Changes in connected speech and predictors of response
	Dr Jordi A Matias-Guiu ¹ , Prof Paz Suárez-Coalla ² , Dr Cristina Delgado-Alonso ¹ , Miss Silvia Oliver-Mas ¹ , Dr Yadhira Barroso-Rosales ¹ , Dr María José Gil-Moreno ¹ , Dr María Díez-Cirarda ¹ , Dr Lucía Fernández-Romero ¹
	¹ Hospital Clinico San Carlos, Madrid, Madrid, Spain. ² Universidad de Oviedo, Oviedo, Asturias, Spain
	Introduction. Primary progressive aphasia (PPA) is a neurodegenerative syndrome characterized by progressive speech and/or language impairment. Non-invasive neuromodulation techniques such as transcranial magnetic stimulation (TMS) have shown potential for improving language-related outcomes, although their long-term effects in PPA remain unclear. Aims. This presentation reports secondary analyses of a double-blind, randomized, parallel clinical trial comparing active TMS combined with language therapy (Lexical Retrieval Cascade Treatment) versus sham TMS with language therapy over six months. The present analyses focus on changes in connected speech and on predictors of clinical response. Methods. Participants received intermittent theta-burst stimulation over the left dorsolateral prefrontal cortex for six months, followed by language therapy based on Lexical Retrieval Cascade Treatment. Sixty-three patients with PPA (24 nonfluent/agrammatic, 12 semantic, and 27 logopenic variants) were enrolled. The primary outcome was FDG-PET imaging, and secondary outcomes included standardized language, functional, and neuropsychiatric measures. Connected speech samples were elicited using wordless picture books at 3 and 6 months and were analyzed by raters blinded to diagnosis, treatment allocation, and assessment time point. Predictors of clinical change were examined using multiple regression models, and unsupervised k-means clustering was applied to identify response profiles. Results. Adjusted mean differences between groups showed statistically significant improvements in the active TMS group compared with the sham group in total number of different items, total number of items (tokens), Giraud index, mean length of utterances, and mean pause duration, favoring active stimulation. Regression analyses indicated a changes in confrontation naming were associated with changes in connected speech in the group receiving active TMS, but not sham TMS. Cluster analysis identified two subgroups: responders and non-responders. A 77.5% of patients receiving active TMS were classified as responders, whereas 82.4% of patients in the sham group were classified as non-responders. Within the active TMS group, response was associated with the nonfluent/agrammatic and semantic variants, as well as with better baseline cognitive performance in non-language domains. Discussion. These findings suggest that long-term TMS combined with language therapy can induce measurable improvements in connected speech in individuals with PPA. The identification of distinct responder profiles highlights the heterogeneity of treatment effects and suggests that clinical variant and preserved non-linguistic cognitive functions may be important predictors of benefit. Together, these results support the potential role of TMS as an adjunctive intervention in PPA and underscore the need for personalized neuromodulation approaches in future clinical trials.
2.2	The Communication Bridge Research Program: Advancing implementation readiness of person-centred interventions for primary progressive aphasia
	Dr. Angela C Roberts ¹ , Mr. Matt Bona ² , Dr. Eric Polley ³ , Ms. Olivia Fegter ⁴ , Dr. Emily Rogalski ^{2,5}
	¹ Western University, School of Communication Sciences and Disorders and Department of Computer Science, London, Ontario, Canada. ² University of Chicago, Healthy Aging and Alzheimer's Care Center, Chicago, Illinois, United States. ³ University of Chicago, Department of Public Health Sciences, Chicago, Illinois, United States. ⁴ Northwestern University, The Feinberg School of Medicine, Chicago, Illinois, United States. ⁵ University of Chicago, Department of Neurology, Chicago, Illinois, United States
	Introduction: Primary progressive aphasia (PPA) is a progressive neurodegenerative disorder that affects daily communication and participation for individuals and their families. Although interest in speech-language interventions for PPA is growing, wide-reaching clinical impact depends on whether effective interventions can be delivered with fidelity, feasibility, and equity in real-world settings. Communication Bridge-2 (CB2) demonstrated the efficacy and feasibility of a dyadic, telehealth-delivered intervention for individuals with mild-to-moderate PPA and their communication partners [1-2]. Communication Bridge-3 (CB3, NCT06191198) builds upon CB2 by explicitly focusing on increasing intervention scalability and readiness for implementation to support future practical adoption. This work is guided by the Readiness Assessment for Pragmatic Trials (RAPT) model [3], which assesses pragmatic trial readiness across nine relevant domains. Aims: 1) Describe the CB2 to CB3 evolution using the NIH Stage Model and RAPT implementation science framework, highlighting design refinements to improve scalability; and 2) Present the CB3 trial design and early implementation indicators (reach, feasibility, retention) reflecting progress toward an implementation-ready model of care. Method: CB3 is a randomized non-pharmacologic telehealth-delivered clinical trial (RCT) for individuals with mild-to-moderate PPA and a

co-enrolled communication partner. Dyads are randomized to an impairment-focused arm or a dyadic, personalized, multi-clinician participation-focused arm. Interventions are delivered via synchronous videoconferencing with a clinician and supported by structured asynchronous home practice via the Communication Bridge™ web application. CB3 incorporates CB2-informed refinements to strengthen pragmatic trial readiness mapped to RAPT domains, including: standardized clinician support tools, training resources, and fidelity monitoring to support reproducibility; telehealth workflows designed for geographic reach and partner-inclusive participation; and measurement strategies prioritizing clinically meaningful participation-focused and dyadic outcomes aligned with stakeholder priorities. Key CB3 innovations include 1) integrating speech-language pathology and social work within a unified intervention framework to address psychosocial and access-related barriers that influence engagement, retention, and sustained carryover and 2) wearables for monitoring intervention effects on everyday social mobility and talking behaviours. **Results:** CB3 is actively enrolling. As of October 15, 2025, 53/100 dyads have enrolled, representing four countries. Early implementation indicators will be reported descriptively and pooled across intervention arms, including reach (geographic distribution and referral pathways), retention and completion rates, and feasibility of delivering an integrated SLP–social work telehealth model across participant contexts. Additional indicators will include descriptions of session fidelity monitoring to characterize scalability and operational readiness. These implementation-focused indicators will be interpreted through a RAPT model lens to highlight strengths and opportunities. Because this is an ongoing RCT, no interim clinical outcomes or between-arm comparisons will be presented. **Discussion:** CB3 represents a deliberate progression from CB2 efficacy toward an intervention model positioned for pragmatic adoption. By structuring the CB2 to CB3 transition using the NIH Stage Model and RAPT, the Communication Bridge Research Program advances readiness across domains central to scalable delivery. This approach aims to accelerate equitable access to evidence-informed interventions for individuals living with PPA and their communication partners by focusing not only on *what works* for them, but also on *what can be delivered broadly, consistently, and sustainably* in real-world clinical settings.

2.3 Clinical and neural predictors of a tailored speech and language therapy intervention for Italian individuals with primary progressive aphasia

Dr Petronilla Battista^{1,2}, Mrs Roberta Tomasoni¹, Ms Allegra Benzini¹, Dr Paola Santacesaria¹, Dr Gaia C. Santi¹, Ms Simona Aresta¹, Ms Cinzia Palmirotta¹, Mr Davide Mongelli¹, Ms Serena Tagliente¹, Dr Anna Gilioli³, Ms Laura Lumaca³, Dr Silvia Basaia³, Ms Annamaria Riva³, Dr Fabiola Freri³, Dr Alessandra Bianchi³, Dr Bianca Lamorgese³, Dr Stefania De Trane⁴, Dr Elisa Canu³, Prof. Massimo Filippi^{3,5,6}, Prof. Federica Agosta^{3,5,6}, Dr Brigida Minafra⁴, Prof. Pietro Fiore⁴

¹Laboratory of Neuropsychology, Istituti Clinici Scientifici Maugeri IRCCS, Bari, Italy. ²Global Brain Health Institute (GBHI), San Francisco, California, United States. ³Neuroimaging Research Unit, Division of Neuroscience, IRCCS San Raffaele Scientific Institute, Milan, Italy. ⁴Unit of Neurorehabilitation, Istituti Clinici Scientifici Maugeri IRCCS, Bari, Italy. ⁵Neurology Unit, IRCCS San Raffaele Scientific Institute, Milan, Italy. ⁶Vita-Salute San Raffaele University, Milan, Italy

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative condition characterized by speech-language impairment. Unlike other neurodegenerative conditions, currently no pharmacological treatments are available for people with PPA. The only viable approach to support patients and help them manage language deficits is a tailored intervention. Furthermore, scant evidence exists regarding the neural correlates that support behavioral restitution. **Aims:** To assess the effectiveness of web-based speech-language therapy (SLT) for Italian-speaking PPA patients and to perform an exploratory analysis on the neural correlates that sustain behavioural changes after SLT. **Methods:** Twenty-seven PPA patients (16 lvPPA, 4 svPPA, 7 nfvPPA) received SLT: svPPA and lvPPA patients underwent Lexical Retrieval Treatment (LRT), while nfvPPA patients received Video-implemented Script Training for Aphasia (VISTA) for 5 weeks. Thirteen patients (6 lvPPA, 3 svPPA, 4 nfvPPA) also underwent baseline 3D T1-weighted MRI. Primary outcomes were naming accuracy for LRT, accuracy and intelligibility of scripts for VISTA on trained and untrained items. SLT effectiveness was assessed with the Wilcoxon signed-rank test comparing pre- and post-treatment performance, with Bonferroni correction. MRI-derived brain volumes in language-related regions were correlated with pre- and post-treatment changes in trained (d-TRAINED) and untrained (d-UNTRAINED) items using Spearman's correlations, stratified by treatment type. **Results:** Wilcoxon Signed-Rank Test showed a statistically significant post-treatment improvement only for trained items in VISTA (p -adjusted=0.04). Similarly, a positive response to treatment was observed in LRT, resulting in significant improvements in naming both trained (p -adjusted<0.001) and untrained (p -adjusted<0.001) items. Spearman's correlation in LRT treatment revealed a statistically significant positive correlation between d-TREATED and left Supramarginal gyrus (p =0.80, p -value=0.01), whereas in VISTA treatment, a positive tendency between d-TREATED and left superior temporal gyrus, right fusiform and inferior frontal gyri, and bilateral Heschl gyrus (p =1.00, p -value=0.08). **Discussion:** Together, these findings show that tailored web-based SLT is an effective intervention for individuals with PPA, yielding robust improvements in speech-language production with generalization beyond trained items. Importantly, the integrity of temporo-parietal regions appears to underpin these therapy-induced behavioural gains, highlighting the potential of personalized web-based SLT to enhance speech-language abilities in PPA. **Funding:** The study was funded by EU-NRRP M6C2 (Project-ID PNRR-MCNT2-2023-12378220).

2.4 Advancing assessment and intervention for primary progressive aphasia in bilingual and Spanish-speaking populations

Dr. Stephanie M. Grasso¹, Dr. Núria Montagut Colomer², Wenfu Bao¹, SLP Camille Wagner Rodríguez³, SLP Estefanía García⁴, SLP Júlia Filella Mercè⁴, Student Giselle Yoshimoto¹, Student Katie Cole³, SLP Diana F. Cruz¹, SLP Sonia Marqués Kiderle¹, SLP Whendy Avila Motta¹, Student Lokesha Pugalenti¹, Dr. Andrew Collins¹, Dr. Karla Patricia Gutiérrez Sánchez⁵, Dr. Mariana Longoria Ibarrola⁵, Dr. Sergi Borrego-Écija², Dr. Alberto Lladó², Dr. Ignacio Illán-Gala⁴, Dr. Jordi Matias Guiu⁶, Dr. Juan Fortea Ormaechea⁴, Dr. Ana Luisa Sosa Ortiz⁵, Dr. Maya L. Henry¹, Dr. Albert Lleó Bisa⁴, Dr. Raquel Sánchez-Valle², Dr. Miguel Ángel Santos Santos⁴

¹University of Texas at Austin, Austin, Texas, United States. ²Hospital Clínic de Barcelona, Barcelona, Spain. ³The University of Texas at Austin Clínic de Barcelona, Austin, Texas, United States. ⁴Hospital de la Santa Creu i Sant Pau, Barcelona, Spain. ⁵Instituto Nacional de Neurología y Neurocirugía, Mexico City, Mexico. ⁶Hospital Clínico San Carlos, Madrid, Spain

Introduction. Primary progressive aphasia (PPA) is a neurodegenerative syndrome characterized by progressive speech and/or language impairment. Despite growing evidence that behavioral speech-language interventions can yield meaningful benefits, the vast majority of PPA research has focused on monolingual English speakers. This narrow focus limits the validity of intervention approaches, diagnostic tools, and clinical trial identification strategies for Spanish-speaking and bilingual populations, who remain substantially underrepresented despite comprising a large proportion of the global population. **Aims.** This presentation describes an integrated program of research focused on advancing assessment, intervention, and care partner support for Spanish-speaking monolinguals and bilingual individuals with PPA. Specifically, we report: (1) outcomes of two restitutive interventions (i.e., Lexical Retrieval Cascade Treatment (LRCT) and Video Implemented Script Training for Aphasia (VISTA) in Spanish speakers with PPA across Mexico, the United States, and Spain; (2) development and preliminary outcomes of *RESPALDO*, a Spanish-language care partner program for families supporting individuals with language-prominent dementia; and (3) ongoing work using connected speech measures to improve diagnosis of PPA in Spanish-speaking and bilingual populations, with direct implications for equitable identification for clinical trials. **Method.** For the intervention component, Spanish-speaking individuals with PPA (n = 81) across sites received structured speech-language intervention (i.e., LRCT or VISTA), targeting personally relevant nouns and scripts, respectively. Trained and untrained targets were matched on relevant lexical and linguistic characteristics, and outcomes were assessed longitudinally to examine treatment gains, maintenance, and generalization. For the care partner component, *RESPALDO* was developed as a culturally and linguistically tailored program providing education, communication strategies, and psychosocial support to Spanish-speaking care partners (n = 15); feasibility, acceptability, and preliminary benefit were assessed. For the diagnostic component, connected speech samples were collected from Spanish-speaking monolinguals and bilinguals with PPA and analyzed using metrics derived from natural language processing. These measures are being evaluated for their ability to distinguish PPA variants and reduce diagnostic bias. **Results.** Both LRCT and VISTA yielded improved performance for trained items, with evidence of maintenance over time and generalization to untrained targets were variable, demonstrating feasibility and treatment responsiveness across diverse Spanish-speaking contexts. Preliminary findings from *RESPALDO* indicate high acceptability and perceived benefit among care partners, underscoring substantial unmet needs for Spanish-language caregiver resources. Connected speech analyses reveal distinct linguistic profiles in Spanish-speaking and bilingual individuals with PPA, suggesting that language-specific and cross-linguistic markers may enhance diagnostic sensitivity relative to monolingual English norms. **Discussion.** Collectively, these findings highlight the necessity of expanding PPA research beyond English-dominant paradigms. By integrating intervention (LRCT and VISTA), care partner support, and diagnostic innovation, this work advances equitable clinical care and provides a framework for improving identification and representation of Spanish-speaking and bilingual individuals in clinical trials. This program of research provides support for a more inclusive model of PPA assessment and treatment.

Day 1 Poster session 2

3:40 PM - 4:40 PM

Poster webpage →



P2.1 Cognitive and brain reserve in bilingual speakers with logopenic variant primary progressive aphasia and amnesic Alzheimer's dementia

Dr. Jessica de Leon¹, Dr. Nicoletta Biondo¹, Ms. Muskaan Sandhu¹, Ms. Jeanine Estaban¹, Ms. Janhavi Pillai¹, Dr. Maria Luisa Mandelli¹, Ms. Eugenie Mamuyac¹, Ms. Rochelle-Jan Reyes¹, Ms. Ariel Guevarra¹, Dr. Maya Henry², Dr. Nina Dronkers³, Dr. Maria Luisa Gorno-Tempini¹, Dr. Stephanie Grasso²

¹University of California, San Francisco, San Francisco, CA, United States. ²University of Texas, Austin, Austin, TX, United States. ³University of California, Berkeley, Berkeley, CA, United States

Introduction: Bilingualism, defined as the regular use of two or more languages, may confer cognitive and brain reserve and resilience by continuously engaging executive functions, leading to enhanced neural integrity. However, evidence for bilingualism's neuroprotective effect is mixed. One contributing factor to mixed findings may be that bilingualism has network-specific effects in language and/or executive functioning networks in addition to domain-general effects that are present regardless of clinical syndrome. Studies of bilingualism in distinct clinical syndromes may help clarify the effects of bilingualism. Therefore, in this study, we examined cognitive performance and grey matter volume (GMV) differences between bilingual and monolingual speakers with 1) amnesic Alzheimer's dementia (AD), which is primarily associated with memory deficits, and 2) logopenic variant primary progressive aphasia (lvPPA), which is primarily associated with word retrieval and repetition deficits. **Aims:** By examining cognitive and imaging differences between monolingual and bilingual speakers with amnesic AD and lvPPA, we aimed to elucidate whether the neuropsychological and structural brain adaptations associated with bilingualism manifest differently depending on the primary cognitive domain affected by neurodegeneration. The goal of the study was to contribute to a more refined understanding of the role of bilingualism in reserve and resilience. **Methods:** We obtained neuropsychological assessments and structural MRI brain imaging in 136 amnesic AD and 88 lvPPA participants. Between monolingual and bilingual speakers within each variant, we examined differences in cognitive performance and GMV, controlling for demographic covariates. **Results:** Amnesic AD bilingual speakers exhibited less GMV in hippocampal, fusiform, and occipital regions compared to monolinguals. lvPPA bilingual speakers had less temporal and occipital volumes, but they had greater volumes in inferior parietal regions, which are considered a disease epicenter in lvPPA. Cognitive performance in monolinguals and bilinguals was comparable within variants. **Discussion:** Bilingualism may support cognitive reserve (preserved cognition despite reduced GMV) in both amnesic AD and lvPPA, with additional brain reserve in lvPPA. Our findings may support the notion that bilingualism has both domain-general and domain-specific effects within cognitive domains and clinical syndromes. Findings may also help address previously mixed findings regarding the effects of bilingualism in cognitive and brain reserve and resilience by demonstrating that its neuroprotective effects may depend in part on the clinical syndrome.

P2.2 A focus on strengths: Introducing the Progressive Aphasia Communication Toolkit

Dr. Jeanne Gallée¹, Dr. Jade Cartwright², Dr. Maya L Henry³, Dr. Aimee R Mooney⁴, Dr. Brielle C Stark⁵, Dr. Anna Volkmer⁶, Dr. Rob J Fredericksen¹, Dr. Rene Utianski⁷, Dr. Carolyn Baylor¹, Dr. Kimiko Domoto-Reilly¹, Dr. Paul K Crane¹

¹University of Washington, Seattle, Washington, United States. ²University of Tasmania, Hobart, Tasmania, Australia. ³University of Texas at Austin, Austin, Texas, United States. ⁴Oregon Health & Sciences University, Portland, Oregon, United States. ⁵Indiana University, Bloomington, Indiana, United States. ⁶University College London, London, United Kingdom. ⁷Mayo Clinic, Rochester, Minnesota, United States

Introduction: Tools to document communication function in people living with primary progressive aphasia (PwPPA) are limited and predominantly deficit-focused. This work describes the development of a strengths-based, ecologically valid assessment instrument: the Progressive Aphasia Communication Toolkit (PACT). **Aims:** The primary aim was to develop and pilot a novel instrument that captures communication strengths in PwPPA. First, we sought to develop a structured inventory of communication that reduces assessment burden and aligns with the principles of the RAISE Assessment Framework for PPA: (1) establish a relationship, (2) cultivate an informal assessment process, regardless of exact measurements used, (3) include opportunities for clinician, client, and care partner feedback, (4) support and promote advocacy, and (5) evolve assessment over time. Second, we wanted this instrument to be a tool that enables clinicians and researchers to synthesize broader communicative functions within a strengths-based framework that is sensitive to the lived experiences of PwPPA. **Method:** The PACT was developed and evaluated across five experiments. Experiments 1 and 2 focused on instrument development, while Experiments 3–5 examined structural refinement, digitization, acceptability, and inter-rater agreement. Ninety-five individuals worldwide contributed, including 80 researchers and clinicians, nine PwPPA, and six care partners. **Results:** Development yielded a multidimensional tool that documents speech, language, and communication function. The instrument comprises four linked rating scales that combine quantitative scoring with

qualitative feedback, allowing clinicians to capture symptom-led performance and behavior impact. Pilot testing demonstrated strong inter-rater agreement (91% for general measurability; 85% for strength ratings) and highlighted user preference for the PACT over traditional neuropsychological evaluation. Participants reported that the conversational structure minimized testing discomfort and facilitated naturalistic engagement. The PACT successfully captured listener-based perceptions and contextualized them with qualitative insights from PwPPA and care partners, supporting a holistic understanding of communication ability and guiding clinical decision-making. **Discussion:** The PACT reframes communication assessment in PPA by centering on retained abilities and functional outcomes, rather than deficits alone. This strengths-based approach promotes person-centered care, informs individualized intervention targets, and enables monitoring of treatment responsiveness. Future directions include validation studies, establishment of normative parameters, evaluation of reliability, and the development of culturally and linguistically responsive adaptations for global use. This will be accomplished by multisite, international collaborations to adapt and pilot the PACT. By leveraging structured conversation rather than formal testing, the PACT provides a practical, clinically meaningful tool that aligns assessment with the lived communication experience of PwPPA.

P2.3 Why both languages matter: Discourse assessment in a bilingual person with logopenic primary progressive aphasia

Dr Aviva Lerman^{1,2}, Dr Taryn R Malcolm³

¹University of Haifa, Haifa, Israel. ²Rehabilitation department, Hadassah medical center, Jerusalem, Israel. ³Hunter College, CUNY, NYC, NY, United States

Introduction: Bilingual people with primary progressive aphasia (PPA) do not always show parallel deterioration across their languages. Instead, second language (L2) abilities typically decline faster than first language (L1) abilities (Malcolm et al., 2019). In clinical practice, assessment of bilingual people with PPA is challenging because it is often unclear which language(s) should be evaluated and to what extent observed impairments reflect the neurodegenerative process versus typical differences associated with language dominance. In monolingual speakers with PPA, several language tasks have been proposed as necessary to differentiate between PPA and healthy controls, including measures of oral narrative discourse (Silva et al., 2025). Furthermore, the Cookie Theft picture description has been shown to differentiate PPA subtypes from each other and from healthy controls (Anwia et al., 2025). For example, in logopenic variant PPA (lvPPA), fluency measures such as words per minute and word/phrase repetitions significantly distinguish individuals with lvPPA from neurotypical speakers. However, for bilingual individuals with PPA, the relative influence of language status (L1 vs. L2) on narrative production remains unclear, especially in comparison to the influence of the degenerative condition itself.

Aims: The present study examined which discourse measures are impaired in the L1 and/or L2 of a bilingual speaker with lvPPA during the Cookie Theft picture description, and which measures remain comparable to healthy controls in both languages. **Methods:** A 70-year-old female bilingual English L1–Hebrew L2 speaker with a clinical diagnosis of lvPPA participated in this study. Her non-linguistic cognitive abilities, assessed using the CLQT, were within normal limits. She produced two Cookie Theft descriptions, one in English and one in Hebrew. These were compared to Cookie Theft descriptions from 10 healthy bilingual English L1–Hebrew L2 controls (4 male, 6 female; ages 61–81, $M = 70.3$, $SD = 6.6$). All controls scored at least 26/30 on the MMSE administered in English. All participants were English-dominant and used both languages daily to high proficiency for over 50 years. **Results:** In L1 English, the lvPPA participant scored more than two SD lower than the control mean for number of unfilled pauses, and one SD lower for CIU/min and number of nouns. In L2 Hebrew, larger discrepancies emerged. The participant scored more than two SD lower than controls for CIU/min, number of verbs, and number of unfilled pauses, and more than one SD lower for %CIUs, number of nouns, grammaticality and complexity of utterances, number of self-corrections, and frequency of code-mixing from English into Hebrew.

Discussion: Consistent with previous research, L2 deterioration in our participant with lvPPA was more pronounced than L1 deterioration. Cross-linguistic comparison of her picture descriptions with age-matched and bilingualism-matched controls revealed substantially more impaired discourse measures in L2, whereas only minimal deviations from healthy controls were observed in L1. These findings underscore the clinical importance of assessing both languages in bilingual people with PPA and demonstrate that even brief discourse samples can yield clinically meaningful information, particularly in the more vulnerable language.

P2.4 Cognitive-linguistic skills in production of expository discourse: Insights from longitudinal changes and neural correlates in primary progressive aphasia

Miss Marina A Anwia¹, Asst. Prof. Mara S Lowe², Ms. Sophie Matis^{1,3}, Mr. James Carrick^{3,4}, Prof. Olivier Piguet^{3,4}, A. Prof. Ramon Landin-Romero^{1,3}, Prof. Kirrie J Ballard^{1,3}

¹The University of Sydney, Faculty of Medicine and Health, School of Health Sciences, Sydney, NSW, Australia. ²CUNY Queens College, Department of Linguistics and Communication Disorders, NY, United States. ³The University of Sydney, Brain and Mind Centre, Sydney, NSW, Australia. ⁴The University of Sydney, Faculty of Science, School of Psychology, Sydney, NSW, Australia

Background: Engaging in conversational and story-telling discourse involves an interplay of language and cognitive skills, including working memory, attention, and inference-making. Primary progressive aphasia (PPA) provides a model for exploring discourse, as both language and cognitive abilities change over time with changes in cortical atrophy. Here, associations between morphosyntactic discourse skills and patterns of cortical atrophy are measured over time in nonfluent (nfv), logopenic (lv) and semantic (sv) variants of PPA. **Aims:** This study aims to characterise longitudinal changes in discourse-level linguistic features across PPA variants, and to examine associated changes in cortical integrity to identify variant-specific brain-behaviour relationships. **Method:** Participants were 27 individuals with nfvPPA ($M = 66.6 \text{ years} \pm 8.3$), 30 lvPPA ($M = 66.7 \pm 7.3$), 33 svPPA ($M = 64.8 \pm 6.7$), and 36 healthy controls (HC; $M = 65.5 \pm 6.8$). Picture descriptions were analysed for word density and diversity, sentence complexity, well-formedness, and fluency annually for up to three timepoints. Associations between language measures and cortical thickness on structural MRI scans were analysed. **Results:** At timepoint 1, nfvPPA performed below other groups on most measures; lvPPA were differentiated from svPPA on fluency measures only. Longitudinally, utterance length declined in all variants. For nfvPPA, this was linked with reduced sentence complexity and cortical atrophy in regions engaged by higher attentional demand. For lvPPA, it was linked with increasing grammatical errors and atrophy extending into perisylvian language network. No associations were identified for svPPA. **Discussion:** These findings suggest that discourse production in PPA relies on a network extending beyond classic language regions, with morphosyntactic elements partly supported by domain-general cognitive systems such as error monitoring and elaborative encoding. The variant-specific patterns of decline observed here indicate that different cognitive-linguistic mechanisms drive microstructural change across the PPA variants. Together, these insights highlight the potential value of morphosyntactic elements of discourse in improving the sensitivity of assessment, refining prognostic expectations, and guiding intervention planning across the PPA disease course.

P2.5 Not all ASR is equal: A multi-metric comparison of automatic speech recognition systems for dementia speech

Dr Thayabaran Kathiresan^{1,2}, Ms Zona Ling¹, Ms Hana Elhammamy¹, Ms Clara Tjiandra¹, Ms Stephanie E Piccolo¹, Ms Loretta Gasparini^{3,2}, Professor Adam P Vogel^{4,2}

¹The University of Melbourne, Melbourne, VICTORIA, Australia. ²Redenlab Ltd, Melbourne, Victoria, Australia. ³Murdoch Children's Research Institute, Melbourne, Victoria, Australia. ⁴The University of Melbourne, Melbourne, Victoria, Australia

Introduction Automatic speech recognition (ASR) is increasingly used in digital health research and clinical practice. However, its reliability when applied to clinically impaired speech, such as that produced by individuals with dementia, remains uncertain and under-investigated, particularly in contexts relevant to speech-language assessment and monitoring. **Aims** To evaluate the performance of eight contemporary ASR systems on spontaneous speech samples from adults with dementia compared with healthy older adults, using a multi-metric assessment framework that captures lexical, syntactic, semantic, and dysfluency characteristics of clinical speech. **Method** Speech samples from adults diagnosed with dementia and age-matched healthy controls were processed using eight commercial and open-source ASR systems. Performance was quantified using multiple metrics: word error rate (WER), part-of-speech (POS) sequence agreement (POS-sqWER), POS distribution mismatch error (POS-MDE), sentence-embedding cosine distance (semantic fidelity), and stutter detection error (SDE). Mixed-effects models were used to estimate system effects adjusted for speaker group, with pairwise contrasts controlled via Tukey's method. **Results** Across all metrics, ASR performance was significantly poorer for dementia speech compared with healthy controls. Two systems, AWS and CrisperWhisper, formed a leading performance tier, showing comparatively strong lexical and semantic fidelity and competitive grammatical alignment. Google and Meta platforms generally under-performed. AssemblyAI, NeMo, Microsoft, and Whisper formed a mid-performing group with metric-dependent rankings. POS-MDE revealed tag-specific grammatical distortions not captured by WER or POS-sqWER, offering deeper insight into syntactic deviations. Stutter detection accuracy was low across systems; CrisperWhisper was strongest in dementia but with modest absolute performance. **Discussion** Relying on WER alone can obscure clinically relevant ASR failures in syntax and meaning. A multi-metric evaluation framework provides richer, clinically relevant information to guide ASR selection and adaptation for speech assessment and monitoring in PPA and related dementia clinical research.

P2.6 Orthographic scaffolding combined with tDCS to support naming in semantic-variant primary progressive aphasia: A case report

Dr Carlos T. Roncero, Dr Regina Jokel, Dr Howard Chertkow

Baycrest, Toronto, Ontario, Canada

Introduction Semantic-variant Primary Progressive Aphasia (svPPA) is characterized by progressive degradation of semantic knowledge, leading to severe naming impairments often accompanied by surface dysgraphia and surface dyslexia. Although orthographic representations are compromised, spelling-based strategies may still provide partial access to phonological output. Whether such degraded orthographic pathways can be leveraged therapeutically to support naming remains unclear. **Aims** This case report examined whether a naming-through-writing intervention, combined with transcranial direct current stimulation (tDCS) could improve spoken naming in svPPA. We specifically explored whether explicit orthographic scaffolding could facilitate verbal retrieval despite impaired spelling and reading abilities. **Method** A single-case design was

employed. An initial corpus of 82 object nouns was categorized into semantic groups (animals, household objects, fruits and vegetables) and divided into two separate word lists that were matched for semantic category distribution and word familiarity. One list was trained, while the second served as an untrained control. The participant was a 64-year-old right-handed male with severe anomia accompanied by surface dysgraphia and surface dyslexia, with a confirmed diagnosis of semantic-variant Primary Progressive Aphasia. The intervention consisted of 10 therapy sessions. Each session began with 20 minutes of anodal tDCS (2 mA) targeting the inferior parietal lobule and posterior temporal lobe, followed by a naming-through-writing task applied to the trained word list. When the participant was unable to name an item, he was encouraged to attempt verbal spelling; if unsuccessful, the correct word was provided and he was asked to write the word three times, with spelling errors corrected. The control list was never practiced. **Results** Baseline naming accuracy was severely impaired (trained list: 4/41; control list: 7/41). Following treatment, naming accuracy for the trained list increased to 37/41, while performance on the control list remained unchanged (7/41), indicating item-specific improvement. Early in treatment, correct naming responses for trained items consistently involved an overt verbal spelling step prior to spoken naming. For example, upon presentation of an image of a balloon, the participant would first spell the word aloud (B-A-L-L-O-O-N) and then produce the spoken response ("balloon"). As training progressed, an increasing number of trained items were named correctly without preceding overt spelling, reflecting a change in the observed response sequence. Spelling accuracy improved substantially for items on the trained list and this improvement co-occurred with gains in spoken naming. In contrast, items on the untrained control list showed neither improvement in naming nor spelling accuracy. **Discussion** These findings suggest that orthographic-based training may support spoken word retrieval in svPPA, even in the presence of surface dysgraphia. A partially degraded orthographic system may still function as a scaffold for accessing phonological output. However, because therapy and tDCS were delivered concurrently, the specific contribution of neuromodulation cannot be isolated in this design. A planned follow-up phase will compare naming-through-writing therapy with and without stimulation, using high-definition tDCS targeted to the anterior temporal lobe, to better dissociate training and stimulation effects.

P2.7 Designing a new technology-based therapy for primary progressive aphasia

Dr. Viktória Čiernik Kevická^{1,2,3}, Prof. Zsolt Cséfalvay¹, Mr. Tomáš Benko¹

¹Comenius University, Bratislava, Slovakia. ²Institute of Informatics of the Slovak Academy of Sciences, Bratislava, Slovakia. ³MEMORY Centre, Bratislava, Slovakia

Introduction: Primary progressive aphasia (PPA) can be addressed through behavioral, speech-language therapy approaches. In the early stages, restorative techniques may be used. Even though it can be challenging to monitor progress in progressive conditions, a sufficiently intensive therapeutic approach may support improvements in language abilities. To maintain the necessary intensity, home practice is needed, guided by a speech-language therapist and a trained communication partner. **Aims:** The aim of this work is to propose a therapeutic framework that leverages social robotics and large language models (LLMs) to supplement limited therapist availability and support intensive, adaptive discourse-level intervention for individuals with PPA. The goal is to test therapy options that mirror authentic communication with a therapist, and can be delivered both in clinical settings and as supervised home-based practice. **Methods:** Existing approaches to aphasia intervention, computer-assisted language therapies, and applications of robotics in speech-language rehabilitation were reviewed. Particular attention was given to findings from human–robot interaction relevant to sustaining engagement and providing consistent therapeutic oversight, as well as to identifying technical solutions for effectively integrating social robotics into the therapeutic process. **Results:** The outcome is a design of a novel therapeutic approach. This pilot intervention is being developed through a co-design process with individuals with aphasia, and initial pilot testing is currently underway, including participation of a person with primary progressive aphasia. The proposed approach employs a social robot as a guide for adaptive discourse-level therapy that is structurally closest to script therapy, while leveraging LLMs to move beyond fixed scripts and approximate a more natural communication setting. Script therapy is implemented as a communication loop in which the participant's spoken input is converted into text via the automatic speech recognition module, processed by a LLM, and then transformed back into spoken output via the social robot interface through a text-to-speech module. The attitudes and perspectives of the co-designers will be presented as part of the study outcomes. **Discussion:** This work results in a proposal for a therapeutic approach that has the potential to support increased therapy intensity within the practical constraints of service delivery in Slovakia. At the same time, it contributes to scientific knowledge on the use of social robotics and large language models in speech-language therapy with this population. **The presented study is conducted as part of the VV-MVP-24-0072 Therapy of Aphasia Using Social Robotics and Artificial Intelligence project.*

P2.8 Bilingual profiling and dual-language therapy in primary progressive aphasia: Insights from a case series of Italian-English speakers

Ms Roberta Tomasoni^{1,2}, Dr Gaia C Santi¹, Ms Serena Tagliente¹, Dr Marta Pengo³, Ms Chiara Griseta¹, Ms Simona Aresta¹, Ms Allegra Benzini¹, Dr Paola Santaceseria¹, Ms Cinzia Palmirotta¹, Dr Stephanie Grasso⁴, Dr Petronilla Battista¹

¹Istituti Clinici Scientifici Maugeri IRCCS - Laboratory of Neuropsychology, Bari, Italy. ²Division of Psychology and Language Sciences, University College London, London, United Kingdom. ³Neurology Unit, ASST Santi Paolo e Carlo, San Paolo University Hospital, Milan, Italy. ⁴Department of Speech, Language and Hearing Sciences, University of Texas at Austin, Austin, United States

Introduction: Bilingualism has been associated with enhanced cognitive reserve and delayed dementia onset, yet its effects in language-led dementias such as Primary Progressive Aphasia (PPA) remain underexplored. Existing studies in bilingual PPA report parallel or asymmetric decline across languages, often with relative preservation of the first-acquired language, shaped by age of acquisition, proficiency, and language use. However, systematic bilingual assessment is uncommon, thus limiting the interpretation of language profiles and change. Evidence on how bilingualism influences speech and language therapy outcomes in PPA is similarly limited, despite indications that language dominance and cross-linguistic transfer may shape treatment response. **Aims:** This study has three aims: 1) to characterise bilingual experience (i.e., use, age of acquisition, dominance, etc.); 2) to determine the cross-linguistic speech and language profiles before therapy; 3) to explore how dual-language intervention influences outcomes on formal assessments and functional communication in L1 and L2 after therapy. **Methods:** This ongoing case series presents three bilingual Italian (L1)–English (L2) speakers; n=1 with logopenic-variant PPA (lvPPA) and n=2 nonfluent/agrammatic-variant PPA (nfvPPA). All participants underwent detailed bilingual profiling, including language history, age of acquisition, language dominance, and patterns of language use. A functionally equivalent bilingual language assessment was conducted pre-therapy to characterise baseline performance within and across languages and post-therapy to assess therapy effects. Dual-language therapy was delivered using Lexical Retrieval Therapy (LRT) for the lvPPA patient and Video-Implemented Script Training for Aphasia (VISTA) for the nfvPPA patients. Outcomes were evaluated within and across languages using item-specific measures and changes in functional communication. **Results:** Interim results are available for all three participants, though to varying extents. Premorbidly, the lvPPA patient (L.R.) was a relatively balanced bilingual with stronger literacy skills in L1, whereas the nfvPPA patients (B.A.; V.S.) acquired L2 later and showed clear L1 dominance both premorbidly and post-morbidly. Pre-therapy assessment revealed greater overall vulnerability in L2 for L.R. and B.A., with the magnitude of vulnerability reflecting each participant's bilingual history. For L.R., who has completed therapy, post-treatment outcomes demonstrated robust item-specific gains in both languages (L1 $d_2 = 5.0$; L2 $d_2 = 5.6$), asymmetric cross-linguistic transfer favouring L2, and modest improvements on functional communication measures. Similar patterns are anticipated for B.A. and V.S. following treatment.

Discussion: These findings highlight the importance of assessing all languages systematically to understand patterns of language vulnerability and treatment response in PPA. Across participants, baseline assessment revealed greater L2 impairment, with variability reflecting individual bilingual histories. Treatment outcomes suggest that dual-language therapy can support gains in both languages, with cross-linguistic transfer influenced by premorbid language experience. As data collection in the case series progresses, it will enable comparison of baseline trajectories and treatment responses across participants, contributing to a more nuanced understanding of bilingualism in PPA. This will, in turn, inform assessment planning and therapy decision-making in bilingual individuals with neurodegenerative language disorders.

P2.9 Logopenic variant of primary progressive aphasia: A multidimensional and graded cognitive phenotype

Dr Shalom K Henderson^{1,2}, Professor James B Rowe², Professor Matt A Lambon Ralph²

¹Boston University, Boston, MA, United States. ²University of Cambridge, Cambridge, United Kingdom

Introduction: The logopenic variant of primary progressive aphasia (lvPPA) is commonly associated with Alzheimer's disease (AD) pathology, yet its clinical characterization and representation in clinical trials remain comparatively underdeveloped. Although lvPPA is defined by a core language profile, most notably impaired word retrieval and reduced phrase and sentence repetition, clinical presentation varies substantially across individuals and disease stages. While language symptoms may predominate early, increasing overlap with non-language domains emerges over time. These findings challenge categorical distinctions between lvPPA and other AD phenotypes. **Aims:** We posed three key questions that challenge current assumptions and understanding about lvPPA: (1) If people with lvPPA have semantic deficits, what is the nature of the deficit and when does the impairment occur?; (2) Beyond short-term memory impairment, do people with lvPPA have an impairment within phonology?; and (3) Is lvPPA a distinct nosological entity or part of a graded multidimensional AD clinical spectrum? **Methods:** We recruited nine patients who had typical, amnesic presentation of AD (tAD) and 18 with lvPPA. The lvPPA sample was further grouped into those meeting strict consensus criteria for PPA and lvPPA (n = 10) and others who had previously satisfied definitions of lvPPA but progressed with multi-domain cognitive impairments (herein referred to as "lvPPA+"; n = 8). The inclusion of tAD patients facilitated a direct comparison of cognitive and neuroanatomical profiles across typical and atypical presentations of AD and the distinction between lvPPA

and lvPPA+ patients offered a window into cognitive decline across lvPPA disease severity. **Results:** Across complementary investigations, lvPPA showed a multidimensional and graded cognitive profile. First, lvPPA patients showed declining performance as semantic control demands increased, mirroring patterns observed in post-stroke semantic aphasia. Importantly, this sensitivity to semantic control demands extended across both verbal and non-verbal semantic tasks. Second, performance on working memory tasks revealed that the core repetition and length effects observed in lvPPA are better explained by impairments in short-term memory and information buffering, rather than a primary phonological deficit. Phonological representations themselves appeared relatively preserved, with deficits emerging most clearly under increasing memory load and length. Third, deep phenotyping of lvPPA demonstrated that multidimensional cognitive impairments can be present even in mild disease stages. Memory deficits were not only evident in lvPPA but were comparable in magnitude to those observed in typical amnesic Alzheimer's disease. Crucially, these impairments were consistent across verbal and non-verbal modalities and detected using both clinic-based and research-grade assessments. Longitudinally, cognitive decline in lvPPA followed a largely graded, dimensional pattern, rather than progressing through discrete categorical stages. **Discussion:** Together these findings support the reconceptualization of lvPPA within a graded multidimensional framework of AD-related cognitive phenotypes. Although lvPPA and typical AD differ in their predominant presenting features, there emerges a substantial overlap across cognitive domains. The presence of shared transdiagnostic impairments has direct implications for clinical trial design, arguing both for the inclusion of lvPPA in broader AD trials and for the expansion of lvPPA-focused trials beyond speech-language interventions alone.

P2.10 Speech-in-noise processing in primary progressive aphasia

Miss Sophie A Froud¹, Dr Benjamin A Levett¹, Dr Lucy B Core¹, Dr Jessica Jiang¹, Professor Charles R Marshall², Dr Chris JD Hardy¹, Professor Jason D Warren¹

¹University College London, London, United Kingdom. ²Queen Mary University of London, London, United Kingdom

Introduction: In daily life, understanding spoken messages generally requires decoding of speech signals embedded in variably noisy acoustic backgrounds. This is a computationally demanding neural task that is likely to be vulnerable early in the course of neurodegenerative brain pathologies. However, how speech-in-noise processing is affected in different dementia syndromes, how it relates to peripheral hearing loss and the brain basis for impaired speech-in-noise perception remain unclear. **Aims:** Here we addressed these questions using a speech-in-noise test in a well-defined cohort of patients with language-led dementias (primary progressive aphasia (PPA) syndromes) and Alzheimer's disease (AD). **Methods:** We administered an in-house Digit Triplets test in which participants listened binaurally to three digits presented in competition with speech-weighted white noise and reported the digits heard on each trial. Signal-to-noise ratio (SNR) was adjusted from trial to trial based on task performance following an adaptive staircase protocol, and mean SNR for speech comprehension was generated for each individual. 48 patients (13 with logopenic variant (lv)PPA, 12 with semantic variant (sv)PPA, eight with nonfluent/agrammatic variant (nfv)PPA), 15 with AD, and 22 cognitively-well, age-matched older individuals participated. Peripheral hearing function as indexed on pure tone audiometry and general cognitive functions were assessed using standard test procedures. Clinical diagnosis of dementia syndromes was supported by biomarker data or on volumetric brain MRI. Voxel-based morphometry (VBM) was used to identify structural neuroanatomical associations of speech-in-noise performance in the patient cohort. **Results:** lvPPA and nfvPPA groups had significantly higher mean SNR (performed significantly worse) than cognitively-well older listeners on our speech-in-noise task, while the svPPA group did not significantly differ from healthy controls. SNR was significantly higher in the lvPPA group than in all other syndromic groups. Auditory cortical correlates of speech-in-noise performance were identified on VBM in the patient cohort. **Conclusion:** PPA syndromes are associated with separable profiles of speech-in-noise impairment, which appear to capture auditory brain dysfunction in these canonical dementia syndromes

P2.11 Speech and language therapy in PPA: Integrating client and family voices to enhance person-centred care

Ms Gráinne M O'Shea, Ms Jessica Molloy

St James Hospital, Dublin, Co. Dublin, Ireland

Introduction: Primary Progressive Aphasia (PPA) is an umbrella term describing a group of neurodegenerative disorders characterised by progressive decline in speech and language abilities. These conditions have a substantial impact on the lives of affected individuals and their families. Speech and Language Therapists (SLTs) play a critical role in assessment, diagnosis, and intervention for people with PPA, and in recent years several frameworks and clinical pathways have emerged to support evidence-based SLT practice (Gallée et al., 2023; Volkmer, Alves et al., 2025; Volkmer, Boll et al., 2025). While previous research highlights the complexities of achieving timely and accurate diagnosis in PPA, less is known about how individuals with PPA and their families perceive their experiences of SLT assessment and ongoing intervention (Ho et al., 2023). Studies also suggest that perspectives may differ between people with PPA and their family members (Davies et al., 2019). Understanding these experiences is essential for developing person-centred and family-centred models of care. **Aim:** To explore the self-reported perspectives of clients living with PPA and their families

on the SLT process from initial assessment through ongoing intervention. **Methods:** A retrospective qualitative review of clinical interview data from five individuals diagnosed with PPA (3 females, 2 males, aged 63–70 years). Diagnoses included logopenic variant PPA ($n = 3$), semantic variant PPA ($n = 1$), and nonfluent/agrammatic variant PPA ($n = 1$). All participants lived with spouses who were their primary communication partners. Clinical notes from initial assessment to current intervention were analysed for emergent themes. **Results:** Themes during assessment included: (1) Generally good insight into communication difficulties among patients and spouses (2) Development and use of supportive communication strategies (3) Emotional responses to communication changes (4) Attempts to understand or rationalise communication changes. Themes during intervention included: (1) Developing understanding and acceptance of the diagnosis (2) Ongoing concerns about the impact of communication changes (3) Identifying supports that maintain participation in valued daily activities (4) Improved confidence in using both previously adopted and newly learned communication strategies. **Discussion:** This study provides insight into the lived experience of people with PPA and their families as they engage with SLT services. Findings highlight strengths within current SLT provision and identify opportunities to enhance person-centred and family-centred care. The themes underscore the importance of supporting emotional adjustment, reinforcing effective communication strategies, and addressing the evolving needs of both clients and their communication partners over time.

P2.12 Automated discourse markers from story retelling distinguish semantic variant primary progressive aphasia in Spanish-speaking Latinos

Dr. Florentina Morello-García¹, Mr. Lucas F Sterpin², Mr. Nicolás Pelella², Mr. Jeremías Inchauspe², Mr. Franco J. Ferrante^{2,3,4}, Mr. Gonzalo N. Pérez^{2,3,4}, Dr. Jet M. J. Vonk⁵, Dr. Agustina Birba^{2,6,7}, Dr. Lucía Amoroso^{2,8,9}, Dr. Marilu Gorno-Tempini⁵, Dr. Agustín Ibáñez^{2,10,11}, Dr. Adolfo M. García^{2,12,13}

¹Institute of Neurosciences (INEU), Fleni-CONICET, Buenos Aires, Argentina. ²Cognitive Neuroscience Center, University of San Andrés, Buenos Aires, Argentina. ³National Scientific and Technical Research Council (CONICET), Buenos Aires, Argentina. ⁴Faculty of Engineering, University of Buenos Aires, Buenos Aires, Argentina. ⁵Memory and Aging Center, Department of Neurology, University of California San Francisco, San Francisco, California, United States. ⁶University Institute of Neuroscience, University of La Laguna, Tenerife, Spain. ⁷Faculty of Psychology and Speech Therapy, University of La Laguna, Tenerife, Spain. ⁸Basque Center on Cognition, Brain and Language (BCBL), San Sebastián, Spain. ⁹Ikerbasque, Basque Foundation for Science, Bilbao, Spain. ¹⁰Global Brain Health Institute, Trinity College Dublin, Dublin, Ireland. ¹¹Latin American Brain Health Institute (BrainLat), Universidad Adolfo Ibáñez, Santiago de Chile, Chile. ¹²Global Brain Health Institute, University of California, San Francisco, California, United States. ¹³Departamento de Lingüística y Literatura, Facultad de Humanidades, Universidad de Santiago de Chile, Santiago de Chile, Chile

Introduction: Story retelling tasks offer an ecological way to examine discourse production across multiple linguistic levels. However, standard scoring approaches depend heavily on highly-trained clinicians' efforts, who can rely on different criteria and are often limited in their availability due to high-demand. This undermines the test's robustness, informativeness, and scalability. Newly developed natural language processing (NLP) based frameworks enable large-scale measurement of semantic and text-structural outcomes from these tasks, highlighting the need for validation in syndromes with prominent impairments in these domains. Yet, this approach remains underexplored in semantic variant primary progressive aphasia (svPPA), a syndrome characterized by core semantic and text-structural deficits. Importantly, it has not been validated in Spanish-speaking Latino populations, an underserved group in dementia research with a disproportionately high burden of all-type dementia. **Aims:** To validate an NLP-based framework for story retelling in Spanish-speaking Latino patients with semantic variant primary progressive aphasia (svPPA). To this end, we evaluate (i) story-to-retelling distance metrics and (ii) output-specific features, and compare them with (iii) a video description task to disentangle the role of language comprehension difficulties. **Methods:** A total of 77 participants (36 svPPA patients and 41 demographically-matched controls) recruited from the ReDLat consortium completed a story retelling task (Craft Story 21) and a video description task. NLP-based metrics capturing lexico-semantic (lexical richness, word class ratios) and text-structural (sentence quantity, length and complexity; and topographical organization, via speech graphs) qualities were extracted from the participants' transcribed recordings. For story retelling, we additionally quantified the story-to-retelling distance of each metric. To test their usefulness for between-group discrimination, we fed such features into Logistic Regression, k-Nearest Neighbors, and XGBoost classifiers with 5-fold nested cross-validation, recursive feature elimination, and Bayesian hyperparameter optimization across ten seeds. Scores were bootstrapped to obtain 95% confidence intervals. Score differences were bootstrapped to compare models, with p -values estimated as the fraction of sign-aligned bootstrap differences smaller than 0. As a control measure, we repeated all analyses after shuffling participant labels. **Results:** Models trained with story retelling features showed good classification scores, both when using distance metrics [ROC-AUC = 0.82 (0.73-0.90)] and output-specific features [ROC-AUC = 0.77 (0.66-0.85)]. In the best-performing distance-based model, classification accuracy was primarily driven by semantic distance and lexical density distance. Compared to this model, classification performance significantly worsened after training with video description features alone [ROC-AUC = 0.68 (0.58-0.77), Δ ROC-AUC = 0.145 (0.056, 0.254), p -value < .001]. Models trained with shuffled participant labels yielded the expected (near-)chance levels, with non-overlapping confidence intervals to true models. **Discussion:** Automated NLP-

derived metrics from story retelling successfully identify Spanish-speaking Latino individuals with svPPA from demographically matched controls. Across models, both story-to-retelling distance-based and output-specific measures achieved better results than those from video description, possibly because story retelling more strongly engages impaired semantic and verbal comprehension processes in svPPA. Overall, this framework offers a scalable, efficient, and low-cost complement to traditional story retelling scoring, with the potential to strengthen ecological discourse-level assessment in underserved populations.

P2.13 Effect of semantic and metacognitive rehabilitation in semantic variant primary progressive aphasia: A single-case experimental study

PhD Student Sarah Maso¹, Speech Therapist Stéphanie Delrutte², Speech Therapist Anaëlle Manteaux², Speech Therapist Marine Jourdan², Speech Therapist student Emma Bagnaud³, Neurologist Marie Rafiq², Neurologist Marie Wolfrum², Neurologist Fleur Gérard², Professor and Neurologist Jérémie Pariente², MCF and Speech Therapist Lola Danet⁴

¹ToNIC, Toulouse Neurolmaging Center, Toulouse University, INSERM Laboratory - Baudot Pavillon,, Toulouse, France. ²Cognitive and Behavioral Neurology Unit, University Hospital of Toulouse, Toulouse, France. ³Institut Universitaire des Sciences de Réadaptation (IUSR), College of Health, Bordeaux, France. ⁴ToNIC, Toulouse Neurolmaging Center, Toulouse University, INSERM Laboratory - Baudot Pavillon, Toulouse, France

Introduction : The semantic variant of primary progressive aphasia (svPPA), a rare neurodegenerative disorder, leads to anomia due to a progressive loss of word meaning. The clinical features of svPPA are explained by hypometabolism and then atrophy of the anterior temporal lobes, with predominant involvement of the left hemisphere which is involved in semantic processes. In the absence of pharmacological treatment, speech therapy is preferred in clinical practice. However, semantic rehabilitation, which has shown beneficial effects in vascular aphasia when used in combination with metacognitive training, remains poorly studied in degenerative pathologies and specifically in svPPA patients. **Aims :** The aim of this study was to assess the effect of semantic therapy combined with metacognitive training on naming performance in patients with svPPA. **Method :** svPPA patients were recruited from the outpatient memory clinic of the Neurology Department at primary University Hospital of Toulouse in accordance with the classification established by Gorno-Tempini et al. (2011). The study followed a Single Case Experimental Design (SCED) methodology with a multiple baseline AB design. Phase A corresponded to the baseline period during which patient received a non-specific phonological rehabilitation program. The duration of this baseline varied randomly across participants, ranging from 6 to 10 weeks, in order to control for potential time-related or practice effect. During this period, treatment focused on phonological processing exercises without directly targeting semantic or metacognitive components. Phase B corresponded to the specific intervention period, which lasted for 5 weeks. In this phase, participants underwent a structured rehabilitation program combining semantic therapy with metacognitive training. The semantic component targeted lexical access and word-concept associations through individualized naming, whereas the metacognitive component aimed to enhance participants' awareness and self-monitoring of their own cognitive strategies during language use and rehabilitation exercises. Three 45-minute treatment sessions were carried out per week. Patient performance of a rapid naming task was measured repeatedly during every second session and constitutes the primary endpoint. Four assessments were also administered to each participant : before, during and after intervention, and in follow-up. **Results:** In this study, 8 subjects were included, comprising 6 men and 2 women aged between 59 and 72 years with a diagnosis of svPPA. Six out of eight patients showed a significant improvement in naming performance on trained items on repeated measurement, as a result of the semantic rehabilitation. Two of the six patients who showed significant improvement in naming trained items also showed a significant improvement in naming performance on untrained items. **Discussion :** The results show that specific semantic rehabilitation combined with metacognitive training had a beneficial effect on svPPA patients, and promising results for the generalization of these effects. Nevertheless, it seems important that patients' production should not be considered simply as errors but as naming behaviors and strategies that support partial activation of semantic features. **Trial registration:** The study was approved by the Ethics Committee for the Protection of Persons on June 22, 2021 (ID-RCB Number: 2021-A01698-33) and was conducted in accordance with the Declaration of Helsinki.

P2.14 Better Conversations with Primary Progressive Aphasia: Translation and cultural adaptation to Norwegian

Ms Ingvild Winsnes¹, Dr Monica Norvik², Dr Anna Volkmer³

¹University of Oslo, Oslo, Norway. ²UiT Arctic University of Oslo, Oslo, Norway. ³University College London, London, United Kingdom

Introduction: Primary progressive aphasia (PPA) describes a group of language-led dementias. People with PPA report that being able to have conversations with family and friends is one of the most important aspects of their lives, and they would like to address this in therapy (Volkmer et al., 2024). A study from the UK found that Better Conversations with Primary Progressive Aphasia (BCPPA), a communication partner training program, holds promise as an intervention to improve conversations between people with PPA and their communication partners (CPs) (Volkmer et al., 2023). **Aims:** This study aimed to translate and culturally adapt BCPPA into Norwegian. **Methods:** The adaptation process was guided by the

cultural adaptation elements identified by Day et al. (2023) and the Framework for Reporting Adaptations and Modifications-Enhanced (Wiltsey Stirman et al., 2019). We translated the BCPPA into Norwegian before piloting it with four people with PPA and their CPs. The translated version was compared to the original English version to identify adherence to the core components (i.e., the active ingredients) in the intervention (Day et al., 2023). Additionally, we conducted individual semi-structured interviews post-intervention, which were transcribed and analysed using content analysis, to explore acceptability. **Results:** We found high adherence to the core components. The participants found the intervention acceptable; however, they suggested some changes to peripheral components (i.e. components that do not impact the effectiveness of the intervention). Five themes were identified in the interview data: (1) awareness of how communication works, (2) communication strategies, (3) the amount of work, (4) unfamiliar terminology, and (5) the BCPPA provides a different perspective. **Discussion and conclusion:** The results of this study indicated that the BCPPA intervention was acceptable to the participants in the study. However, there is a need for some adjustment to the peripheral components to enhance the cultural adaptation. Overall, the Norwegian BCPPA is a promising intervention.

P2.15 Mini-Linguistic State Examination (MLSE.cz) in clinical practice: Administration experience and qualitative interpretation to support PPA classification

Mgr Kamila Ludka¹, Mgr. Štěpánka Philippová¹, Mgr. Martina Hladká¹, Mgr. Markéta Štěpánková¹, MUDr., Ph.D., MBA Tom Philipp^{2,3}

¹Department of Speech and Language Therapy, Thomayer Hospital, Prague, Czechia. ²Department of Rehabilitation and Rheumatology, Prague, Czechia. ³3rd Faculty of Medicine, Charles University, Prague, Czechia

Introduction: The Mini-Linguistic State Examination (MLSE) is a brief language screening tool for primary progressive aphasia (PPA) based on error-oriented analysis across five language domains. During the development and ongoing validation of the Czech version (MLSE.cz), systematic clinical use has generated experience-based insights into test administration, error interpretation, and diagnostic decision-making. These observations highlight the importance of qualitative evaluation of error patterns and targeted supplementary testing to support clinical classification. **Aims:** To summarise clinical experience from the administration of MLSE.cz and to propose targeted recommendations for qualitative interpretation of test performance and the use of supplementary assessment tasks in patients with PPA.

Methods: A qualitative analysis of clinical observations was conducted during MLSE.cz administration in patients with PPA and healthy controls. Recurrent administration-related challenges were systematically documented, including ambiguity of stimuli, multiple acceptable lexical responses in Czech, sensory limitations (vision and hearing), patient fatigue, and scoring dilemmas. Observations were synthesised and interpreted in relation to existing methodological discussions in the MLSE literature. **Results:** Several recurring areas were identified where enhanced qualitative interpretation is clinically informative. MLSE.cz administration typically required 15–30 minutes, making the test suitable for patients with reduced endurance. compared to 90–120 minutes for comprehensive language assessment using the VFF-R battery, representing a 75–83% reduction in testing time. For more detailed analysis of error patterns, audio recording of responses proved helpful, particularly when reviewing subtle articulatory and phonological features. Sensory factors affected performance in visually demanding tasks, especially sentence comprehension II and picture description. Within the working memory domain, sentence repetition emerged as highly sensitive but was also influenced by articulatory and syntactic demands. Language-specific factors highlighted the need for systematic examples to guide interpretation of grammatical and phonological errors in Czech. The use of brief supplementary subtests facilitated diagnostic clarification, particularly in mixed or borderline PPA presentations. **Discussion:** Clinical feedback from MLSE.cz administration indicates that effective use of the test relies on careful qualitative interpretation of error patterns within a broader clinical context. Attention to sensory factors, rater training, and targeted supplementary testing enhances diagnostic confidence without altering the standardized test structure. These experience-based recommendations align with the literature emphasising clearer error definitions and improved sensitivity to mixed PPA phenotypes, and may support the clinical applicability of MLSE adaptations across languages and settings.

P2.16 Digital version of Slovak Mini Language State Examination (MLSEsk)

Mr. Benko Tomáš¹, Professor Zsolt Cséfalvay¹, Dr. Viktória Čiernik Kevická^{1,2}, Professor Peter Garrard³

¹Department of Communication Disorders, Comenius University, Bratislava, Slovakia. ²Centrum MEMORY, Bratislava, Slovakia. ³2 Neuroscience and Ageing Research Institute, St Georges, University of London, London, United Kingdom

Introduction: Early diagnosis and analysis of language deficits in patients with primary progressive aphasia is a challenge even for experienced speech-language therapists. MLSE (Mini Language State Examination¹) is a newly developed diagnostic tool, which has the potential to evaluate all important areas of language processes within a short timeframe. A digital version may further enhance consistency of administration and streamline data collection required for the ongoing validation process ² **Aims:** The aim of this project was to design and pilot a tablet-based (iPad) version of the Slovak adaptation of the MLSE (MLSEsk) to ensure uniform administration, reduce human-made errors, and streamline data collection for validation purposes **Methods:** A functional iPad-based application was developed, featuring pre-recorded

audio instructions, automated display of visual stimuli and animations, and integrated audio-video recording of each testing session. One experienced SLT administered the app in a clinical pilot (5 patients with neurodegenerative disorders, including 2 PPA cases) to assess usability and clinical utility. **Results:** The administering SLT reported that the interface was intuitive, navigation between subtests was markedly smoother than with paper materials, and manual handling of test pages was eliminated. The integrated audio–video recordings and autogenerated session summaries were highlighted as particularly valuable for later scoring. In clinician judgement, routine administration time was reduced (estimated 10–15%), and the automated instruction delivery enhanced consistency across sessions. Pilot testing demonstrated good face validity and confirmed that the application functioned smoothly under real clinical condition **Discussion:** The proposed digital MLSEsk has a potential to be an efficient tool for administering and validating the Slovak version of the MLSE. Future work will focus on systematic comparison between the paper and digital formats and on completing psychometric validation.

P2.17 Assessment of long-term efficacy of transcranial magnetic and electrical stimulation in primary progressive aphasia: protocol for the RECONNECT-PLUS randomized trial

Dr Lucia Fernandez-Romero¹, Dr Maria Diez-Cirarda¹, Dr Cristina Delgado-Alonso¹, Dr Maria Nieves Cabrera-Martin¹, Dr Javier J Gonzalez-Rosa², Dr Carmen Sanz-Nieto¹, Dr Natalia Perez-Macias¹, Dr Paloma Balugo¹, Dr Jorge Matias-Guiu¹, Dr Antonio Portoles-Perez¹, Dr Jordi Matias-Guiu¹

¹Hospital Clínico San Carlos, Madrid, Spain. ²Universidad de Cadiz, Cadiz, Andalucía, Spain

Introduction. Primary progressive aphasia (PPA) is a neurodegenerative syndrome associated with Alzheimer’s disease and frontotemporal lobar degeneration. Non-invasive brain stimulation (NIBS), particularly when combined with language therapy, has emerged as a promising therapeutic approach. However, the comparative efficacy and long-term effects of different NIBS techniques (transcranial direct current stimulation – tDCS- and transcranial magnetic stimulation -TMS-) remain unclear. This study aims to examine the effects of non-invasive brain stimulation, applied alone or in combination (tDCS, TMS, or tDCS plus TMS), together with language therapy over a 6-month period, on the progression of language impairment in individuals with PPA, in comparison with sham stimulation combined with language therapy. **Methods.** This is a randomized, double-blind, parallel-group, sham-controlled clinical trial. Patients with early-stage PPA (global CDR ≤ 1) will be eligible for inclusion. Participants will be randomly assigned to one of four treatment arms: active tDCS plus active TMS; active tDCS plus sham TMS; sham tDCS plus active TMS; or sham tDCS plus sham TMS. All participants will receive language therapy immediately following each NIBS session for a total duration of 6 months. **Results:** The primary outcome measure will be the Mini-Linguistic State Examination. Secondary outcomes will include naming of trained items, the Addenbrooke’s Cognitive Examination, the Interview for Deterioration in Daily Living Activities, the Clinical Dementia Rating (including behavioural and language domains), the Neuropsychiatric Inventory, a questionnaire of functional communication (CETI) and regional brain metabolism. In addition, exploratory substudies will assess blood biomarkers, quantitative electroencephalography, and spontaneous speech measures. **Conclusions:** This will be the first clinical trial evaluating and comparing the efficacy of both TMS and tDCS in PPA for 6 months, in combination with retrieval lexical training.

P2.18 Revisiting sentence repetition in primary progressive aphasia: Beyond phonological working memory

Dr. Sandra Lafenthaler., Bergmann, J., Alber, R., Trinker, E., Staffen, W. & Rossini, F.

Department of Neurology, Neurointensive Care, and Neurorehabilitation, Christian Doppler University Hospital Paracelsus Medical University, Salzburg, Austria

Introduction: The logopenic variant of primary progressive aphasia (lvPPA) is most commonly associated with Alzheimer disease (AD) pathology. However, growing evidence indicates a more heterogeneous etiological spectrum, including non-AD neurodegenerative processes (Macoir et al., 2025). This etiological diversity poses a particular challenge for accurate diagnosis. In addition, clinical symptoms often arise from distinct underlying pathomechanisms that are generally not captured by commonly used assessment tools. Deficits in sentence repetition are considered a core feature of lvPPA and play a central role in (differential) diagnosis, for example in the Mini Linguistic State Examination (MLSE; Patel et al., 2021). Impaired repetition is typically interpreted as reflecting a primary deficit in phonological working memory. However, recent findings suggest that the strong reliance on sentence repetition as a measure of working memory may contribute to diagnostic uncertainty in PPA (Herrera et al., 2024; Macoir et al., 2025). **Aims:** This presentation draws on theoretical perspectives and clinical observations to critically reconsider how sentence repetition is interpreted in PPA. It specifically sheds light on the relative contributions of limitations in phonological working memory, semantic dysfunction, and increased monitoring demands associated with self-correction behaviour in the context of articulatory difficulties. Particular emphasis is placed on qualitative behavioural features such as self-corrections and semantic drift, as these features are not yet systematically incorporated into the assessment of repetition performance. **Methods:** Patient examples assessed using the German pilot version of the MLSE (Frommann, Lafenthaler, & Baltes, *in preparation*) will be presented. Sentence repetition performance will be discussed with regard to both quantitative outcomes and qualitative features, including self-corrections, semantic drift, and error monitoring processes. Clinical observations will be interpreted within a neurolinguistic framework, taking into account the cognitive and executive demands of sentence repetition

beyond phonological storage. **Results:** Clinical observations indicate that sentence repetition in PPA reflects complex interactions among phonological working memory, comprehension, monitoring, and repair processes. Depending on the PPA variant, qualitative behaviours such as self-corrections and semantic drift may occur and contribute to impaired repetition performance. These observations suggest that relying solely on sentence repetition as a measure of working memory may increase the risk of misclassifying PPA subtypes (Herrera et al., 2024; Macoir et al., 2025). **Discussion:** Sentence repetition extends beyond phonological storage and can be influenced by semantic processing, articulatory abilities and self-monitoring mechanisms. Current diagnostic models may oversimplify sentence repetition performance, thereby increasing the risk of misclassifying PPA subtypes. Incorporating qualitative behavioural features into clinical assessment protocols may therefore enhance diagnostic accuracy in PPA.

P2.19 The risk of prospective functional decline in a cohort of Italian patients with primary progressive aphasia

PhD Chiara Carbone¹, MD Chiara Galligani^{1,2}, MSc Silvia Cossutti¹, PhD Gaia Santi³, MSc Riccardo Maramotti¹, MD, PhD Giulia Vinceti², MD, PhD Manuela Tondelli^{1,2}, MD Annalisa Chiari², PhD Petronilla Battista³, MD, DPhil Giovanna Zamboni^{1,2}

¹University of Modena and Reggio Emilia, Modena, Italy. ²Azienda Ospedaliero-Universitaria of Modena, Modena, Italy. ³Institute of Bari, Bari, Italy

Introduction: Primary progressive aphasia (PPA) is a neurodegenerative syndrome characterized by progressive speech and language impairment and marked clinical heterogeneity. Although many studies have focused on cross-sectional characterizations, there are limited longitudinal data on how cognitive, linguistic, and functional abilities change over time in patients with PPA. **Aims:** This study aimed to evaluate whether baseline performance on the Screening for Aphasia in NeuroDegeneration (SAND) provides information regarding disease progression, described in terms of *functional decline*, beyond cross-sectional characterization. **Method:** Patients with a diagnosis of PPA (Gorno-Tempini et al., 2011) were consecutively recruited between 2016 and 2025 and followed longitudinally with periodic follow-up assessments at the University Hospital of Modena, Italy. Age- and education-corrected scores from the SAND were obtained at baseline. For each SAND subtest, patients were classified into *normal* or *pathological* performance groups according to established Italian normative cut-offs (Catricalà et al., 2017). The outcome *functional decline* was defined as a loss of at least one point on the Activities of Daily Living (ADL) or Instrumental Activities of Daily Living (IADL) compared with the baseline visit. Time-to-event analyses were performed using Kaplan-Meier survival curves and Cox proportional hazards models, with SAND performance group as the predictor. Hazard ratios (HRs) with 95% confidence intervals (CI) were estimated. Statistical analyses were adjusted for multiple comparisons using the Holm-Bonferroni correction (p_{Holm}), with a significance threshold set at $p_{\text{Holm}} < 0.05$. **Results:** Thirty-eight PPA (18 logopenic variant, 10 semantic variant, 10 nonfluent variant PPA) patients were enrolled. The median time of follow-up was 26 months (interquartile range: 15-46 months). Among SAND subtests, total word repetition baseline performance was significantly associated with *functional decline* risk, irrespective of PPA clinical phenotypes: patients with *pathological* performance ($N = 11$, 10 events) showed a significantly higher risk of *functional decline* compared with those with *normal* performance ($N = 27$, 16 events) (HR 3.78, 95% CI 1.58-9.04; $p_{\text{Holm}} = 0.025$). Kaplan-Meier analysis confirmed an earlier *functional decline* in the *pathological*-performance group (median time to *functional decline* 8.0 vs 28.4 months; log-rank $p_{\text{Holm}} = 0.012$). **Discussion:** In this study, baseline performance on the SAND word repetition subtest was significantly associated with *functional decline* in Italian patients with PPA. Word repetition relies mainly on the integrity of phonological working memory and temporoparietal language networks, frequently affected in PPA, particularly in profiles characterized by reduced capacity to maintain and manipulate verbal information. Impairment in this domain may therefore reflect early network-level vulnerability rather than isolated linguistic deficits. Such vulnerability could facilitate the emergence of extra-linguistic cognitive impairments, ultimately impacting daily functioning and autonomy. These findings identify repetition as a potential prognostic marker of *functional decline* in PPA across clinical variants, beyond its established diagnostic relevance.

P2.20 Lexico-semantic and phonological processes in single-word production in primary progressive aphasia

Ms María Sainz-Pardo¹, Mr Marco Calabria¹, Mr Francesco Ciongoli¹, Ms Clara Martín², Ms Simona Mancini², Ms Sonia Marqués Kiderle³, Dr Stephanie Grasso⁴, Dr Juan Fortea³, Dr Alberto Lleó³, Dr Ignacio Illán-Gala³, Dr Miguel Ángel Santos-Santos³

¹Faculty of Health Sciences, Universitat Oberta de Catalunya, Barcelona, Spain. ²Basque Center on Cognition, Brain and Language, San Sebastián, Spain. ³Sant Pau Memory Unit, Department of Neurology, IR Sant Pau, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain. ⁴Department of Speech, Language, and Hearing Sciences, The University of Texas at Austin, Austin, Texas, United States

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative disorder primarily characterized by a progressive decline in language abilities, including impairments in lexical retrieval, being considered as a hallmark diagnostic criterion. Word retrieval from the mental lexicon requires, at least, access to two types of information: lexico-semantic and phonological. Despite extensive research, it remains unclear which specific levels of language are differentially affected by the neurodegenerative process across the distinct variants of PPA. **Aims:** The main aims of this study were: (1) to determine

which lexico-semantic and phonological word features modulate lexical retrieval in patients with PPA, and (2) to identify potential differences among PPA variants that may contribute to diagnostic discrimination. **Methods:** Thirty patients with PPA (svPPA = 9; lvPPA = 10; nfvPPA = 11) and fourteen cognitively healthy control participants were assessed using a picture-naming task (48 items). Word frequency, phonological neighbourhood density (PhND), and word length (number of phonemes) were systematically manipulated. Accuracy, naming latencies and error types were analysed. **Results:** First, analyses revealed that patients with PPA were significantly less accurate and slower than cognitively healthy controls. Word frequency was a significant predictor of accuracy ($p < .0001$) meaning that high frequent words were named more accurately than low-frequent words. However, this word-frequency effect was not observed in naming latencies, that is high-frequency words were not named faster than low-frequency ones. Additionally, two significant interactions were observed; in accuracy for the nfvPPA group ($p = .029$) and in naming latencies for the svPPA group ($p = .005$). See Figure 1. Second, analyses of PhND showed a similar overall pattern, with PPA patients performing worse than controls in both accuracy and response times. However, no significant main effect of PhND nor significant interactions across PPA variants were observed. See Figure 2. Third, analyses of word length (number of phonemes) revealed the same general tendency, with poorer performance in the PPA groups compared to controls, but without significant main effect or interactions. See Figure 3. Finally, error-type analyses indicated that omissions and semantic errors were the most frequent error categories across PPA variants, whereas phonological errors occurred at a very low rate. See Figure 4. **Discussion:** The present findings suggest that lexical retrieval deficits in PPA primarily stem from impairments in lexico-semantic processing rather than phonological processing. The lack of significant effects of PhND and word length, together with the robust modulation effect of word frequency, supports the notion of a predominant semantic-level disruption. This interpretation is further reinforced by the error analysis, which revealed a higher prevalence of lexico-semantic errors (semantic substitutions and omissions) compared to phonological errors. These results contribute to a better understanding of the linguistic mechanisms underlying naming impairments in PPA and may have implications for differential diagnosis across PPA variants.

P2.21 Predicting neuropathologic disease in primary progressive aphasia from narrative speech

Mr. Daniel B Gutstein, Dr. Michael Iorga, Dr. Jane Stocks, Dr. Nathan Gill, Dr. Jennifer Sleeman, Dr. Tamar D Gefen, Ms. Michelle Los, Ms. Caroline Nelson, Dr. Changiz Geula, Dr. Sandra Weintraub, Dr. Todd Parrish, Dr. Marsel Mesulam, Dr. Elena Barbieri

Northwestern University, Chicago, Illinois, United States

Introduction: Narrative speech samples provide the ideal context for the investigation of language abnormalities in Primary Progressive Aphasia (PPA) (Mack et al., 2021), which is defined by a gradual deterioration of language abilities due to various neuropathologies that can be diagnosed at post-mortem brain autopsy (Mesulam et al., 2022). Natural Language Processing (NLP) excels at automatically extracting nuanced features from unstructured text data and provides proficient mechanisms for detecting divergent speech patterns in syndromes such as PPA. **Aims:** This analysis primarily aimed to use NLP features extracted from samples of narrative speech to distinguish autopsy-confirmed PPA disease pathologies – PPA due to AD and PPA due to FTLD 4-repeat tauopathy (FTLD-4Rtau) – while also differentiating the same two groups from normal controls (NC). Post-hoc analysis also sought to identify features with statistically significant impact upon the prediction of disease pathology (FTLD-4Rtau vs. AD) and clinical diagnosis (PPA vs. NC). **Method:** Narratives obtained from 54 individuals with PPA ($N_{AD} = 37$, $N_{FTLD-4Rtau} = 17$) and 15 NC through the re-telling of the Cinderella story were transcribed using the procedures outlined in Thompson et al. (2012). NLP methods were used to extract two distinct feature sets: transformer embeddings and classical quantitative linguistic measures. These NLP features were applied to train two separate neural network-based multiclass machine learning classifiers (one with the classical features and one with the transformer embeddings) that matched each narrative speech sample to a label of FTLD-4Rtau, AD, or NC. Variables in the classical model were grouped into subclusters such as closed-class words, syntactic dependencies, and lexical diversity. These classical model subclusters were then assessed using a feature-wise permutation approach. **Results:** Both the transformer space and the classical linguistics feature space successfully differentiated between AD and FTLD-4Rtau neuropathologies while distinguishing healthy individuals from patients with PPA. The permutation of variables pertaining to dependencies between verbs and their arguments as well as dependency distance caused the predictive capacity of the model to drop with respect to FTLD-4Rtau but not for AD, whereas the permutation of lexical diversity and closed-class parts of speech features caused the predictive capacity of the model to drop with respect to FTLD-4Rtau and AD but not for NC. **Discussion:** The usage of NLP and machine learning in the context of naturalistic language tasks may ultimately aid in uncovering avenues for disease-specific interventions and diagnosing PPA. The findings suggest that artificial intelligence approaches leveraging narrative speech could enhance the differential diagnosis of PPA and help develop biomarkers to assess the efficacy of targeted, non-pharmacologic interventions. Future research will incorporate a more diverse network of speech measures – including prosody and speech rate – within a broader array of narrative speech to analyze additional neurological conditions and provide objective, quantitative measures of speech impairment and disease heterogeneity.

P2.22 Changes in the writing process and written product in primary progressive aphasia and apraxia of speech

Dr Rene Utianski¹, Dr Hans-Leo Teulings², Dr Gabriela Meade¹

¹Mayo Clinic, Rochester, MN, United States. ²Neuro Script, Tempe, AZ, United States

Introduction: Patients with nonfluent-agrammatic primary progressive aphasia (nfvPPA) and primary progressive apraxia of speech (PPAOS) often develop motor features consistent with corticobasal syndrome (CBS) and/or progressive supranuclear palsy (PSP). Digitized handwriting analysis may provide an objective method to track motor decline and inform management options, particularly related to augmentative-alternative communication options. **Aims:** Characterize writing process and written product measures in nfvPPA- PPAOS spectrum disorders and healthy controls.

Method: Neurologically normal controls (n=19) and patients with nfvPPA (n=7) or PPAOS (n=17), performed a case-transcription task (writing lowercase 'a,' 'c,' and 'd' five times after being shown the corresponding uppercase letter) on a Wacom digitizing tablet. Kinematic features of the writing process (e.g., velocity, duration) and the written product (e.g., letter size) were calculated. Subject-level medians were analyzed using Scheirer-Ray-Hare tests with diagnosis (combined PPAOS and nfvPPA versus controls) and letter as fixed factors. P-values were False Discovery Rate (FDR) adjusted.

Results: See Table 1 for descriptive statistics (median (IQR)). Surprisingly, there were no significant Letter x Group interactions that survived the statistical penalty. Robust main effects of diagnosis were observed across 6 writing variables. The most sensitive differentiators included markers of movement fluidity (e.g., average normalized jerk, $p_{adj} < .001$), and speed (duration, average absolute velocity, peak vertical velocity and acceleration, $p_{adj} < .001$). Subtle but significant differences were also noted in fine motor control markers, including number of peak acceleration points ($p_{adj} = .02$). Also surprisingly, there were no clear differences between groups in written product measures. **Discussion:** The widespread kinematic deviations observed across writing process more than written product domains support the motoric changes in nfvPPA- PPAOS spectrum disorders and the absence of such difficulties in controls. The lack of letter-group interaction suggests that digital kinematics can objectively capture difficulties in speed and fluidity, regardless of the motoric demands of the letters. Future longitudinal research is warranted to characterize the timing of kinematic changes relative to emerging motor features of CBS or PSP. Ongoing analyses are exploring the relationships between digital markers and standardized clinical variables, alongside preliminary evaluations of longitudinal trajectory (which we expect to complete prior to the conference). Future work investigating content-kinematic interactions may further improve phenotypic differentiation across the spectrum of progressive speech-language disorders. Ultimately, this tool may offer an objective, cost-effective method for supporting differential diagnosis and monitoring disease progression in clinical and research settings.

P2.23 Using experience sampling method to characterize the effect of dyadic PPA therapy on multimodal communication

Dr. Gary Robinaugh¹, - Carly Millanski², Dr. Rachel Tessmer³, Dr. Lisa Wauters², Dr. Stephanie Grasso², Dr. Maya Henry²

¹University of Northern Colorado, Greeley, CO, United States. ²University of Texas at Austin, Austin, TX, United States. ³VA Pittsburgh Healthcare System, Pittsburgh, PA, United States

Introduction: People with primary progressive aphasia (PPA) and their care partners strategically utilize multiple modes of communication to compensate for declining spoken language and benefit from increased awareness of the advantages of multimodal communication (Cadório & Vieira, 2025; Lindeberg et al., 2023; Mooney et al., 2023; Nakkawita & Utianski, 2024). Training and encouraging the use of communication strategies, including multimodal communication, is an essential component of evidence-based behavioral treatment for PPA (Volkmer et al., 2023). However, no studies to date have investigated whether therapies that train multimodal communication result in changes to modality use in the daily lives of those impacted by PPA. **Aims:** In this study, we used Experience Sampling Method (ESM) to characterize use of communication modalities in two dyads before and after speech-language intervention. The aim of the study was to investigate the effect of treatment on modality use following a dyadic communication therapy that emphasized multimodal communication. **Methods:** Participants included two dyads, each comprising an individual with PPA and their spouse (Table 1). One participant with aphasia, SV-PA, had a diagnosis of semantic variant PPA (svPPA) characterized by moderate word finding difficulty and single-word comprehension deficits. The other participant, NV-PA, had symptoms consistent with non-fluent variant PPA (nfvPPA) and primary progressive apraxia of speech (PPAOS) characterized by mild apraxia of speech. Treatment (9–10 weeks) combined restorative word-retrieval (SV) or script training (NV) (Henry et al., 2018, 2019) with dyadic conversation training. Both the restorative and parter-focused components incorporated multimodal communication training. ESM surveys were used to characterize participants' use of 13 different modalities (Blackstone & Hunt-Berg, 2004; Mooney et al., 2023). They received survey links via text message twice per day for seven days before and after treatment. To analyze post-treatment change, modality use was compared using a Welch t-test in R (R Core Team, 2025). **Results:** For one dyad, NV (Figure 1), the participant with aphasia, NV-PA, reported a significant increase in his use of gestures to communicate ($p < .01$). For dyad SV (Figure 1), the participant with aphasia, SV-PA, reported a significant increase in her use of a communication book and drawing to communicate ($p < .01$) while her

spouse, SV-CP, increased his use of gesture ($p < .01$) and body language/facial expressions ($p = .01$). No significant decrease in modality use was observed. Dyads also reported meeting or exceeding personalized goals and participants with PPA demonstrated improved performance on treatment probes (i.e., naming or script accuracy). **Discussion:** Multimodal communication is a valuable communication strategy for people with PPA and their partners and is often encouraged and/or trained in therapy (Volkmer et al., 2023). However, measuring the ecological validity of treatment (e.g., changes in daily use of these modalities) is a challenge. ESM is a novel method in PPA research that allows for ecologically valid assessment of communication behaviors over time (Shiffman et al., 2007). Results of the current study, though limited in scope, provide additional evidence that behavioral treatments can indeed impact the use of communication strategies in daily life.

P2.24 Preliminary interrater reliability of APROCSA-PPA: Auditory-Perceptual Rating of Connected Speech in Primary Progressive Aphasia and Related Syndromes

Ms. Kiiya Shibata¹, Dr. Marianne Casilio^{2,3,1}, Ms. Zoe Ezzes⁴, Dr. Stephen Wilson^{5,6}, Dr. Ryan Darby⁷, Dr. Michael de Riesthal^{7,1}

¹Vanderbilt University, Nashville, TN, United States. ²Portland State University, Portland, OR, United States. ³Portland VA, Portland, OR, United States. ⁴San Diego State University, San Diego, CA, United States. ⁵University of Queensland, Brisbane, Australia. ⁶Vanderbilt, University, TN, United States. ⁷Vanderbilt University Medical Center, Nashville, TN, United States

Background: Connected speech provides a data-rich and ecologically valid window into language impairment in primary progressive aphasia (PPA) and frontotemporal degeneration (FTD). However, systematic characterization of connected speech in these populations often relies on time-intensive transcription and quantitative linguistic coding, limiting feasibility. Auditory-perceptual approaches offer a scalable alternative by enabling rapid multidimensional characterization of speech-language behaviors from brief excerpts. Auditory-Perceptual Rating of Connected Speech in Aphasia (APROCSA) demonstrated robust psychometric properties in post-stroke aphasia and offers a structured framework for rating diverse connected speech. Building on prior expert-driven adaptation, this project evaluates reliability of the expanded features in connected speech samples from individuals with PPA/FTD. **Aims:** (1) To estimate preliminary interrater reliability for APROCSA-PPA features across connected speech samples from individuals with PPA/FTD. (2) To identify features demonstrating strong versus variable agreement to inform refinement, rater training, and future validation directions. **Methods:** Connected speech samples were obtained from participants recruited through the Vanderbilt FTD clinic. Two expert raters (KS, MDR) independently rated samples using the APROCSA 5-point interval scale (0–4), including original APROCSA features and PPA/FTD-relevant additions developed through a prior exemplar-based content validity, item expansion process. Interrater reliability was quantified using two-way random-effects intraclass correlation coefficients for absolute agreement (ICC[A,1]). Preliminary ICCs are reported. A third expert rater (Marianne Casilio) will independently rate the full sample for the final validation study by May 2026. **Results:** Across 16 connected speech samples, interrater reliability was good-to-excellent for many core microlinguistic features. Excellent agreement (ICC[A,1] $\geq .75$) was observed for omission of function words, off-topic speech, circumlocution, dysexecutive paraphasias, reduced speech rate, short and simplified utterances, anomia, apraxia of speech, expressive aphasia, stereotypies/automatisms, and overall communication impairment. Additional features showed good agreement (ICC[A,1] $\approx .60-.74$), including reduced prosody, dysarthria, rapid/blurred/imprecise articulation, dysphonia, semantic paraphasias, and halting/effortful speech. Fair agreement (ICC[A,1] $\approx .40-.59$) was observed for features reflecting brief, context-dependent phenomena (e.g., pauses, false starts, retracing, formulaic utterances). Lower agreement was observed for select low base-rate or context-dependent features (e.g., target unclear, paragrammatism, abandoned utterances), and a subset of rare features yielded non-estimable ICCs due to minimal variance across samples. **Discussion:** Preliminary findings provide initial evidence that APROCSA-PPA can be applied reliably by expert raters to quantify multidimensional connected speech profiles in PPA/FTD. Features with more variable reliability tended to reflect transient behaviors or low base-rate phenomena, highlighting priorities for additional exemplar development, refined operational definitions, and training materials. Ongoing work will expand the rated sample to support final reliability estimates and consensus procedures. Future directions include iterative refinement of low-reliability items, development of PPA-specific training/benchmark materials, and evaluation of how APROCSA-PPA feature profiles map onto phenotypic heterogeneity across PPA/FTD syndromes.

Day 2 – Friday 17th July 2026

Invited Speaker

8:30	AM	-	9:10	AM
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Dr Cathy Taylor-Rubin

Research and clinical practice in PPA: Reflections from the last two decades, and aspirations for the future

Cathy Taylor-Rubin is a Sydney based speech pathologist. Two decades ago, with a growing caseload of individuals with Primary Progressive Aphasia, she focused on clinical practice and research in this emerging field. She completed a Master of Applied Science at University of Sydney, focussing on conversation breakdown in PPA, followed by PhD studies at Macquarie University investigating behavioural treatments for improving and maintaining communication for people with PPA, their families and caregivers. Her current focus is clinical practice. Both the public NSW hospital clinic she leads and her private practice, specialise in PPA and related disorders. Cathy delights in improving lives through clinical research and providing education to diagnosed individuals, families, health care providers and students.

Day 2 Platform Session 3 – Innovative Models of Care

9:10 AM - 10:10 AM

3.1 A clinical multidisciplinary virtual program for families: The strategy training and education program for persons living with primary progressive aphasia

Dr. Sharon M Antonucci

The Aphasia Center at Jefferson Moss-Magee Rehabilitation, Elkins Park, PA, United States. Jefferson Moss Rehabilitation Research Institute, Elkins Park, PA, United States

Introduction: A substantial concern in healthcare provision for those living with primary progressive aphasia (PPA) is that access to speech-language treatment and community support is severely restricted. Appropriate treatment can be difficult to access, due to lack of availability in the broader healthcare community and by the fact that symptom onset begins when many people and their partners are still working. The *Strategy Training and Education Program for People Living with Primary Progressive Aphasia (STEP-LPPA)*, theoretically motivated by the Life Participation Approach to Aphasia, was designed to fill this critical gap by providing communication, psychosocial, and educational support to people with PPA (PwPPA) and their primary care/communication partners (CPs). **Aim:** Evaluate satisfaction and impact of STEP-LPPA activities, including participants' self-ratings of quality of communication life and use of personalized communication strategies. **Methods:** Three PwPPA and their chosen CPs participated in a virtual, adapted, intensive-comprehensive program. Dyads consisted of two spouse pairs and one parent/adult-child pair. PwPPA demonstrated clinical characteristics consistent with mixed (logopenic, with semantic deficits) variant PPA. PwPPA were between approximately 18-24 months post neurologist's diagnosis. Each of eight weekend days consisted of a combination of peer support groups and dyad-centered strategy selection and training, all facilitated by a speech-language pathologist. Each dyad received conversational coaching and selected additional strategies to practice from proposed evidence-based treatments. Days ended with an education program facilitated by a community expert including a neurologist, clinical neuropsychologist, recreation specialist and social worker with expertise in accessing support services/benefits. A diminishing schedule of post-program support meetings facilitated carry-over of strategies and maintenance of community connections during the follow-up phase. The utility of strategy training in supporting communication effectiveness was evaluated immediately after the program and again at a 6-month follow-up. Participants were surveyed regarding trained strategy use through a participant-reported outcome measure of program satisfaction and impact. PwPPA also described complex picture scenes to their CPs, which were coded using transcription-less main concept analysis to explore clinical feasibility of this measure. **Results:** Satisfaction survey responses indicated high levels of participant satisfaction and impact (see table 1). Participants expressed the value of both communication strategy training (*The 3-step strategy... is invaluable; The program ... gave both hope in using the strategies and techniques covered in the program, [My partner with PPA] truly looked forward to each new session.*) and peer-support (*Meeting other [care providers] was the best possible thing; It was so beneficial meeting other care givers; The program was also a 'safe' space where I could bring up difficult topics; Meeting other people with PPA. I liked the first hour with [SLP] and others with PPA. I am glad I was included in the group.*) Exploratory main concept analyses immediately post-program demonstrated proportional increases in accurate relative to missing or inaccurate information during retell to CPs, which returned to baseline at follow-up. **Discussion:** Participant feedback indicates that STEP-LPPA provided community-building and communication facilitation, with reported impact extending into the follow-up phase. Participant recommendations have informed modifications for future offerings of the program.

3.2 "The hands on learning... taught me the most": Preparing speech-language pathology students for supporting people with primary progressive aphasia

Ms. Eavan Sinden, Dr. Kate Davies, Dr. Tami Howe, Dr. Jeff Small, Ms. Breelyn Plesha

University of British Columbia, Vancouver, BC, Canada

Introduction: International calls to strengthen speech-language pathology (SLP) student education in primary progressive aphasia (PPA) have been reinforced by research showing that many clinicians feel underprepared and lack adequate training, confidence, and experience in supporting people with PPA (PwPPA) and their families. In response, enhancements were made to the University of British Columbia's School of Audiology and Speech Sciences' SLP curriculum on PPA to include (1) a case co-constructed with a PwPPA and their partner; and (2) the Community of Mentors with Primary Progressive Aphasia Supporting Students (COMPPASS) Program, an innovative online community group for PwPPA and their partners. The COMPPASS Program is the central experiential learning component, wherein students directly apply their learning by facilitating groups that implement a life storytelling intervention. The students' preparation for this role is supported by authentic case video data using an adapted PBL approach; signpost lectures on evidence-based management

of PPA, counselling, and grief-work; and an educational module with resources to support students' skill development as a life storytelling facilitator. **Aims:** The aims of this presentation are to: 1. Present the co-development and implementation of the PPA curriculum, including active and experiential pedagogical activities. 2. Describe the evolution of the COMPPASS Program. 3. Share the results of two studies on the COMPPASS Program that explore the perspectives of SLP students and PwPPA and their families respectively. 4. Discuss future innovative opportunities for enhancing student learning in PPA. **Methods:** We followed Kern's "Curriculum Development for Medical Education: A Six-Step Approach" to enhance the PPA curriculum. This involved gathering evidence from research, clinical expertise, and client perspectives (e.g., literature on management approaches for PwPPA and teaching practices for health professional students; consultations with SLPs with expertise in PPA, PwPPA, and their family members). Learning materials were co-created and developed (e.g., case video data) and an experiential learning component was designed (e.g., COMPPASS Program). Implementation has been evaluated through two consecutive research studies. Study 1 used a cross-sectional survey design to gather students' perceptions of their confidence, knowledge, and skills in working with PwPPA. Study 2 uses semi-structured qualitative interviews to explore the perspectives of PwPPA and their family members on the impact of the COMPPASS Program life storytelling student-led intervention on their psychosocial wellbeing. **Results:** The enhanced PPA curriculum has been successfully implemented over four years. Study 1 results indicated an increase in perceived confidence, knowledge, and skills among students working with PwPPA. Students found interacting with PwPPA and their partners to be the most beneficial for their learning. Study 2 data collection is underway with data analysis taking place in the Spring of 2026. Preliminary qualitative and quantitative results for this study will be presented. **Discussion:** In total, 152 SLP students have completed this curriculum from 2023 to 2026. Four years of student experience learning data and two evaluation research studies have demonstrated the positive impact of the enhanced PPA curriculum. The importance of PwPPA involvement and hands-on learning has been highlighted. Future innovative opportunities for enhancing student learning in PPA have been identified.

3.3 PPA/PPAOS Together! A community partnership for supporting people living with PPA/PPAOS

Ms. Megan Caldwell¹, Dr. Jeanne Gallée², Ms. Leslie Kot¹, Ms. Marigrace Becker³

¹University of Washington Department of Speech and Hearing Sciences, Seattle, WA, United States. ²University of Washington School of Medicine, Seattle, WA, United States. ³The Memory Hub, UW Memory and Brain Wellness Center, Seattle, WA, United States

Introduction/Aims: Primary progressive aphasia (PPA) and primary progressive apraxia of speech (PPAOS) present unique communication challenges that are often insufficiently addressed by general dementia support groups. In response, the PPA/PPAOS Together! Community Group was developed to provide a holistic, inclusive, and communication-accessible space for individuals living with PPA/PPAOS and their care partners. Hosted monthly at the University of Washington (UW) Memory Hub, this cross-departmental collaboration involves the UW Memory Hub, UW Alzheimer's Disease Research Center (ADRC), and the UW Department of Speech and Hearing Sciences, while also serving as an interprofessional training opportunity for graduate students. **Methods:** The group meets monthly for 90-minute, in-person sessions open to individuals with PPA/PPAOS and their loved ones at all stages of diagnosis and disease progression. Each meeting incorporates multiple components to address diverse needs, including a brief educational presentation and experiential activity (e.g., augmentative and alternative communication [AAC], mindfulness, music or art therapy, adaptive yoga, horticulture therapy), structured socialization, and small-group discussions which often include themed topics or resource-sharing time. Discussions are facilitated by speech-language pathologists (SLPs) who model multimodal communication strategies, including keyword writing and low-tech AAC, to support equitable participation. Sessions conclude with group singing to foster connection across communication ability levels. Graduate students in speech-language pathology and social work contribute to planning and facilitation under faculty supervision. **Results:** As of submission, 24 monthly meetings have been held and reached 50 people living with PPA or PPAOS and their care partners. Approximately 20 SLP graduate students and three master's-level social work students have participated in program development and delivery. A Spring 2024 survey, completed by a small number of attendees, indicated generally positive perceptions of the group atmosphere, content, and relevance of topics. Attendance and community reach have steadily increased over time. A follow-up survey is planned for 2026 to evaluate the current format, identify future topic priorities, and guide program refinement. **Discussion:** The PPA/PPAOS Together! Community Group represents the first statewide program in Washington specifically designed for individuals and families affected by PPA/PPAOS. Lessons learned over two years highlight the importance of multimodal communication support, flexible programming responsive to disease progression, and co-located support for individuals and care partners. This model demonstrates feasibility, sustainability, and educational value for training future professionals. The presentation will share practical tools, implementation strategies, successes, and limitations, and will invite audience discussion to inform the ongoing evolution and replication of similar programs in other communities.

Day 2 Platform Session 4 – Pathology and Imaging

10:30 AM - 11:30 AM

4.1 Spatially resolved cell-type-specific molecular drivers of anterior temporal pole neuropathology in frontotemporal lobar degeneration with TDP-43 Type C

Mr. Brian Druciak^{1,2}, Mr. Thomas Watson^{1,2}, Dr. Elena Barbieri³, Dr. Tamar Gefen³, Dr. Changiz Geula³, Dr. M. Marsel Mesulam³, Dr. David Gate^{1,2}

¹Ken and Ruth Davee Department of Neurology, Northwestern University Feinberg School of Medicine, Chicago, IL, United States. ²Abrams Research Center on Neurogenomics, Northwestern University Feinberg School of Medicine, Chicago, IL, United States. ³Mesulam Institute for Cognitive Neurology and Alzheimer's Disease, Northwestern University Feinberg School of Medicine, Chicago, IL, United States

Introduction: Frontotemporal lobar degeneration (FTLD) with TDP-43 Type C pathology (TDP-C) is a distinct subtype of FTLD characterized pathologically by pronounced unilateral atrophy the anterior temporal pole (ATL) and colocalization of phosphorylated TDP-43 (pTDP-43) and annexin A11 (ANXA11) aggregates in predominantly long, tortuous dystrophic neurites (DN) in superficial cortical laminae (cortical layers II/III). Clinically, TDP-C originating in the right ATL presents with behavioral variant FTD (bvFTD), prosopagnosia, and social deficits, but primary progressive aphasia (PPA) when originating in the left ATL. The molecular and cellular drivers of selective ATL vulnerability and hemispheric lateralization in TDP-C remain unknown. **Aims:** Utilizing spatial transcriptomics (ST) paired with single-cell RNA-sequencing (scRNAseq), we characterize the brain region-specific transcriptomic profile of TDP-C and identify the genetic pathways underlying left ATL vulnerability in TDP-C with svPPA. Moreover, we elucidate the transcriptomic and molecular drivers mediating the progression of TDP-C pathology from the ATL to the adjacent frontal gyri. Lastly, we investigate how regional transcriptomic changes contribute to the formation of pTDP-43-ANXA11 protein aggregates across multiple brain regions. **Methods:** Formalin-fix paraffin-embedded (FFPE) brain tissue samples of paired left and right ATL, inferior frontal gyrus (IFG), and middle frontal gyrus (MFG) were obtained from six confirmed TDP-C with svPPA patients and five non-neurological disease (NND) controls. Immunofluorescence staining for pTDP-43 (S409/410), ANXA11, IBA1, and MAP2 were used to visualize pathology. Spatial transcriptomic profiling of samples was performed using the 10X Genomics Visium platform. ScRNAseq data from the Religious Orders Study/Memory and Aging Project (ROSMAP) was used to deconvolve our ST data and generate high-fidelity, cell-type resolved molecular maps of TDP-C. **Results:** The left ATL exhibited the most significant transcriptomic dysregulation, with nearly all differentially expressed genes (DEGs) in the right ATL also present in the left. Minimal left-right transcriptional asymmetry in NND controls and pooled samples suggests disease-specific left ATL vulnerability rather than inherent hemispheric differences. Compared to NND, the left ATL in TDP-C showed the greatest transcriptomic dysregulation in arterial endothelial cells (EC), followed by astrocyte precursor cells (AST precursors), smooth muscle cells (SMC), and microglia. Within TDP-C, dysregulation of interneurons in the left ATL emerges as the strongest differentiator between the ATL and frontal gyrus. Across comparisons, transcriptomic dysregulation decreased with distance from the ATL (IFG > MFG), indicating a spatial pathological gradient. In all regions but the left ATL, transcriptomic changes correlated with TDP-43/ANX-11 aggregates in cortical layers 2/3. Functional enrichment highlighted neurovascular disruption, and innate immune activation as key TDP-C features. **Discussion:** Transcriptomic dysregulation of ATL specific interneurons that predominately project into cortical layers II/III explain both the observed pTDP-43-ANXA11 proteinopathy as well as the ATL's predilection to developing TDP-C. Moreover, the left ATL exhibits distinct transcriptomic features that confer preferential vulnerability to TDP-C with svPPA. Transcriptomic dysregulation across neurovascular cell types such as arterial and venous EC, SMC, pericytes, and fibroblasts point to blood-brain-barrier (BBB) impairment as an inciting disease trigger. Simultaneous innate immune activation implicates neuroinflammation as an important component of TDP-C initiation and propagation.

4.2 Left-sided ventral occipito-temporal hypoactivity in PPA with history of reading disability

Dr. Zachary A. Miller^{1,2}, Dr. Leighton B.N. Hinkley³, Dr. Isabel E. Allen⁴, Dr. Ezra Mauer^{1,2}, Ms. Celina Alba^{1,3}, Dr. Bruce L. Miller^{1,2}, Dr. Srikantan S. Nagarajan³, Dr. Maria Luisa Gorno-Tempini^{1,2}

¹UCSF Fein Memory and Aging Center, San Francisco, CA, United States. ²UCSF Dyslexia Center, San Francisco, CA, United States. ³UCSF Department of Radiology, San Francisco, CA, United States. ⁴UCSF Department of Biostatistics, San Francisco, CA, United States

Introduction: To characterize functional language activity patterns in primary progressive aphasia (PPA), comparing individuals with and without histories of reading disability (RD). **Aims:** Previously we identified elevated rates of language-based learning disabilities among PPA variants compared to the general population, via retrospective chart-based review. The most common language-based learning disability reflected within PPA was reading disability (RD). Separately, in a group of healthy adults with a history of RD, we identified a distinct pattern of reduced activity in the left-sided ventral

occipito-temporal (vOT) region, consistent with known theories of functional deficits present in individuals with developmental dyslexia. Here, using magnetoencephalography (MEG) imaging in a subset of PPA patients, we examined whether this vOT hypoactivity signal is present in PPA patients with RD histories. **Methods:** MEG data were collected from 84 PPA patients during auditory noun-verb generation and nonsense word repetition tasks using a 275-channel biomagnetometer. Stimulus-locked and response-locked MEG data was reconstructed in the beta (12-30Hz) band using a time-frequency optimized beamforming technique. We compared 23 PPA patients with documented RD (11 logopenic variant PPA, 5 semantic dementia PPA, and 7 nonfluent variant PPA) against 61 PPA patients without RD (nRD) (11 logopenic variant PPA, 30 semantic dementia PPA, and 20 nonfluent variant PPA) using atrophy measures derived from the T1-weighted MRI as a covariate at the voxel level. **Results:** After correcting for atrophy, PPA patients with RD exhibited decreased ($p < 0.05$ cluster corrected) activity in left-sided vOT regions compared to nRD. Both stimulus and response locked analyses revealed significantly weaker beta power change over left vOT peaking over time windows typically associated with hemispheric dominance for language (Figure 1). This reduction mirrored the pattern observed in healthy controls with RD, particularly affecting the left-sided vOT regions. **Discussion:** PPA patients with a history of RD demonstrate a consistent pattern of reduced left-sided vOT activity, identical to findings in older healthy individuals with a history of RD. These results underscore the validity of our retrospective chart-based review in capturing language-based learning disabilities in dementia populations and validate MEG as a tool for detecting neuronal activity patterns associated with RD histories in aging cohorts.

4.3 Neuropathological fingerprints of language in primary progressive aphasia - revisited

Ms Michelle A Los, Dr Jane K Stocks, Dr Tamar Gefen, Dr Changiz Geula, Dr Elena Barbieri, Dr M Mesulam, Dr Sandra Weintraub

Northwestern University, Chicago, IL, United States

Introduction: Primary progressive aphasia (PPA) is a clinical syndrome characterized by a gradual decline in language abilities over one to two years, occurring in relative isolation before other cognitive and behavioral domains are affected (Mesulam et al, 2012). On autopsy, brains of individuals with PPA may display a variety of neurodegenerative diseases, whose concordance with the three major clinical variants is probabilistic at best (Mesulam et al., 2022). Among the neurodegenerative diseases at the root of PPA, Alzheimer's disease (AD) is the only one for which *in vivo* biomarkers (e.g., PET scans) are available, a fact that poses major limitations to the early prediction of the neuropathology underlying PPA. While prior studies have suggested associations between language performance on standardized tests and underlying neuropathology (Mesulam et al., 2022), they have not considered measures derived from the analysis of spontaneous speech. **Aims:** In this study we aimed to examine the relationship between impairment in selected language domains (e.g., lexical-semantics, morpho-syntax) – derived from both standardized text and spontaneous speech – and autopsy-confirmed neuropathologic diagnosis in individuals with PPA. **Methods:** Data from 73 participants with PPA and confirmed postmortem diagnoses were analyzed. Standardized aphasia assessment of lexical-semantics, repetition, syntax, and motor speech metrics were available for all. Additionally, measures of lexical-semantics, morphology, syntax, and fluency derived from a narrative speech task (the re-telling of the Cinderella story). Of the 73 cases, 38 had a neuropathologic diagnosis of AD, 14 of TDP-43 proteinopathy (TDP-C), 7 of Pick's Disease (PiD), and 17 of 4R tauopathy (Progressive Supranuclear Palsy, PSP, n=8, or Corticobasal Degeneration, CBD, n=11). Linear mixed-effects regression was used to investigate between group differences. **Results:** Measures of lexical-semantic and syntax derived from standardized assessments distinguished TDP-C from all other groups. Naming had the greatest discriminative power between neuropathologies. Repetition accuracy distinguished AD pathology from TDP-C, Pick's, and PSP but not CBD. While no standardized tests differentiated between the two 4R tauopathies (CBD vs. PSP), a narrative morphology measure (% correct irregular verb inflections) significantly differentiated between them. Fluency, as measured by words per minute in the narrative task, clearly distinguished TDP-C from all other neuropathologies, with the TDP-C group significantly more fluent than other groups in this task (Thompson, 2012). **Discussion:** Standardized assessments, particularly of lexical-semantics, continue to be a valuable clinical tool in not only diagnosing the clinical subtypes of PPA but also in distinguishing amongst different neuropathologies. But narrative language measures provide more nuanced information about morphological and syntactic abilities that, in combination with information about fluency, may discriminate between CBD and PSP (Thompson, 2012). Together, these findings suggest a combination of standardized aphasia tests and measures derived from narrative speech can improve prediction of underlying neuropathologic disease in PPA.

Day 2 Poster session 3

11:30 AM - 12:30 PM

Poster webpage →



P3.1 The Late Neurodevelopmental History Questionnaire (LNHQ): A new tool to capture neurodevelopmental diversities in individuals with neurodegenerative diseases

Ms. Arianna Frijo¹, MD, PhD Salvatore Mazzeo^{1,2}, PhD Petronilla Battista³, PhD Gaia C. Santi³, Ms. Paola Santacesaria³, Ms. Elisa Bortolin^{1,2}, Ms. Giulia Bruschi^{1,2}, Ms. Maria Vittoria Corbari¹, PhD Manuela Berlinger^{4,5,6}, MD Massimo Filippi⁷, MD Maria Salsone^{1,2}

¹IRCCS Policlinico San Donato, Milan, Italy. ²Vita-Salute San Raffaele University, Milan, Italy. ³Istituti Clinici Scientifici Maugeri IRCCS, Laboratory of Neuropsychology, Institute of Bari, Bari, Italy. ⁴DISTUM, Department of Humanities, University of Urbino Carlo Bo, Urbino, Italy. ⁵Center of Clinical Developmental Neuropsychology, ASUR Marche, Area Vasta 1, Pesaro, Italy. ⁶NeuroMi, Milan Center for Neuroscience, Milan, Italy. ⁷Vita-Salute San Raffaele University, and Neurology Unit, Neurorehabilitation Unit, and Neurophysiology Service, IRCCS Ospedale San Raffaele, Milan, Italy

Introduction Alzheimer's disease (AD) and frontotemporal lobar degeneration (FTLD) are neurodegenerative conditions characterized by a range of clinical presentations at disease onset. Among these, primary progressive aphasia (PPA) represents a prominent atypical manifestation of both AD and FTLD. The factors determining why some individuals develop typical versus atypical clinical phenotypes remain unknown. Based on emerging evidence, we hypothesize that neurodevelopmental diversity affecting reading, spelling, handwriting, numerical processing, and language acquisition may predispose to selective vulnerability of specific brain networks to neurodegeneration later in life. However, exploring these conditions in adults and, in particular, in individuals with neurodegenerative conditions is a major challenge. To date, no validated instruments exist for the retrospective assessment of neurodevelopmental history in older adults, and current approaches rely largely on medical or educational records, thereby limiting systematic research in this area. **Aims** We aim to: 1) develop and validate a questionnaire for the retrospective assessment of neurodevelopmental diversity in individuals with neurodegenerative conditions; 2) determine whether early-life language-related differences constitute a source of vulnerability to neurodegeneration affecting specific language networks. **Methods** We conducted multidisciplinary meetings involving neuropsychologists, speech and language therapists, and neurologists with expertise in neurodevelopmental conditions and neurodegenerative diseases. Questionnaire items were generated based on a synthesis of existing literature, clinical questions derived from standardized diagnostic manuals, routinely used pediatric anamnestic questionnaires, and established assessment instruments previously employed in clinical practice. To validate the questionnaire, it will be administered to a cohort of individuals with confirmed neurodevelopmental conditions and to a comparison cohort without such conditions. The questionnaire will then be administered to individuals diagnosed with PPA and to individuals with other clinical variants of AD or FTLD. All participants will undergo an extended neuropsychological assessment in conjunction with the administration of the proposed questionnaire. **Results** We introduce the Late Neurodevelopmental History Questionnaire (LNHQ), a 40-item instrument assessing the following domains: language, reading, writing, handwriting, calculation, working memory, sequencing, praxis, and orientation/organization. For each domain, participants indicate whether differences or difficulties were present during childhood or adolescence. The LNHQ is designed to be administered either by a clinician or self-administered, depending on the severity of cognitive or language impairment. To enhance accessibility for individuals with PPA, each item incorporates visual and video-based stimuli to support comprehension and response. The validation study will assess the ability of the LNHQ to identify a history of neurodevelopmental diversity in individuals whose conditions have previously been established using validated tools. Among participants with neurodegenerative conditions, we anticipate that individuals with PPA will report a higher prevalence of childhood- or adolescence-onset differences in language-related domains compared with individuals with other variants of AD and FTLD. Within the PPA group, we further expect distinct patterns of early-life differences across PPA variants. **Discussion** The LNHQ could provide a novel framework for retrospectively examining neurodevelopmentally mediated vulnerability to neurodegeneration. Elucidating how early developmental diversity interacts with lifelong brain organization may offer new insights into disease mechanisms and inform preventive or resilience-oriented strategies aimed at supporting vulnerable neural networks across the lifespan.

P3.2 Support groups for people with primary progressive aphasia – An international inventory

Dr. Jeanne Gallée¹, Mrs. Mirjam Gauch^{2,3}, Dr. Anna Volkmer⁴

¹Department of Medicine, University of Washington, Seattle, Washington, United States. ²Department of Psychiatry and Psychotherapy, University Medical Center of the Johannes Gutenberg University Mainz, Mainz, Germany. ³Faculty of Healthcare and Nursing, Catholic University of Applied Sciences Mainz, Mainz, Germany. ⁴Department of Psychology and Language Sciences, UCL, London, United Kingdom

Introduction: Support groups are widely used psychosocial resources for people living with primary progressive aphasia (PwPPA) and their care and community partners (Schaffer & Henry, 2023; Taylor-Rubin et al., 2020). Yet there is limited systematic description of how these groups are structured, facilitated, and sustained across settings and countries. Support groups are often conflated with intervention-based group therapies, despite differing goals, theoretical underpinnings, and resource requirements (Volkmer et al., 2025). **Aims:** This study aimed to characterize contemporary support groups for PwPPA internationally, including facilitator backgrounds, group composition, delivery models, content, and perceived facilitators and challenges. The results will be used to develop a “support group toolkit” and will serve as the basis for future projects. **Method:** We conducted an international, cross-sectional survey of clinicians and professionals who had led a PwPPA support group within the past two years. Eligibility required that PwPPA be present at group meetings. Respondents were instructed to complete one survey per support group. The survey collected facilitator demographics and professional background; group setting and environment; group size, composition, and attendance consistency; meeting frequency and duration; diagnostic severity and representation of PPA variants; topics covered; session structure; theoretical frameworks informing practice; and approaches to evaluating group success. Open-ended questions solicited qualitative descriptions of opportunities, challenges, and advice for establishing new groups. This study was approved by the University of Washington Institutional Review Board (STUDY00019344). **Results:** A total of 15 respondents representing 15 unique support groups. Respondents were primarily speech-language pathologists/therapists, with additional representation from psychology, social work, and academic faculty, and reported practice experience ranging from [range] years. Groups were conducted across eight countries and in multiple languages, including Dutch, English, French, German, Icelandic, and Italian. Support groups were delivered in different ways, including face-to-face and digital settings. Group size varied widely (up to 30 participants), and many facilitators identified smaller groups (e.g., 4–8 participants or dyads) as most conducive to psychosocial goals. Groups commonly included PwPPA and care partners together. Meeting frequency ranged from weekly to monthly, with session durations of approximately 60–120 minutes. Formats included both time-limited cohorts and ongoing/open enrollment models. PwPPA participants typically had mild-to-moderate disease severity, with heterogeneous distributions of PPA variants; many facilitators reported that participants had not received a formal variant diagnosis. Commonly covered topics included informational counseling about PPA and its progression, personal adjustment for PwPPA, caregiving and coping, navigation of legal and social resources, and peer support. Outcome evaluation practices varied substantially, ranging from informal feedback and attendance consistency to standardized quality-of-life measures and structured questionnaires, while several groups reported no formal outcome measurement. **Discussion:** This study highlights substantial heterogeneity in how PwPPA support groups are conceptualized and delivered internationally, despite shared psychosocial goals. The results help to develop shared terminology, descriptive frameworks, and resources to support the sustainable implementation of PwPPA support groups across clinical and community contexts. Our findings provide an empirical foundation for a “support group toolkit” that can be adapted to the needs of people with PwPPA in the near future.

P3.3

Efficacy and prediction of tailored lexical retrieval cascade treatment in bilinguals with semantic or logopenic variant of primary progressive aphasia

Dr. Wenfu Bao¹, Ms. Camille A. Wagner Rodríguez¹, Dr. Núria Montagut Colomer², Ms. Sonia-Karin Marqués Kiderle¹, Ms. Júlia Filella Mercè³, Ms. Estefanía García³, Ms. María Pinart³, Dr. Jan Christian Holst Chaires¹, Dr. Laura Augé Domenech⁴, Dr. Carlota Faixa Sol⁴, Dr. Sergi Borrego-Écija², Dr. Albert Lladó², Dr. Alberto Lleó³, Dr. Juan Fortea³, Dr. Maya L. Henry¹, Dr. Raquel Sánchez-Valle², Dr. Miguel Ángel Santos Santos³, Dr. Stephanie M. Grasso¹

¹The University of Texas at Austin, Austin, United States. ²Hospital Clínic de Barcelona, Barcelona, Spain. ³Hospital de la Santa Creu i Sant Pau, Barcelona, Spain. ⁴Escola Clínica de Neuropsicologia i Patologia del Llenguatge, Barcelona, Spain

Introduction. Individuals with primary progressive aphasia (PPA) experience a gradual loss of speech and language abilities. Anomia (i.e., word-finding deficit) is one of the earliest and most prominent symptoms in semantic/logopenic variants (sv/lv). Despite no effective pharmaceutical cures, speech-language interventions have demonstrated robust positive effects. Lexical retrieval cascade treatment (LRCT), for example, has shown improvement in word naming for sv/lvPPA. However, the extant literature primarily focuses on monolingual English speakers, with little research on speech-language interventions in bilinguals, who constitute most of the world’s population. **Aims.** Addressing the critical need for systematic treatment research in bilingual PPA, this study aims to evaluate the efficacy of tailored LRCT administered to bilinguals with lv/svPPA, by examining immediate and long-term effects both within and cross languages. In addition, we seek to establish stimulus-level predictors (e.g., word frequency, phonological length) of treatment response to inform intervention practices. **Method.** We recruited 36 Spanish-Catalan bilinguals with svPPA ($n = 24$) or lvPPA ($n = 12$) in Catalonia, Spain. Participants received tailored LRCT that targets unique nouns of personal importance, assigned to each of their two languages in two distinct phases of intervention, using multiple-baseline design with control items matched to trained items for lexical characteristics within and across languages. We included cognates (i.e., word pairs sharing orthographic and/or phonological forms across languages like *dentist* and *dentista*) as treatment targets to examine their potential to facilitate cross-linguistic transfer. The primary outcome measure was naming accuracy on trained and untrained words, which were evaluated before, during, and after the treatment, as well as at three follow-ups (3, 6, and 12 months). We

built linear mixed-effects models to analyze within-language gains and cross-language transfer, and applied corrections for multiple comparisons. Principal component analysis is ongoing to investigate the effects of stimulus-level predictors before entering the model. **Results.** For within-language gains, we observed a significant *Condition* $\times$ *Timepoint* interaction ($p < .001$; Figure 1A): trained words showed improvement relative to baseline and maintained gains through one year; untrained items also improved, yet less robustly, with similar maintenance. Additionally, we found significant *Cognate Status* effects ($p < .001$), with greater naming accuracy for cognates relative to non-cognates. For cross-language transfer, a significant *Cognate Status* $\times$ *Timepoint* interaction ($p = .004$; Figure 1B) showed improvement across cognates and non-cognates, though cognates exhibited greater transfer at all timepoints. A significant *Condition* $\times$ *Cognate Status* interaction ($p < .001$) also indicated stronger transfer for cognates than non-cognates when examining trained items from the dominant to nondominant language, and vice versa. Ongoing lexical predictor analyses will clarify how word parameters influence treatment response. **Discussion.** Our results demonstrate the efficacy of tailored lexical retrieval cascade treatment in bilinguals with lv/svPPA, evidenced by significant and lasting naming improvement in both the dominant and nondominant languages. Further, strategic selection of treatment targets enhances within-language gains and cross-linguistic transfer. Together, these findings support implementing dual-language intervention approaches for bilingual speakers with progressive anomia, regardless of language dominance, and provide evidence for a culturally responsive bilingual treatment model.

P3.4 Speech reveals early clinicopathological dissociations in primary progressive aphasia subtypes

Ms Eloïse DA CUNHA^{1,2,3,4}, Dr Valeria Manera^{1,2}, Pr Raphaël Zory^{5,6}, Pr Auriane Gros^{1,2,4}

¹Speech and Language Pathology department of Nice, Faculty of Medicine, Université Côte d'Azur, Nice, France. ²Cognition Behaviour Technology Laboratory (CoBTeK), Université Côte d'Azur, Nice, France. ³Interdisciplinary Institute of Artificial Intelligence Côte d'Azur, Nice, France. ⁴Centre Hospitalier Universitaire de Nice, Nice, France. ⁵Laboratoire Motricité Humaine Expertise Sport Santé, Nice, France. ⁶Institut Universitaire de France, Nice, France

Introduction: Primary progressive aphasia (PPA) is characterized by marked clinical and neuropathological heterogeneity. Although current diagnostic frameworks delineate main clinical variants (non-fluent/agrammatic, semantic, logopenic and mixed variants) these phenotypes do not uniquely map onto underlying pathology, most commonly Alzheimer's disease (AD) or frontotemporal lobar degeneration (FTLD). This clinicopathological dissociation is most pronounced at disease onset, when diagnostic uncertainty is highest. There is therefore a critical need for sensitive functional markers capable of capturing early, pathology-linked signatures. **Aims:** We examined whether connected speech, acquired at the first consultation, contains robust temporal, acoustic, and linguistic markers that distinguish PPA phenotypes, dissociate underlying pathology, and identify distinct speech profiles for each subgroup defined by the intersection of clinical phenotype and physiotype. **Methods:** The cohort comprised 108 patients with neurodegenerative disease and 64 healthy controls. Patients were stratified by physiotype into AD (N = 49) and FTLD (N = 59), and further subdivided by clinical presentation. The AD group included amnesic AD (N = 30) and logopenic PPA (lvPPA-AD, N = 19). The FTLD group comprised behavioural variant FTD (N = 21), lvPPA-FTLD (N = 11), semantic variant PPA (svPPA, N = 13), and non-fluent/agrammatic PPA (nfvPPA, N = 14). No significant differences were observed between groups for age, sex, handedness, or educational level. Speech recordings were collected on the first clinical evaluation, prior to diagnostic stabilization, using a standardized protocol including connected speech, sentence repetition, and sustained phonation. Diagnoses were established retrospectively 2–5 years after audio acquisition, based on longitudinal clinical follow-up, neuroimaging, and cerebrospinal fluid biomarkers. Automated analyses extracted three complementary families of speech markers: temporal measures, acoustic features reflecting phonatory and spectral characteristics, and quantitative linguistic indices capturing lexical diversity, morphosyntactic structure or discourse organization. Group comparisons used non-parametric statistics with effect size estimation. **Results:** Despite being acquired at an early clinical stage, speech measures showed highly significant group differences. Effect sizes ranged from small to very large ($r = 0.026$ – 0.964), with a mean effect size of $r = 0.288$ and a median of $r = 0.249$, indicating clinically meaningful effects across multiple speech dimensions. Temporal markers, such as pause-related measures during sentence repetition and connected speech, were the most discriminative across contrasts. Linguistic measures further differentiated semantic and non-fluent profiles, while acoustic features contributed to separating AD- and FTLD-related speech patterns independently of phenotype. Finally, each subgroup defined by clinical phenotype and underlying pathology exhibited a distinct speech signature, demonstrating that connected speech captures both syndrome-level and pathology-level information. **Discussion:** Connected speech constitutes a sensitive and ecologically valid functional marker that reflects underlying neurodegenerative processes at disease onset, years before consensual diagnostic confirmation. The identification of distinct phenotype–physiotype speech profiles challenges the sufficiency of the pre-existing PPA sub-types model and supports the existence of physiological meaningful subtypes. These findings provide a strong rationale for the development of speech-based diagnostic tools and highlight the need for large-scale, cross-linguistic and cross-cultural collaborations to validate and generalize the speech-derived markers diagnostic specificity across the neurodegenerative spectrum.

P3.5 A metabolic continuum within primary progressive aphasia

Dr. Perrine LM Siguier^{1,2}, Dr. Maxime Bertoux³, Ms. Aurore Mahut-Dubos³, Prof. Thibaud Lebouvier^{3,4}, Prof. Thi Mai Tran³, Dr. Hélène Lahousse⁵, Ms. Coline Carpentier⁴, Ms. Nathalie Forestier⁴, Dr. Amandine Géraudie⁶, Ms. Sarah Maso¹, Dr. Lola Danet^{1,7}, Ms. Anaëlle Manteaux⁷, Ms. Stéphanie Delrutte⁷, Dr. Mélanie Jucla², Dr. Patrice Péran¹, Prof. Pierre Payoux^{1,8}, Prof. Jérémie Pariente^{1,7}

¹Toulouse NeuroImaging Center, UMR1214, Inserm, Toulouse, France. ²Neuropsycholinguistics laboratory, Jean Jaurès University, Toulouse, France. ³Lille Neuroscience & Cognition, U1172, Inserm, University of Lille, University Hospital of Lille, Lille, France. ⁴Resource and Research Memory Center, University Hospital of Lille, University of Lille, Lille, France. ⁵Médecine Nucléaire et Imagerie Fonctionnelle Salengro, Lille, France. ⁶Institut du Cerveau, NSERM U1127, CNRS UMR 7225, Paris, France. ⁷Neurology department of the Toulouse University Hospital, Toulouse, France. ⁸Nuclear medicine department, Toulouse University Hospital, Toulouse, France

Introduction: In order to refine the classification of primary progressive aphasia (PPA), data-driven analyses have recently been conducted. Few works used methods capable of capturing graded variations with the sole goal of demonstrating the existence of a continuum between PPA phenotypes, an approach that might albeit better reflect clinical reality. To our knowledge, such studies have never been conducted on metabolic imaging. **Aims:** The objective is to demonstrate the relevance of a multidimensional and transdiagnostic approach to PPA based on cerebral metabolism. We hypothesised that PPA could be conceptualised as falling within a metabolic continuum. **Methods:** 18F-FDG-PET scans of patients with PPA were retrospectively collected at the Toulouse and Lille Memory Clinics. Based on whole brain relative standard uptake values against a normative database of healthy controls, we conducted a profile analysis via multidimensional scaling (PAMS). PAMS is a technique allowing the identification of core profiles –here, metabolic profiles– in a sample. K-means clustering then grouped patients based on their correspondence with each profile. **Analyses:** Analyses included 139 patients comparable across centers (Toulouse: 92, Lille: 47) (12 progressive apraxia of speech, 48 logopenic PPA, 42 nonfluent/agrammatic PPA, 34 semantic PPA, 3 unclassified PPA). From this sample, emerged five core metabolic profiles. According to the average silhouette width and the gap statistic, individual correspondence with these profiles grouped patients into three clusters, strongly associated with PPA variants ($p < 0.001$; effect size = 0.77). However, the Hopkins statistic (0.634) indicated a medium clustering tendency and 15% of individuals were classified in clusters where their variant was not predominant. Besides, a sensitivity analysis indicated significant overlap (up to 46%) between variants. **Discussion:** These results confirm the validity of the reference diagnostic criteria for PPA variants, while demonstrating that their metabolic signatures are heterogeneous and not mutually exclusive. Thus, PPA can be described along a metabolic continuum. Consequently, considering a given metabolic signature, individuals with different variants of PPA may be more similar than individuals with the same variant. This study demonstrates the value of a dimensional, rather than categorical approach to PPA in order to account for their phenotypic variability. This type of approach offers prospects for personalised medicine.

P3.6 Technology-assisted Semantic Feature Analysis intervention for neurodegenerative aphasia: A single-case experimental design study of functional outcomes in communication

PhD Marion Castéra^{1,2}, PhD Céline Borg^{3,4}, PhD, Professeur Hanna Chainay¹

¹EMC Laboratory (EA 3082), Université Lyon 2, University of Lyon, LYON, France. ²CHU de Saint-Étienne, Hôpital Nord, SAINT-ETIENNE, France. ³Neurology/ Neuropsychology CMRR Unit, Hospital Nord, SAINT-ETIENNE, France. ⁴UR Confluence EA 1598, Institut Catholique de Lyon, LYON, France

Introduction: Anomia is the main complaint reported by people living with primary progressive aphasia (PwPPA) and by some people living with Alzheimer's disease (AD) presenting with predominant language impairment, with a major impact on everyday communication. Semantic Feature Analysis (SFA) has demonstrated efficacy in post-stroke aphasia [1] but remains less studied in neurodegenerative language disorders, particularly regarding its functional impact [2]. PwPPA frequently report the need for complementary home-based practice, which can be supported by digital health tools [3]. Therefore, evaluating treatment efficacy in neurodegenerative aphasia requires consideration of both objective language performance and patient- and care partner-reported communicative impact. This study evaluated technology-assisted SFA delivered via Nomemo-SFA® in people living with mild to moderate neurodegenerative aphasia. **Aims:** The aims were to: (1) assess the effectiveness of technology-assisted SFA on lexical retrieval of trained items selected according to patient-specific communication needs; (2) examine its functional relevance for everyday communication using ecological discourse measures and patient- and care partner-reported outcomes; and (3) explore generalization to untrained items and maintenance of treatment effects over a 12-month follow-up. **Methods:** A single-case experimental design (SCED) with multiple baselines across participants was used. Fifteen participants with PPA (logopenic and semantic variants) or AD completed an SFA intervention delivered via Nomemo-SFA® over 8–17 weeks, consisting of two 45-minute clinician-led sessions per week supplemented by autonomous home practice. The primary outcome was naming accuracy for trained items individually selected based on participants' communication priorities. Secondary outcomes included an ecological

discourse measure, generalization and transfer effects, and a self-reported anomia questionnaire completed by participants and their communication partners. Treatment effects and maintenance were monitored longitudinally for up to 12 months. **Results:** All participants showed improvements in naming performance for trained items following the intervention. Fourteen of fifteen participants and their communication partners independently reported reduced anomia-related complaints and greater use of communication strategies in everyday life. Maintenance of treatment gains was observed for up to 12 months in some participants, predominantly those with the semantic variant. Among participants with the logopenic variant, four out of five did not return to pre-treatment performance levels at follow-up. Generalization to untrained intra-conceptual items was observed in a subset of participants, mainly those with the semantic variant. Discourse measures indicated positive changes in several participants, particularly those with the logopenic variant, including increased discourse informativeness and greater use of lexical circumlocution strategies. **Discussion:** Technology-assisted SFA delivered via Nomemo-SFA®, combining clinician-led sessions with autonomous practice, was associated with improvements that extend beyond isolated lexical performance gains in neurodegenerative aphasia. The inclusion of patient- and care partner-reported outcomes provides a more comprehensive view of functional communication changes in daily life. Personalized item selection and home-based practice may support engagement in therapy and the adoption of compensatory strategies. Variability in treatment response across PPA variants and AD highlights the heterogeneity of neurocognitive profiles and communicative adaptation patterns in neurodegenerative aphasia, supporting the relevance of personalized, technology-enhanced speech-language interventions that integrate patient and partner perspectives.

P3.7 Classifying frontotemporal dementia using artificial intelligence: A systematic review

Dr Samuel L Warren, Mr Ângelo Bumanglag, Professor Muireann Irish

The University of Sydney, Sydney, NSW, Australia

Introduction: Artificial intelligence (AI) methods are rapidly changing the way researchers approach the early and accurate diagnosis of dementia. This has led to widespread adoption of machine learning (ML) and deep learning (DL) models in Alzheimer's disease (AD) research; however, research is lacking on other related diseases, such as frontotemporal dementia (FTD). This dearth of knowledge is problematic as FTD presents unique diagnostic challenges including heterogeneous clinical subtypes (i.e., primary progressive aphasia [PPA] variants), overlapping symptom profiles, and relatively small clinical datasets. This systematic review aimed to understand which ML and DL methods can accurately and reliably classify FTD syndromes and determine the clinical viability of current AI-based classification techniques for use in behavioural variant FTD (bvFTD) and PPA syndromes. **Methods:** We identified and reviewed relevant articles using a keyword search of popular databases (PubMed and Scopus) and risk-of-bias assessments (QUADAS-2). Selected articles had to apply AI methods to the individual-level prediction of semantic dementia (SD), right temporal variant FTD, bvFTD, progressive non-fluent aphasia (PNFA), or logopenic progressive aphasia. **Results:** Our search resulted in 62 articles containing approximately 120 different FTD AI classification scenarios. Most of these studies performed FTD classification with ML methods (74.2%)—such as support vector machines—used structural MRI data (43.5%), and k-fold cross-validation designs (83.1%). Similarly, the majority of studies (58.1%) exclusively performed binary classification (e.g., SD vs. controls) and most (74.2%) classified FTD subtypes from each other (e.g., SD vs. PNFA) or related diseases (e.g. AD). **Discussion:** AI classification approaches are increasingly used to diagnose FTD. We discuss specific recommendations to promote best practices for future model development and methods for applying AI to syndromes lacking data, such as the PPAs.

P3.8 Graph theory parameter differences in primary progressive aphasia subtypes

Dr. Maria Diez-Cirarda¹, Dr. Gabriel Gonzalez-Escamilla^{2,3}, Dr. Lucia Fernandez-Romero¹, Dr. Sergiu Groppa^{2,3}, Dr. Cristina Delgado-Alonso¹, Ms. Silvia Oliver-Mas¹, Ms. Yadhira Barroso-Rosales¹, Ms. Lidia Gil-Moreno⁴, Dr. Miguel Yus-Fuertes⁴, Dr. Jorge Matias-Guiu¹, Dr. Jordi A. Matias-Guiu¹

¹Department of Neurology, Hospital Clínico San Carlos, Health Research Institute 'San Carlos' (IdISCC), Universidad Complutense de Madrid, Madrid, Spain. ²Department of Neurology, Saarland University, Homburg, Germany. ³Department of Neurology, Saarland University hospital, Homburg, Germany. ⁴Department of Radiology, Hospital Clínico San Carlos, Health Research Institute 'San Carlos' (IdISCC), Universidad Complutense de Madrid, Madrid, Spain

Introduction: Primary progressive aphasia (PPA) is a neurodegenerative syndrome characterized by progressive language impairment associated with distinct patterns of distributed brain atrophy. Neuroimaging studies have shown that each PPA subtype presents specific structural and functional alterations affecting large-scale language networks. However, little is known about network-level organization in PPA. Graph theory offers a powerful framework to characterize brain connectivity. Applying graph-based approaches to language subnetworks may provide deeper insights into the neural mechanisms underlying PPA subtypes. **Aims:** The aim of this study was to evaluate structural and functional brain differences in language subnetworks among PPA subtypes. **Methods:** Twenty-two logopenic PPA (lvPPA), 23 non-fluent PPA (nfvPPA), and 15 semantic PPA (svPPA) patients were recruited. Participants underwent a comprehensive neuropsychological assessment and structural magnetic resonance imaging (MRI). The SENAAS atlas was used to analyze

64 language-related brain regions, divided into three subnetworks: CORE (regions primarily involved in language production and comprehension), MEMORY (regions associated with semantic and verbal memory), and VISUAL (regions related to reading and visual word recognition). Gray matter volume and graph theory parameters were evaluated.

Results: Regarding gray matter volume, nvPPA patients showed greater volumes in the MEMORY ($p = .010$) and VISUAL ($p = .003$) subnetworks compared to lvPPA and svPPA patients, which was associated with better cognitive performance ($p < .001$). In terms of network topography, nvPPA patients exhibited lower assortativity ($p = .001$) and higher modularity ($p < .001$), which translated into higher global network efficiency ($p = .044$) compared to lvPPA and svPPA patients. Lower assortativity ($p = .052$) and higher modularity ($p = .001$) were associated with better cognitive performance. **Discussion:** These findings suggest that graph theory-based connectivity measures and language subnetwork analyses may represent valuable tools for differentiating PPA subtypes and for improving the understanding of the underlying neural mechanisms.

P3.9 Differential vulnerability of cognitive flexibility components, and their neural substrates, in frontotemporal dementia

Dr Tao Chen^{1,2}, Dr Rebekah Ahmed^{1,3}, Dr Ya Wang⁴, Dr Olivier Piguet^{1,2}, Dr Muireann Irish^{1,2}

¹The University of Sydney, Brain and Mind Centre, Sydney, NSW, Australia. ²The University of Sydney, School of Psychology, Sydney, NSW, Australia. ³The University of Sydney, Central Clinical School, Sydney, NSW, Australia. ⁴School of Psychology, Capital Normal University, Beijing, China

Introduction: Cognitive flexibility is a key component of adaptive behaviour and can be broadly divided into externally driven flexibility (i.e., responding to environmental demands), and internally driven flexibility (i.e., relying on self-generated strategies and internal representations). These two forms of flexibility are proposed to be differentially affected across frontotemporal dementia (FTD) syndromes, particularly behavioural variant frontotemporal dementia (bvFTD) and semantic dementia (SD). However, the nature of these behavioural impairments and their underlying neural substrates remain incompletely understood. **Aims:** This study aimed to determine whether externally and internally driven cognitive flexibility show dissociable patterns of impairment in bvFTD and SD, and to identify the distinct neural correlates associated with each form of cognitive flexibility. **Methods:** Forty-five patients with bvFTD, 25 patients with SD, and 41 healthy older controls were recruited for this study. Participants completed the Trail Making Test (TMT) to assess externally driven cognitive flexibility and an animal fluency task to index internally driven cognitive flexibility, operationalised as switching between semantic subcategories. High-resolution structural MRI data were acquired in all participants. Voxel-based morphometry was used to characterise patterns of grey matter atrophy in patient groups and to examine brain-behaviour relationships associated with performance on each cognitive flexibility measure. **Results:** Relative to Controls, both bvFTD and SD groups showed significant impairments on the two flexibility measures. Crucially, however, internally driven cognitive flexibility was disproportionately impaired in SD compared to bvFTD, reflected by fewer semantic switches during fluency. In contrast, bvFTD patients exhibited more pronounced deficits in externally driven cognitive flexibility compared to the SD group. Voxel-based morphometry revealed that externally driven cognitive flexibility impairments (i.e., on TMT) in bvFTD were associated with atrophy in frontal regions, including the middle and superior frontal gyri, while internally driven cognitive flexibility (i.e., animal fluency) was linked to medial orbital frontal cortex and rectus gyrus atrophy. In SD, externally driven cognitive flexibility on the TMT showed no significant neural correlates, while internally driven flexibility was associated with predominantly left-lateralised temporal and medial temporal regions. **Discussion:** Using two common neuropsychological tests, we show disease-specific patterns of externally and internally driven cognitive flexibility in bvFTD and SD, supported by distinct patterns of neural degeneration. By clarifying syndrome-specific behavioural profiles and neural substrates across the FTD spectrum, this study advances mechanistic understanding of cognitive inflexibility in neurodegenerative disease. The results further highlight the importance of differentiating between flexibility processes when developing intervention strategies for bvFTD and SD.

P3.10 Comparative neuroanatomy of object and generative naming impairment in behavioral variant frontotemporal dementia and primary progressive aphasia

Ms. Grace Lee, Mr. Jordan Behn, Dr. Elena Barbieri, Dr. Borna Bonakdarpour

Northwestern, Chicago, Illinois, United States

Introduction: Behavioral variant frontotemporal dementia (bvFTD) is a neurodegenerative syndrome that presents behavioral changes such as apathy, social inhibitions, and impulsiveness (Snowden et al., 2019). Patients with bvFTD also present with deficits in executive function and language (Cappa et al., 1998). Primary progressive aphasia (PPA) is a syndrome of progressive language decline with deficits in other cognitive domains presenting later in the course. Previous findings demonstrated a correlation between naming deficits and atrophy in the left temporal lobe for both PPA and bvFTD (Lukic et al., 2021). Behavioral variant frontotemporal dementia (bvFTD) and primary progressive aphasia (PPA) both present with impairments in naming and word finding. However, the underlying neural mechanism could be different in each syndrome. **Aims:** The purpose of this study was to investigate patterns of grey matter (GM) atrophy associated with impaired object and generative naming in bvFTD and PPA to compare the neuroanatomic features

of both syndromes. **Methods:** Participants in this study included 143 bvFTD, 69 PPA, and 118 healthy controls from the ALLFTD Research Study (Table 1). Boston Naming Test (BNT), and Multilingual Naming Test (MINT) were used as object naming measures. Generative naming was evaluated using average scores for animal and vegetable fluency tests. The Benson Complex test was used as a control measure of visuospatial function. Voxel-based morphometry (VBM) was performed in the CAT12 toolbox to visualize atrophy patterns and regression analyses. Participants' age and sex were entered as covariates. Laterality Index (LI) was calculated for all clusters. **Results:** The atrophy maps for bvFTD and PPA are presented in Figure 1A and B respectively. As demonstrated in Figure 2, there was a positive correlation between bilateral temporal lobe cortical volume and both object and generative naming in bvFTD and PPA (left > right). Correlation to cortical volume was greater in the left hemisphere in the PPA group. Categorical fluency scores were also correlated positively with the bilateral frontal lobe cortical volumes (left > right) but only in the bvFTD group (Figure 2A, C & E). Benson complex test scores correlated to positively with cortical volume in the dorsal parietal lobes in bvFTD and PPA, which were distinct from perisylvian language zone. **Discussion:** Our results indicate that picture naming in both syndromes was associated with temporal lobe cortical volume, and uniquely asymmetric (left > right) in PPA. Also, while generative naming impairment depended on atrophy in temporal lobes for both groups, it was only associated with cortical volume loss in the frontal regions in bvFTD, suggesting a greater influence of executive dysfunction on generative naming in bvFTD than in PPA. The double dissociation between atrophy patterns for naming and visual tasks underscores the specificity of these effects. Together, our findings clarify the neural mechanisms underlying naming impairment in bvFTD and PPA.

P3.11 Examining reporting of dose and intensity in speech-language, cognitive, and psychological interventions for primary progressive aphasia (PPA): A systematic review

Miss Fern E Rodgers, Dr Chris Hardy, Professor Suzanne Beeke, Associate Professor Anna Volkmer

University College London, London, United Kingdom

Introduction: Primary progressive aphasia (PPA) describes a group of “language-led” dementias that are characterised by progressive impairment of speech, language and communication (Gorno-Tempini et al., 2011). Despite increasing evidence in support of behavioural interventions for PPA, particularly speech and language therapies, there is limited consensus regarding optimum dosage and intensity of these (Wauters et al., 2024). Understanding how much therapy is required for people with PPA, and with what intensity it should be delivered, is crucial for informing clinical service provision and achieving best-possible outcomes for patients. **Aims:** The aim of this study was to systematically review the current research literature on behavioural interventions for PPA to explore what is reported on dosage and intensity, and in how much detail, using the Multidimensional Dose Articulation Framework (MDAF; Hayward et al., 2021) as a conceptual lens for data extraction (Harvey et al., 2023). **Methods:** This study replicated and extended the systematic review by Wauters et al. (2024). The search was conducted across relevant databases (AMED, CINAHL Plus, Embase, LLBA, MedLine, PubMed, PsycInfo, SCOPUS, WoS) using search terms designed to return studies of behavioural interventions targeting speech and language, cognition, and psychological wellbeing in PPA. Interventions with pharmacological or neurostimulation components were excluded. Data on dosage and intensity of intervention delivery was extracted using the MDAF. Data was extracted separately for the ‘main’ intervention(s) described and any homework/home practice protocols (if present) separately. To investigate the level of detail provided by each study for each MDAF dose dimension, a traffic light system was developed to code completeness of reporting; “red” if no information was provided for a dose subcategory, “yellow” if information was provided but was unclear, incomplete, or required manual calculation by the reviewer, and “green” if the information was clearly provided. **Results:** Database searches identified 11,844 papers to be screened (after removal of duplicates). After screening titles, abstracts, and then full texts, 68 papers were included in this review. Across these 68 papers, 94 ‘main’ intervention dosages were described, and 47 also described ‘homework/home practice’ dose. The level of detail in which dose was reported was highly variable, with ‘sessions’ being the most consistently well described MDAF dose dimension, whereas more granular dimensions were less likely to be described, either in detail or at all. Dose was described in greater depth for ‘main’ interventions than ‘homework/home practice’ interventions. **Discussion:** Behavioural interventions for PPA would benefit from reporting dose and intensity parameters in more depth and granularity. There is a need for consensus around the conceptualisation, capture, and reporting of dose, intensity, and scheduling of behavioural interventions for people with PPA. By prioritising the refinement of dosage, we can better understand the intervention efficacy, feasibility, and potential for implementation, ultimately improving outcomes for patients. Researchers should also consider how to improve capture and reporting of ‘homework’ dose. **Keywords:** Primary Progressive Aphasia, dose, intensity, systematic review, behavioural intervention, speech and language

P3.12 Subjective word-finding complaints in older adults: Development and validation of a novel self-reported questionnaire

Mr. Fahed El-Khalidi^{1,2}, Ms. Anna Marier^{1,2}, Dr. Paolo Vitali^{1,3}, Dr. Sylvia Villeneuve^{1,2,4,5}, Dr. Maxime Montembeault^{1,2,3,4,5}

¹Douglas Research Centre, Montréal, Canada. ²Integrated Program in Neuroscience, McGill University, Montréal, Canada. ³McGill University Research Centre for Studies in Aging, Montréal, Canada. ⁴StoP-AD Centre, Montréal, Canada. ⁵Department of Psychiatry, McGill University, Montréal, Canada

Introduction: Word-finding impairments are a central symptom of primary progressive aphasia (PPA) (Gorno-Tempini et al., 2011), but they are also reported in non-linguistic predominant neurodegenerative syndromes like Alzheimer's dementia. In parallel, word-finding difficulties are the most frequent self-reported complaint by cognitively normal older adults (CU). With emerging studies suggesting associations with AD biomarkers in CU (Montembeault et al., 2022), it is possible that subjective word-finding complaints (SWFC) could be an early indicator of a neurodegenerative process. However, the nature and clinical significance of SWFC in preclinical stages remains unclear. There is currently no validated instrument designed to comprehensively assess SWFC. Existing research currently assesses SWFC using isolated items from broader questionnaires which inadequately capture the complex, multifaceted nature of SWFC. Furthermore, while demographic influences have been observed on subjective memory/cognitive complaints, we do not know how these factors can affect the severity of SWFC. **Aims:** To develop and validate a new SWFC questionnaire that elucidates how they manifest in older adults. We assessed its 1) psychometric properties 2) demographic (age, sex, years of education) and clinical (MMSE, diagnostic status (CU vs mild cognitive impairment (MCI)) correlates. **Methods:** 290 older adults (CU=193, MCI=97) from the PREVENT-AD cohort completed the newly designed questionnaire. The internal consistency of the questionnaire was assessed using Cronbach's alpha. Mean severity scores for each questionnaire item were computed to inspect its distribution. Construct validity was examined through principal component analysis (PCA). Relationships of demographic (age, sex, years of education) and clinical variables (MMSE, diagnostic status) with total and domain-specific SWFC scores were analyzed, adjusting for the same demographic and clinical variables as covariates. **Results:** Using rigorous questionnaire development procedures, French and English versions of a 29-item scale were developed. The questionnaire showed strong internal consistency (Cronbach's alpha = 0.926) and showed a normal distribution. Items involving proper nouns emerged as some of the most frequently endorsed SWFC among CU, while items assessing daily and social impacts were the least endorsed. PCA revealed four distinct factors: General SWFC and emotional consequences, SWFC-related errors, SWFC daily and social life impacts, and proper noun retrieval difficulties. Older age was moderately but significantly associated with higher total SWFC scores. Older age and female sex were also associated with more subjective proper noun retrieval difficulties. Higher education was associated with more general SWFC and emotional consequences. MCI participants reported more SWFC daily and social life impacts than CU. **Discussion:** The questionnaire allowed us to better characterize how SWFC manifest in older adults. The novel SWFC questionnaire will facilitate research aimed at identifying thresholds associated with adverse outcomes, including biomarker positivity and clinical progression, and will help clarify the role of SWFC in the context of neurodegenerative diseases such as PPA and Alzheimer's disease. These studies will inform the development of a clinically oriented shorter version of the questionnaire to serve as a low-cost, non-invasive screening tool in the general population.

P3.13 Argument structure production in primary progressive aphasia (PPA)

SLP Tereza C Braga, SLP Cecilia C Nogueira, SPL Caroline M de Araújo, Professor Paulo Caramelli, Professor Leonardo C de Souza, SLP Aline C Campanha, Professor Elisa Resende, Professor Karoline C Carmona, Professor Rui Rothe-Neves, Professor Thais H Machado

UFMG, Belo Horizonte, Minas Gerais, Brazil

Introduction: The verb is the central nucleus of the sentence, determining its syntactic and semantic structure by selecting and organizing its arguments. In language disorders such as aphasia and primary progressive aphasia (PPA), verbs are more vulnerable than other grammatical classes due to their morphological complexity and lower semantic transparency. The three PPA variants (nonfluent/agrammatic, logopenic, and semantic) show distinct patterns of linguistic impairment depending on the affected brain regions. **Aims:** To characterize argument structure production in individuals with PPA, identifying difficulties in verb selection, syntactic organization, and thematic role assignment. **Methods:** Observational, cross-sectional, and descriptive-analytical study with a mixed-methods approach, conducted within a multicenter research project. Eighteen individuals diagnosed with PPA were assessed using the Northwestern Assessment of Verbs and Sentences (NAVS). Data were transcribed, statistically analyzed, and qualitatively interpreted. **Results:** Eighteen subjects participated, totaling 576 observations. Mean age was 65.6 years, and mean education was 12.4 years. Nonresponses accounted for 15.8% ($\chi^2[2] = 28.1$; $p < 0.001$). Education ($\beta = -0.1333$; $p < 0.001$) and PPA variant ($p < 0.001$) significantly influenced nonresponse, while age did not ($p > 0.05$). Each additional year of education reduced the likelihood of nonresponse by 12.5% (OR = 0.875). Argument inversion was affected by sentence type ($p < 0.001$) and PPA variant ($p = 0.022$), being more frequent in trivalent structures ($p < 0.001$) and in the Semantic variant. **Discussion:** The findings indicate

that, when participants were able to produce sentences, they successfully employed all required arguments provided by the task. Consequently, performance was primarily assessed through the ability to organise these arguments in the appropriate order according to their respective thematic roles, which constitutes a robust indicator of semantic–syntactic competence. The inversion of thematic roles emerged as a salient marker of impairment, modulated by both sentence structure and clinical subtype. This error pattern was especially prominent in the Semantic variant, reflecting the substantial reliance on intact semantic knowledge for the identification and correct assignment of thematic roles. By contrast, individuals with the Non-fluent/agrammatic and Logopenic/Mixed variants demonstrated statistically comparable performance, plausibly explained by the relative preservation of semantic representations in the early stages of these variants. A further key finding was the significantly increased likelihood of errors in sentences involving three-argument verbs, underscoring the impact of verbal valency and argument structure complexity on linguistic processing. These results reinforce the view that greater syntactic and argumental complexity places disproportionate demands on a compromised language system. In addition, higher levels of formal education were associated with an increased probability of successful sentence production, supporting the notion that cognitive reserve plays a protective role in mitigating language impairment in PPA. This study offers relevant contributions to speech and language therapy. It highlights the diagnostic and clinical relevance of argument structure complexity and educational background, and supports intervention approaches that target the syntax–semantics interface.

P3.14 Symptom-led staging in PPA: A pilot investigation of the perspectives of care partners

Dr Cathleen Taylor-Rubin^{1,2,3}, Ms Rachel M Kingma¹, Ms Belinda McDonald², Dr Chris JD Hardy⁴

¹Uniting War Memorial Hospital, Sydney, NSW, Australia. ²Macquarie University, Sydney, NSW, Australia. ³University of Technology, Sydney, NSW, Australia. ⁴University College London, London, United Kingdom

Introduction: The fronto temporal dementia language variants, nonfluent agrammatic variant primary progressive aphasia (nfavPPA) and semantic variant primary progressive aphasia (svPPA), present complex management challenges for clinicians and individuals with PPA and their families. The symptom-led staging system and the PPA Progression Planning Aid (“PPA-Squared”) proposed by Hardy and colleagues (2023), describe the evolution of nfavPPA and svPPA, informed by the lived experience of care partners (CPs). Qualitative data collected from CPs who participated in the original Hardy et al., (2023) study suggested that interacting with the information could cause distress, particularly when anticipating future symptoms. This concern could be a potential barrier to uptake of the tool into clinical practice. Our research questions were therefore; **(1)** In a clinical setting, did CPs report their interaction with the symptom-led staging and PPA-Squared was confronting? **(2)** Was interaction with the symptom-led staging and PPA-Squared associated with CPs’ future planning? **Method:** Five care partners (CPs) of people with PPA completed an anonymous survey, including provision of personal comments, on their experience of the symptom led- staging system and PPA-Squared. Each CP had an individual consultation with one of two co-authors; CTR or BMD, both experienced speech pathologists. During the consultation, each CP was encouraged to use the information presented to identify the stage their person with PPA was currently experiencing. Data was analysed via quantitative measures for the survey responses and qualitative measures for the consultations. **Results:** Four CPs identified as female and one male. Four were spouse /partners and one a sibling. Two reported on their pwPPA living with nfavPPA and three with svPPA. At the time of data collection, ages of people with PPA ranged from 62 to 78 years. The evaluation form consisted of eight Likert scale questions. The average time from diagnosis to data collection was 4 years, with one CP completing the evaluation one year post diagnosis. Responses to the Likert evaluation scales indicated that; **(1)** The information was provided in accessible language, **(2)** 1/5 CPs rated the information as minimally confronting; 2/5 as mildly confronting and 2/5 as moderately confronting. **(3)** 2/5 CPs rated the information as definitely impacting future planning, 2/5 as moderately impactful and 1/5 as minimally to mildly impactful on future planning. **(4)** All CPs rated the overall process as helpful. **(5)** Qualitative analysis of comments supported that the information **(6)** Provided a sense of some control and knowing what to expect **(7)** Aided decisions about future planning **(8)** Was less confronting when CPs had received previous education about PPA. **Discussion:** In this pilot investigation we demonstrated that when presented in a supported and person-centred frame, the use of the prototypical PPA Squared tool and the staged symptoms can be a positive experience for care partners and positively impact their future planning. Our preliminary data suggest information may be more confronting to those living in the early years post diagnosis. Provision of early education and information preceding presentation of the staging information and PPA squared tool may be the most beneficial approach.

P3.15 Neural encoding and decoding during picture naming in nonfluent and logopenic variants of primary progressive aphasia

MA Giada Antonicelli^{1,2}, MS Dylan Davis³, PhD Pooja Prabhu³, MS Celina Alba¹, MD Zachary Miller¹, PhD Leighton Hinkley³, PhD Corby Dale³, MD, PhD Maria Luisa Gorno-Tempini¹, PhD John Houde³, PhD Srikantan Nagarajan³

¹Fein Memory and Aging Center, Department of Neurology, University of California San Francisco, San Francisco, CA, United States. ²Basque Center on Cognition Brain and Language, San Sebastián, Spain. ³Department of Radiology and Biomedical Imaging, University of California San Francisco, San Francisco, CA, United States

Introduction: Naming objects can be challenging for different reasons across primary progressive aphasia (PPA) variants. The semantic variant (svPPA) is the most impaired therein due to loss of conceptual knowledge, while in the logopenic (lvPPA) and nonfluent (nfvPPA) variants the struggle stems from hindered lexical retrieval and motor execution/planning, respectively. Little is known on whether compensatory mechanisms are in place in lvPPA and nfvPPA during lexico-semantic tasks, in line with the overrecruitment of visual areas previously reported in svPPA. **Aims:** This work investigates neuromagnetic correlates of lexico-semantic processing and the availability of semantic representations in lvPPA and nfvPPA, to further characterize these PPA phenotypes. **Methods:** Neuronal activity from 20 healthy controls (HC), 14 nfvPPA and 12 lvPPA was recorded using a 275-channel whole-head magnetoencephalography (MEG), while participants named 100 visually presented color line-drawings of living and non-living entities. After coregistering the MEG signal to each individual's T1 MRI, we performed a time-frequency analysis on the spatially normalized source-level data, in the theta (3-7Hz), alpha (8-12Hz), beta (12-30Hz), low gamma (30-55Hz) and high gamma (63-117Hz) bands to determine stimulus-locked activation across groups. We analyzed the reconstructed data at the whole brain level as well as in regions of interest (ROI) implicated in semantic (anterior temporal lobe), lexical (middle temporal gyrus), phonological (angular, supramarginal, superior temporal gyri), and sensory (fusiform and lingual gyri) processing, as well as the inferior frontal gyrus for its role in semantic control. To test group differences in conceptual representations that presumably occur during the identification of pictures and retrieval of their name, we implemented sensor-level neural decoding of living vs nonliving objects using a windowed bootstrap routine robust to class imbalance and small sample size. Significance of pairwise group comparisons in both encoding and decoding were assessed using age-corrected cluster permutation t-tests. **Results:** Statistics highlighted reduced desynchronization in PPA, which was concentrated in alpha and beta bands over motor, parietal and ventro-occipitotemporal areas for lvPPA, while it mainly fell within low-gamma, beta, and alpha bands in motor and inferior frontal regions for nfvPPA. ROI time courses revealed hyperactivation in lvPPA across all locations except bilateral supramarginal and angular gyri most visible in theta and alpha frequencies. Finally, both groups displayed lower semantic decodability than controls during the lexico-semantic processing window (150-400 ms) but also at later stages, with the effect being most pronounced over left temporal sensors in lvPPA and left frontal sites in nfvPPA. **Discussion:** Overall, we found altered brain dynamics for both lvPPA and nfvPPA performing a picture naming task. lvPPA overrecruited visual, motor, phonological, lexical, and semantic areas bilaterally in an effortful attempt to retrieve the intended word; nfvPPA overrecruited regions related to motor planning and execution, which are the main loci of atrophy in this population. Decoding results further suggest that although semantic representations are generally spared in both these PPA variants, their accessibility is impinged by the 'system noise' stemming from disease-specific deficits. This study highlights the potential of neural decoding to evaluate the integrity/availability of lexico-semantic representations in clinical populations.

P3.16 Stimulability testing to predict script training success in nonfluent/agrammatic primary progressive aphasia

Dr. Bárbara Costa Beber¹, Dr. Lisa D. Wauters², Ms. Karinne Berstis², Ms. Paige Brister², Ms. Alisa Ishikawa², Ms. Carly Millanski², Dr. Rachel Tessmer³, Dr. Stephanie Grasso², Dr. Jessica D. Richardson⁴, Dr. Maria Luisa Gorno-Tempini⁵, Dr. Katarina L. Haley⁶, Dr. Maya L. Henry²

¹Universidade Federal de Ciências da Saúde de Porto Alegre - UFCSPA, Porto Alegre, RS, Brazil. ²University of Texas at Austin, Austin, TX, United States. ³VA Pittsburgh Healthcare System, Pittsburgh, PA, United States. ⁴The University of New Mexico, Albuquerque, NM, United States. ⁵University of California, San Francisco, San Francisco, CA, United States. ⁶University of North Carolina-Chapel Hill, Chapel Hill, NC, United States

Introduction: Video Implemented Script Training for Aphasia (VISTA) is a behavioral intervention for individuals with the non-fluent/agrammatic variant of primary progressive aphasia (nfvPPA) (Wauters et al., 2024). VISTA targets learning, automatization, and conversational usage of personalized content, facilitated by unison speech production practice with an audiovisual model (Henry et al., 2018). Previous research has demonstrated that individuals with nfvPPA benefit from treatment with VISTA, but response to treatment varies considerably between participants. Identifying predictors of treatment response is crucial for understanding VISTA candidacy. **Aims:** This study aimed to determine whether pre-treatment stimulability testing can predict the magnitude of treatment response following VISTA. We hypothesized that pre-treatment stimulability would predict post-treatment accuracy. **Methods:** 25 individuals with nfvPPA participated in the study. Six personalized scripts were created for each participant (4 trained and 2 untrained). The intervention comprised twice-weekly clinician-led VISTA sessions of approximately 45 minutes occurring over six weeks. To complement clinician-led sessions, participants independently engaged in a minimum of 30 minutes of unison speech production with a video model of a healthy speaker between sessions. The primary VISTA outcome measure was average accuracy of script production during script probes (e.g., "Tell me about your family") at pre-treatment (three probes) and post-treatment (two probes). A stimulability test was conducted in the final pre-treatment assessment session comprising four steps for each script: (1) pre-stimulability script production probe; (2) viewing the script video twice without speaking; (3) two unison speech practice trials with the script video; and (4) post-stimulability script production probe. Variables extracted from the stimulability assessment were the average number of scripted words produced during the unison speech practice

trials and the proportion of potential of maximum gain (PMG) between pre- and post-stimulability script production probes. Four mixed-effects regression models assessed the relationship between each of the stimulability variables (predictor variables) and VISTA outcomes for trained and untrained scripts (response variables). Timepoint (pre- vs. post-treatment) and Mini Mental State Examination (MMSE) were also included as predictors, and the participant ID variable was modeled as a random effect. **Results:** Significant two-way interactions between PMG and timepoint indicated that higher PMG in the stimulability test was associated with higher post-treatment accuracy for both trained and untrained scripts. There was also a significant interaction between MMSE and timepoint for trained scripts, indicating that higher MMSE scores were associated with higher accuracy for trained scripts at post-treatment. In contrast, average unison speech accuracy did not significantly interact with timepoint in predicting outcomes for either trained or untrained scripts, although MMSE by timepoint interactions were significant for trained and untrained scripts (see Table 1 for a summary of all results). **Discussion:** Stimulability for short-term learning of scripted content was predictive of response to treatment, but initial ability to speak in unison with the training video was not. The significance of PMG as a predictor supports the clinical utility of a brief, structured stimulability assessment to inform treatment planning. This is particularly relevant given the time-sensitive nature of interventions in progressive conditions such as PPA.

P3.17 Spelling accuracy in logopenic variant primary progressive aphasia: Effects of lexicality, length, and frequency

Dr Nomiki Karpathiou^{1,2}, Dr Kyriaki Neophytou³

¹University of the Peloponnese, Department of Speech and Language Therapy, Kalamata, Greece. ²Athens Alzheimer's Association, Athens, Greece. ³University of Nicosia, Department of Social Sciences, School of Humanities and Social Sciences, UNIC Athens, Athens, Greece

Introduction: Spelling impairment is common in the logopenic variant of primary progressive aphasia (lvPPA) yet, the psycholinguistic factors influencing spelling accuracy are not well characterised. This issue is particularly important in languages such as Greek, which exhibit relatively transparent phoneme–grapheme correspondences but persistent ambiguity at the level of grapheme selection, with multiple orthographic representations for several phonemes. These characteristics place additional demands on lexical–orthographic knowledge, making Greek a useful context for examining how different psycholinguistic variables may affect spelling performance in lvPPA. **Aims:** The present study aimed to examine the influence of lexicality, orthographic length and word frequency on spelling accuracy in Greek-speaking individuals with lvPPA, using multilevel modelling that accounts for participant- and item-level variability. **Methods:** Eleven participants with lvPPA completed a spelling-to-dictation task comprising 20 words and 12 nonwords (352 trials across all participants). Accuracy was coded as a binary variable (0 = incorrect, 1 = correct). Two planned mixed-effects logistic regression models were fitted with random intercepts for participant and item, and accuracy as the dependent variable. Model 1 included all items and tested lexicality (words versus nonwords) and length (number of letters, z-scored). Model 2 was restricted to real words and assessed fixed effects of length and frequency (log-scaled, z-scored). Effect sizes are reported as odds ratios (OR) with 95% confidence intervals (CI). Predicted probabilities were derived from fixed effects. **Results:** In Model 1, spelling accuracy decreased with increasing length, $OR = 0.44$, 95% CI [0.32, 0.61] $p < .001$. Lexicality also predicted performance, $OR = 0.57$, 95% CI [0.38, 0.84], $p = .0055$, with slightly lower accuracy for words than nonwords at mean length (predicted $p = .88$ vs. $.93$). In Model 2, longer words were associated with reduced odds of correct spelling, $OR = 0.41$, 95% CI [0.27, 0.62], $p < .001$, whereas higher-frequency words showed increased odds, $OR = 2.67$, 95% CI [1.76, 4.04], $p < .001$. Predicted accuracy ranged from approximately $p = .58$ for long, low-frequency words to $p = .98$ for short, high-frequency words. **Discussion:** Spelling accuracy in lvPPA was influenced by orthographic length, word frequency and lexicality in this stimulus set. Accuracy decreased with orthographic length, whereas, for real words, higher frequency predicted higher accuracy. Lexicality also predicted accuracy with lower performance for words than nonwords at mean length. The length and frequency effects align with the existing literature and are consistent with the phonological short-term memory impairment that characterizes lvPPA. The observed lexicality effect, however, contrasts with previous reports. In Greek, real words may be at a relative disadvantage because accurate spelling relies heavily on lexical–orthographic knowledge to select the correct grapheme among multiple possible representations, whereas nonwords are typically scored as correct when any phonologically plausible spelling is produced. Nevertheless, conclusions regarding the underlying mechanisms should remain tentative given the small item set and the exploratory nature of the analyses.

P3.18 PPA SEED: Primary progressive aphasia support and education for early dementia

Dr. Darby J Morhardt, Ms. Lauren R Dowden

Northwestern University, Chicago, Illinois, United States

Introduction: Primary progressive aphasia (PPA) is a dementia syndrome that impacts a person's language and progresses to other cognitive domains over time. A PPA diagnosis is life altering for the person living with PPA and their families, presenting the need for adaptation in many aspects of life including relationships, communication strategies, and increased dependence on a care partner. These deficits further lead to isolation for both the person living with PPA and their care

partners, despite retention of many strengths and abilities. The early stage thus presents a unique window where persons living with PPA and their care partners can participate in education and care planning. Previous research has demonstrated that early-stage support and education are of benefit to both persons with diagnoses and their families. Benefits have been seen in improved quality of life, more motivated care planning, improved psychological well-being, and stronger social and dyadic connections. **Aims:** PPA SEED combines psychoeducation with support interventions aimed to provide a foundational understanding of PPA and impact the quality of life for the person living with PPA and their care partners.

Methods: PPA SEED is an 8-week, three-hour psychoeducational and support program in development for persons living with PPA and their care partners adapting the previously studied Support and Education for Early Dementia (SEED). Dyadic sessions will cover topics including, PPA diagnosis, Practical and functional strategies, legal and financial planning, community resources, relationships and diagnosis disclosure. Sessions are led by clinical social workers, neurologists, neuropsychologists, speech and occupational therapists, and elder law attorneys. The person living with PPA and their care partners will also participate in separate support groups facilitated by clinical social workers as a component of PPA SEED. Participants' quality of life, knowledge of PPA, ability to connect with others navigating this disease, and awareness of available resources will be evaluated. **Results:** Based on previous research, we expect benefits to participants are increased PPA knowledge, information on helpful programs and services, enhanced coping and compensating for changes in language and other cognitive abilities. Participants may also benefit from meeting others in similar situations which can foster a sense of belonging. **Discussion:** PPA is a rare dementia syndrome that produces a unique experience for both the person living with PPA and their care partners. Tailored interventions are needed to address the needs of these individuals, provide an understanding of the diagnosis and to help prepare them for future progression. PPA SEED aims to provide a foundational education for participants while offering the opportunity for social connections and emotional support as families navigate a PPA diagnosis.

P3.19 **Unclassified primary progressive aphasia: Who are they? Classification of a French bicentric cohort**

PhD student Aurore Mahut Dubos¹, PhD Perrine Siguier^{2,3}, PhD Student Fouad Boutaleb¹, PhD Student Antoine Renard⁴, PhD Student Sarah Maso⁵, Student Emma Bagnaud⁵, Speech therapist Coline Carpentier⁶, Speech therapist Nathalie Forestier⁶, Speech therapist Stéphanie Delrutte⁵, Speech therapist Anaëlle Manteaux⁵, Professor Thi Mai Tran¹, Associate professor Mélanie Jucla², Associate professor Lola Danet^{5,3}, Professor Thibaud Lebouvier^{1,6}, Professor Jérémie Pariente^{5,3}, Associate professor Maxime Bertoux^{1,6}

¹Lille Neuroscience & Cognition, U1172, Inserm, University of Lille, University Hospital of Lille, Lille, France. ²NeuroPsychoLinguistics Lab, UR 4156, University of Toulouse Jean Jaurès, Toulouse, France. ³Toulouse NeuroImaging Center, UMR1214, Inserm, University of Toulouse, Toulouse, France. ⁴PsyNCog Liège Unit, University of Liège, Liège, Belgium. ⁵Neuropsychology Unit, Resource and Research Memory Center, University Hospital of Toulouse, Paul Sabatier University of Toulouse, Toulouse, France. ⁶Resource and Research Memory Center, University Hospital of Lille, University of Lille, Lille, France

Introduction: An early and accurate diagnosis is essential for developing effective disease management plans for primary progressive aphasia (PPA). Current diagnostic criteria have identified three variants (semantic, non-fluent, logopenic – svPPA, nfvPPA, lvPPA), primary progressive apraxia of speech (PPAoS) being considered a fourth one by some authors. However, cohort studies based on this classification have shown that 15 to 40 % of patients do not meet the criteria for any of these phenotypes and remain unclassified (unPPA). **Aim:** Our objective was to enhance the characterization of these unclassified patients through a bicentric study using a common language assessment tool. **Methods:** We retrospectively included 115 patients with PPA and 109 controls matched across sex, handedness, education level, and age. We first applied a rigorous and standardized diagnosis pipeline based on international criteria and the results of a language assessment battery specifically designed to detect language disorders in neurodegenerative diseases (GRÉMOTS). Next, we considered the linguistic data to perform a logistic regression model trained on well-diagnosed patients, considering patients with unPPA as new input into the trained model. **Results:** Multi-disciplinary diagnosis process resulted in 86 patients having one of the four PPA variants and 29 patients (25%) that did not fulfill diagnosis criteria. The regression model was able to classify patients and controls subjects with 93% accuracy in training and 78% accuracy in testing, with svPPA and PPAoS being the best and the least discriminated variants, respectively. Visual inspection of the three-dimensional space defined by the clinical population showed that unPPA patients were centrally distributed within the space occupied by the PPA population, suggesting shared linguistic characteristics with the different surrounding groups, which is consistent with the model hesitation (48% of patients with unPPA could be erroneously classified in two variants). **Discussion:** These initial results are in accordance with previous studies showing that unPPA constitute a heterogeneous entity sharing features with typical variants, rather than a discrete phenotype. An in-depth analysis of the characteristics of patients with unPPA will be conducted. This analysis will include linguistic data at presentation and longitudinally, as well as imaging and cerebrospinal fluid biomarkers data.

P3.20 Multimodal semantic knowledge of emotion concepts in frontotemporal dementia

Dr. Maxime Montembeault^{1,2,3}, Dr. Valentina Borghesani^{1,4}, Dr. Zachary A. Miller¹, Dr. Maria Luisa Mandelli¹, Ms. Janhavi Pillai¹, Ms. Sheila Tran¹, Mr. Rian Bogley¹, Ms. Carly Millanski^{1,5}, Ms. Zoe Ezzes^{1,5}, Mr. Buddhika Ratnasiri¹, Dr. Eleanor Palser^{1,6}, Dr. Hulya Ulugut¹, Dr. Kyan Younes^{1,7}, Dr. Michelle Shiota⁸, Dr. Dacher Keltner⁹, Dr. Alan Cowen⁹, Dr. Maya L. Henry^{1,5}, Dr. Katherine Rankin¹, Dr. Virginia E. Sturm¹, Dr. Maria Luisa Gorno-Tempini¹

¹Memory and Aging Center, Department of Neurology, University of California in San Francisco, San Francisco, California, United States. ²Douglas Research Centre, Montréal, Québec, Canada. ³Department of Psychiatry, McGill University, Montréal, Québec, Canada. ⁴Département de Psychologie, Université de Genève, Genève, Switzerland. ⁵Department of Speech, Language, and Hearing Sciences, The University of Texas at Austin, Austin, Texas, United States. ⁶Department of Psychology, Palo Alto University, Palo Alto, California, United States. ⁷Department of Neurology, Stanford University School of Medicine, Stanford, California, United States. ⁸Department of Psychology, Arizona State University, Tempe, Arizona, United States. ⁹Department of Psychology, University of California Berkeley, Berkeley, California, United States

Background. Recent work has delineated the semantic behavioral variant of frontotemporal dementia (sbvFTD; or right temporal variant of FTD, which is thought to preferentially impair semantic knowledge for emotional concepts. However, this proposed core feature has not yet been empirically validated, and no clinical tool exists to assess it. Establishing reliable markers is essential to clinically differentiate sbvFTD from behavioral variant FTD (bvFTD), which is critical given their overlapping behavioral symptoms but divergent underlying pathologies. Furthermore, contrasting sbvFTD with semantic variant primary progressive aphasia (svPPA) can advance our understanding of semantic memory, revealing how the right and left anterior temporal lobes (ATLs) support emotion-versus tool-related knowledge, highlighting the graded, lateralized organization of the semantic system. **Methods.** We studied 15 patients with sbvFTD, 15 with svPPA, 18 with bvFTD, and 37 healthy controls. The FST included word-based semantic associations, picture-based semantic associations, and sound-to-picture matching. Stimuli were matched on psycholinguistic and perceptual features, and emotional items were drawn from multicultural facial expressions validated with the Facial Action Coding System. Neural correlates of semantic performance were investigated using voxel-based morphometry. **Results.** As expected, patients with both sbvFTD and svPPA showed greater deficits in all semantic tasks compared to controls and bvFTD, and bilateral anterior temporal lobe (ATL) volumes were broadly associated with performance across all semantic tasks. Interactions between modality and categories were necessary for the emergence of differences between sbvFTD and svPPA and right and left ATL atrophy: performance on the Words–Tools condition was more impaired in svPPA and correlated with left ATL volume, while performance on the Pictures–Emotions condition was more impaired in sbvFTD and correlated with right ATL volume. **Conclusion.** The FST provides the first clear dissociation of sbvFTD from bvFTD, a distinction of critical clinical importance given their divergent pathological substrates and the absence of FTLD-specific biomarkers. Beyond its diagnostic value, the study also refines our understanding of semantic memory: contrasting sbvFTD with svPPA reveals complementary roles of the right and left ATLs in supporting emotion and tool knowledge, underscoring the graded, lateralised organisation of the semantic system.

P3.21 Two aphasia stories: Unifying the conversation on cross-pollinating aphasia care across diagnosis

Dr. Nidhi Mahendra

Duke University School of Medicine, Durham, North Carolina, United States

Introduction: Aphasia is a communication disorder that significantly alters the ability to speak, read, write, and understand language. Aphasia profoundly impacts a person's identity and their ability to complete communicative activities of daily living. Aphasia most often occurs following a stroke and more rarely, following a diagnosis of language-led dementias like the primary progressive aphasia (PPA). Speech-language pathologists (SLPs) play a critical role in delivering person-centered clinical services to persons with post-stroke aphasia and PPA. SLP-delivered interventions optimize and adapt communication, integrate cognitive interventions, uphold quality of life, and support affected families. Whereas access to speech therapy services is an issue for all persons with aphasia, significant strides have been made in evidence-based interventions for post-stroke aphasia via individual, impairment-based, group, intensive, and virtual formats. By contrast, the focus on enhancing evidence-based speech-language therapy for persons with PPA is more recent and communicative interventions are not as widely available for this population. Indeed, multiple researchers have documented that persons with PPA frequently experience delays in diagnosis and notable barriers to timely, sustained access to speech and language therapy (Volkmer et al., 2020; Watanabe et al., 2024). **Aim:** The purpose of this paper is to present a structured analysis of 6 years of experience at a university-based, life participation-centered aphasia clinic that integrated assessment and intervention services for persons with post-stroke aphasia and PPA. This clinic also served as a practicum site for graduate speech pathology students. A combined model of care for persons with aphasia and PPA was developed in response to: i) increasing PPA referrals, ii) a shortage of skilled services for PPA in our region, iii) and ethical concerns to not turn away patients with PPA needing services, given the rapid functional decline observed in PPA. **Methods:** This study was

completed using aphasia-friendly, informed consent procedures that permitted access to clinic records, survey and interview data from persons with post-stroke aphasia, persons with PPA and their families. A retrospective, mixed methods analysis was conducted of participating clients, their demographics and diagnosis variables, assessment and intervention services (individual and group) utilized, observed outcomes, and perceptions of patients and families. Further, we offer an analysis of observed strengths and particular challenges in an integrated clinic for persons with post-stroke aphasia and PPA. **Results:** Over 6 years, 25% of our patients presented with PPA and received individualized assessments, referral consultation, and in dyadic and group interventions with persons with pos (e.g. discourse group, aphasia choir). Our results supported the success of such integrated service delivery with some minor logistical challenges and positive perceptions by persons with PPA and their families, alongside maintained or declining functional communicative function. This latter finding is consistent with results published by Simic and colleagues (Simic et al., 2025) and our prior work (Mahendra & Tadokoro, 2020). **Discussion:** It is imperative that SLPs expand clinical services for persons with PPA. Given the greater prevalence and widespread success of life participation-oriented care programming for post-stroke aphasia, including persons with PPA in such clinics is feasible and bears positive outcomes.

P3.22 Vocal function measures associated with global motor dysfunction in frontotemporal degeneration: Perceptual and acoustic correlates across the spectrum

Ms. Kiiya Shibata¹, Dr. Emily Kimball², Mr. Levi Pettit², Dr. Ryan Darby^{2,1}, Dr. Michael de Riesthal^{2,1}

¹Vanderbilt University, Nashville, TN, United States. ²Vanderbilt University Medical Center, Nashville, TN, United States

Introduction: Motor impairment in frontotemporal degeneration (FTD) and primary progressive aphasia (PPA) have major implications for independence, safety, and survival, predicting greater functional dependence and morbidity, with motor-manifest variants showing shorter survival than other FTD subtypes. Despite this, motor involvement is often recognized only after overt functional change (e.g., gait disturbance, falls, dysphagia), limiting opportunities for early intervention/planning. Because phonation requires precise neuromuscular control, subtle laryngeal motor impairment may be detectable in the voice before clinically apparent motor sequelae. However, vocal function has not been well characterized across FTD syndromes in relation to global motor impairment. **Aims:** This study examines whether (1) auditory-perceptual vocal deviance ratings and (2) acoustic measures of perturbation are associated with motor impairment in FTD. We hypothesize that greater perceptual deviance and increased acoustic perturbation will show moderate associations with overall motor dysfunction. **Methods:** Data collection is ongoing. An a priori power analysis indicated a minimum sample of 46 participants, with a target enrollment of ~60; preliminary analyses include 20 participants; ~60 anticipated by May2026. Participants with FTD are recruited through the Vanderbilt Frontotemporal Dementia Clinic and diagnosed by interdisciplinary consensus using established clinical criteria and supportive MRI/FDG-PET findings. Inclusion requires production of a ≥3-second sustained vowel and ≥20-second connected speech sample; exclusion criteria include prior head/neck surgery or radiation, uncontrolled reflux, or premorbid neurological disorders. Audio recordings are obtained at 48-kHz/24-bit resolution in a quiet clinical-research setting. Speech tasks are elicited using the Consensus Auditory-Perceptual Evaluation of Voice-Revised (CAPE-Vr) protocol and the Quick Aphasia Battery connected speech elicitation method (Wilson et al., 2018). Perceptual vocal deviance is rated by three expert SLPs using the voice item of APROCSA-PPA (in preparation), rated on a 0–4 scale with discrepant ratings resolved by consensus. Acoustic measures (jitter, shimmer, harmonic-to-noise ratio) are extracted in Praat (v6.4.22) using a custom moving-window script to identify the most stable subsegment of sustained vowels (/a/, /i/). Global motor function is measured using the Progressive Supranuclear Palsy Rating Scale (PSPRS). Preliminary analyses use Spearman rank correlations; robust regression with M-estimation is planned for final analyses. **Preliminary results:** To date, 20 individuals with FTD-spectrum diagnoses have been enrolled, including nine with FTD-associated PPA (semantic variant = 4; nonfluent/agrammatic variant = 5). Sustained /a/ perturbation measures demonstrated strong associations with global motor severity, including a significant positive correlation between shimmer and PSPRS total score ($p = .80$, $p < .01$) and a significant negative correlation between HNR and PSPRS ($p = -.77$, $p = .016$). Sustained /a/ jitter showed a trend-level association ($p = .58$, $p = .10$). No significant associations observed for sustained /i/. Perceptual rating reliability was excellent (ICC(A,1) = .76, 95% CI [.70, .80]) and showed moderate but non-significant association with PSPRS ($p = .47$, $p = .10$). **Discussion:** Preliminary findings suggest detectable changes in vocal function accompany broader motor impairment in FTD. Perturbation measures may capture clinically relevant information beyond perceptual ratings, warranting further study to clarify clinical relevance and potential utility for monitoring disease progression.

P3.23 Clinical utility of synaptic biomarkers in primary progressive aphasia

MD, PhD Miguel Santos-Santos¹, MD Jesus García-Castro¹, MD Sara Rubio-Guerra¹, MSc Judit Selma¹, MD, PhD Iñigo Íñigo Rodríguez-Baz¹, MD Lucia Maure-Blesa¹, PhD Isabel Sala¹, PhD M.Belen Sánchez-Saudinós¹, SLP Estefania Garcia¹, SLP Julia Filella¹, PhD Oriol Dols-Icardo¹, PhD Stephanie Grasso², MD, PhD Juan Fortea¹, MD, PhD Alberto Lleo¹, MD, PhD Ignacio Illan-Gala¹, MD, PhD Daniel Alcolea¹, PhD Olivia Belbin¹

¹Sant Pau Memory Unit, IR Sant Pau, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain. ²Department of Speech, Language, and Hearing Sciences, University of Texas, Austin, Austin, TX, United States

Introduction: Synaptic dysfunction is an early pathological feature in neurodegenerative diseases primarily affecting the brain, yet synaptic biomarkers remain largely unexplored across primary progressive aphasia (PPA) variants. Neuronal pentraxin-2 (NPTX2) and synaptosomal-associated protein 25 (SNAP-25) are promising cerebrospinal fluid (CSF) biomarkers reflecting synaptic integrity and degeneration. However, it is unclear whether these markers add value for (i) differentiating PPA variants, (ii) indexing clinical severity, and (iii) anticipating subsequent cognitive decline, all key needs for stratification and monitoring in clinical trials and practice. **Aims:** This study aimed to investigate the clinical utility of CSF NPTX2 and SNAP-25 as synaptic biomarkers in PPA for differential diagnosis across PPA variants and controls, prognostic value for disease progression, and potential for disease monitoring. **Methods:** We studied 82 participants including 44 logopenic variant PPA (lvPPA), 12 nonfluent variant PPA (nfvPPA), 12 semantic variant PPA (svPPA), and 14 healthy controls. CSF NPTX2 was measured using ELISA (Innotest NPTX2, Fujirebio-Europe) and SNAP-25 using single-molecule array technology (Simoa SNAP-25, Quanterix). Log-linear regression models adjusted for age, sex, and MMSE examined group differences. Spearman correlations assessed associations with impairment in cognition (MMSE), activities of daily living (IDDD scale), and their rate of decline (operationalized as change in scores divided by days between assessments). **Results:** Diagnostic performance: CSF NPTX2 showed only modest group differences (overall group effect $p \approx 0.09$), with a trend toward lower levels in lvPPA and svPPA relative to controls. In contrast, CSF SNAP-25 demonstrated clear diagnostic separation across groups (overall group effect $p \approx 1 \times 10^{-5}$), driven by higher SNAP-25 in lvPPA compared with nfvPPA ($\approx 45\%$ higher) and svPPA ($\approx 80\%$ higher) after age/sex adjustment; differences versus controls were not robust, likely reflecting limited control sample size for SNAP-25. Cross-sectional severity: In models adjusting for diagnosis group, age, and sex, NPTX2 was independently associated with MMSE_sample ($p = 0.0026$; partial $R^2 \approx 0.12$), indicating lower NPTX2 with worse cognition beyond diagnostic effects. Within lvPPA, NPTX2 correlated with MMSE_sample (Spearman $\rho \approx 0.33$, $p \approx 0.03$) and with iddd_closest_score ($\rho \approx -0.32$, $p \approx 0.047$). Rate of decline: Within lvPPA, SNAP-25 correlated with MMSE decline rate ($\rho \approx 0.54$, $p \approx 0.005$; FDR-significant within lvPPA), suggesting higher SNAP-25 at baseline is associated with faster subsequent cognitive decline. **Discussion:** CSF SNAP-25 showed the strongest potential for differential diagnosis within the PPA spectrum, particularly distinguishing lvPPA from nfvPPA and svPPA, consistent with greater synaptic injury in the lvPPA/AD-spectrum phenotype. CSF NPTX2 was less discriminatory diagnostically but demonstrated the most consistent relationship with cross-sectional clinical severity, supporting its candidacy as a severity-linked synaptic integrity marker. The observed association between SNAP-25 and subsequent MMSE decline in lvPPA suggests prognostic value. All results require future larger and longitudinal studies for confirmation.

P3.24 Exploring the impact of group singing on social connectedness and communication in primary progressive aphasia

Project Assistant Hannah Carrara, Research Scientist Erin Coho, Program Manager Honey I Hubbard, Research Volunteer Pablo Castellanos, Project Assistant Hannah Lewine, Assistant Professor Yina Quique, Associate Professor Rick Arenas, Professor Jessica D Richardson

University of New Mexico, Albuquerque, NM, United States

Introduction: Primary progressive aphasia (PPA) leads to progressive decline in language abilities (Gorno-Tempini et al., 2011) and often contributes to decreased social participation, isolation, and diminished well-being (Medina & Weintraub, 2007). While there is early evidence that group singing interventions show promise for supporting communication, mood, and social engagement in post-stroke aphasia, there is a notable lack of empirical investigation specific to PPA. Choir participation may offer a low-demand, socially rich, communication-supportive environment that could help buffer isolation and maintain aspects of communication function (Dingle et al., 2019; Ong et al., 2024). The present work examines outcomes specifically for people with PPA who participated in a 12-week group-singing program embedded within a mixed choir that included people with stable aphasia and people with PPA. **Aims:** This presentation will (1) describe communication-related and psychosocial assessment trajectories for people with PPA enrolled in the intervention, (2) highlight potential markers of responsiveness or stability over the 12-week period and 1-month follow-up, and (3) share qualitative insights regarding the lived experience of choir participation for people with PPA. **Methods:** Four participants with PPA participated in the study (three with logopenic variant PPA [lvPPA] and one with nonfluent variant PPA [nfvPPA]). The study involved four assessment time points: baseline (one month prior), immediately pre-intervention, immediately post-intervention, and one-month follow-up. Measures included standardized language assessments (WAB-R components, Boston Naming Test, discourse sampling), psychosocial measures (ICS, PHQ-9, STAI-AD, SUDS), and brief qualitative

surveys. The 12-week choir program consisted of weekly 90-minute sessions incorporating vocal warm-ups, musical games, and rehearsal of selected songs, supplemented by optional home-practice materials, including the online Sing-for-Speech e-Program (Ossia Music Therapy). Because the expected progression of PPA differs fundamentally from the potential stability or improvement seen in acquired aphasia, PPA participants were analyzed separately from the people with stable aphasia, and outcomes will be presented descriptively at the individual-participant level. **Results and Discussion to be Presented:** The conference presentation will provide participant-level profiles illustrating communicative and psychosocial trajectories. Data will be shared to explore how PPA participants engaged with and tolerated a choir-based intervention. Qualitative comments will be used to contextualize individual differences and highlight themes related to connection, confidence, enjoyment, and perceived communicative support. This work is intended as an early contribution to evidence on choir-based interventions for PPA, offering initial observations to guide future research and model development.

Invited Speaker

1:10	PM	-	1:50	PM
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Dr Chris Hardy

From hearing to listening: Understanding PPA through auditory cognition and lived experience

Dr Chris Hardy is a Principal Research Fellow at the Dementia Research Centre, University College London. He completed his PhD on auditory symptoms in primary progressive aphasia (PPA) in 2017. Following his PhD, Chris was awarded a personal Fellowship by the Royal National Institute for Deaf People and the Vivensa Foundation which ran from 2019-2020. He is currently the recipient of the Alzheimer's Society Carol Jennings Fellowship for postdoctoral research, which runs from 2024-2028. He was awarded the Elizabeth Warrington Prize in 2025 by the British Neuropsychological Society in recognition of his distinguished work as an early-career researcher. His current research focuses on characterising auditory cognitive profiles of diverse dementia phenotypes, including primary progressive aphasia and Alzheimer's disease. He is particularly interested in the potential for auditory cognitive tests to be used as 'auditory biomarkers' for dementias like PPA, with studies directed at exploring whether such tests hold utility in identifying people at close proximity to developing a clinical dementia syndrome. Chris also directs a line of research looking to identify symptom progression in the progressive aphasia and related disorders.



P4.1 The PPA Platform: A must-know resource for patients, relatives and healthcare professionals

Dr Monica Lavoie^{1,2}, Mr Philippe Lafleur¹, Dr Robert Laforce^{1,2,3}

¹Chaire de recherche sur les aphasies primaires progressives - Fondation de la famille Lemaire, Université Laval, Québec, QC, Canada. ²Clinique Interdisciplinaire de Mémoire, Département des Sciences Neurologiques du CHU de Québec, Québec, QC, Canada. ³Faculté de Médecine, Université Laval, Québec, QC, Canada

Introduction: Very limited web-based information is available for patients and families affected by Primary Progressive Aphasia (PPA). When accessible, it is often incomplete or worded in complex terminology. One of the objectives of the Research Chair on PPA – Fondation de la famille Lemaire (app-ffl.ulaval.ca) is to educate the general population and healthcare professionals on PPA to promote earlier diagnosis and better care. **Aims:** We present the development of the PPA Platform, an innovative knowledge transfer tool. **Methods:** We carried out a focus group with patients and their relatives to understand their needs. We developed templates for 'Patients/Relatives' and 'Health Professionals' and adapted content and terminology for both sections. Content was then validated with experts in the field (neurologists, SLPs). Videos were selected to illustrate the symptoms (eg, naming, repetition, etc.) and we included testimonials to further capture caregivers' experience (eg, first symptoms, challenges, etc.). The initial French version was launched in 2020. **Results:** The PPA Platform is now available in English, Spanish, Italian, Portuguese, German and Chinese. Since its launching, the PPA Platform has been consulted by more than 150 000 individuals in over 100 countries. Content is regularly updated and translation in other languages is ongoing. **Discussion:** The PPA Platform is an outstanding knowledge translation tool for patients, families and healthcare professionals. In a short amount of time, it positioned itself worldwide as a key reference on PPA.

P4.2 Implementing synchronous telehealth with people with dementia: Using theoretical frameworks to explore the perspectives of UK speech and language therapists

Mr Richard Talbot¹, Professor Jason D Warren², Professor Rosemary Varley³, Associate Professor Anna Volkmer³

¹London, London, London, United Kingdom. ²Dementia Research Centre, London, London, United Kingdom. ³University College London, London, London, United Kingdom

Introduction: Communication difficulties are the main and leading symptom in primary progressive aphasia (PPA), and a common major symptom in all dementia types. Speech and language therapy is the principal treatment for communication difficulties in dementia. However, access is dependent on individual factors (e.g., carer support, travel), service availability and contextual factors (e.g., socio-cultural). One way to increase access is via synchronous telehealth. Despite telehealth becoming increasingly common, there is a paucity of literature investigating implementation factors, or probing the views of therapists using telehealth with people with dementia. **Aims:** To identify determinants to implementing synchronous telehealth to people living with dementia (e.g., PPA/other types of dementia), from the perspectives of UK-based speech and language therapists. To probe contextual factors impacting individual's decision making. **Methods:** This qualitative study employed focus group methodology to explore UK speech & language therapists' experiences and perspectives of working with people with dementia via telehealth. Three 90-minute video recorded focus group meetings were transcribed. Utilising content analysis, data were coded deductively using the Theoretical Domains Framework and the Context and Implementation of Complex Interventions framework. **Results:** A diverse sample of ten speech and language therapists from across the UK was recruited, representing the National Health Service and the charity sector. Reported implementation determinants related to therapists' beliefs about their own professional role and their clients' capabilities, beliefs about the consequences of using telehealth, environmental context and resource, and emotion. Individual's decision making was influenced by macro-level socio-economic, ethical, and epidemiological factors, and by meso-level socio-cultural and political factors. **Discussion:** Using theoretical frameworks to investigate UK speech and language therapists' delivery of telehealth for people with dementia will inform the implementation of future telehealth interventions and services. This study highlights individual and contextual factors which may influence intervention implementation and sustainability when working with people with dementia, telehealth and technology.

P4.3 Bridging words and discourse: Exploring the cognitive and neural overlap between picture naming and connected speech in PPA

Dr Francesca Conca¹, Dr Esposito Valentina², Dr Margherita Papaccio¹, Dr Gaia Chiara Santi³, Dr Cristina Polito⁴, Dr Silvia Paola Caminiti⁵, Dr Carmen Morinelli⁶, Dr Valentina Berti⁷, Dr Salvatore Mazzeo^{8,9}, Dr Alessandra Marcone¹⁰, Dr Sandro Iannaccone¹⁰, Dr Sandro Sorbi^{4,7}, Dr Daniela Perani⁸, Dr Stefano Cappa^{1,11}, Dr Valentina Bessi^{7,6}, Dr Eleonora Catricalà¹

¹Institute for Advanced Studies, Pavia, Italy. ²Istituti Clinici Scientifici Maugeri IRCCS, Milan, Italy. ³Istituti Clinici Scientifici Maugeri IRCCS, Bari, Italy. ⁴IRCCS Fondazione Don Carlo Gnocchi, Florence, Italy. ⁵University of Pavia, Pavia, Italy. ⁶Azienda Ospedaliero-Universitaria Careggi, Florence, Italy. ⁷University of Florence, Florence, Italy. ⁸Vita-Salute San Raffaele University, Milan, Italy. ⁹IRCCS Policlinico San Donato, San Donato Milanese, Italy. ¹⁰IRCCS San Raffaele Hospital, Milan, Italy. ¹¹IRCCS Istituto Auxologico, Milan, Italy

Introduction. Identifying the most suitable assessment tool for examining linguistic production in individuals with Primary Progressive Aphasia (PPA) remains a central challenge for clinicians and researchers. Specifically, picture naming is one of the most informative instruments for assessing word retrieval, while connected speech offers a more ecologically valid window into the communicative capabilities of patients. Investigations into the relationship between picture naming and connected speech reveal a complex and nuanced pattern, with the evidence to date drawn from post-stroke aphasic populations [1]. The cognitive and neural mechanisms driving their shared and distinct characteristics in PPA patients are still unclear. **Aims.** Here, we set out to explore, for the first time, the relationship between picture naming and connected speech in patients with PPA, aiming to uncover the shared foundations and distinct mechanisms that shape performance on these two key language tasks. **Methods.** Forty-eight PPA patients completed the picture naming and the connected speech task (picture description) from the SAND battery [2], alongside an FDG-PET scan. Naming accuracy, error types (semantic, phonological, anomia) and connected speech features (e.g., information units, noun rate, mean length of utterance—MLU) were extracted and correlated among tests and with brain metabolism from 9 Regions of Interest.

Results. Naming accuracy and anomia correlated with information units, noun rate, and semantic-anomic errors in connected speech, while phonological errors correlated with utterance count ($p < .017$). Naming accuracy, semantic and anomic errors were associated with the anterior fusiform, with the latter also linked to the IFG and posterior inferior temporal gyri ($p < .015$). MLU correlated with posterior temporal regions, noun rate with posterior inferior and anterior middle temporal gyri, and number of subordinates with the IFG ($p < .021$). **Discussion.** This findings reveal shared and unique neural bases for picture naming and connected speech, with anterior and inferior temporal regions supporting a common lexico-semantic process. Combining both tasks improves clinical assessment, deepening the understanding of language decline in PPA.

P4.4 Effectiveness of a teletherapy-based phonological short-term memory training in the logopenic variant of primary progressive aphasia

Dr Guillaume Duboisdindien^{1,2}, Dr Monica Lavoie^{1,3}, Pr Robert Laforce^{1,3,4}, Pr Joël Macoir^{4,5}

¹Chaire de recherche sur les aphasies primaires progressives - Fondation de la famille Lemaire, Université Laval, Québec, (QC), Canada. ²Unité de Formation et de Recherche en Sciences de la santé, Université Marie et Louis Pasteur, INSERM, UMR 1322 LINC, F-25000, Besançon, France. ³Clinique Interdisciplinaire de Mémoire, Département des Sciences Neurologiques du CHU de Québec, Québec, (QC), Canada. ⁴Faculté de Médecine, Université Laval, Québec, (QC), Canada. ⁵Centre de recherche CERVO, Québec, (QC), Canada

Background The logopenic variant of primary progressive aphasia (lvPPA) is characterized by prominent phonological impairments and reduced phonological short-term memory (pSTM), leading to repetition deficits and communication breakdowns. To date, speech-language interventions in PPA have primarily focused on lexical-semantic abilities, with few studies directly targeting the phonological memory mechanisms underlying these impairments, particularly via teletherapy. Given increasing accessibility needs in neurodegenerative populations, evaluating remote, mechanism-based interventions is critical. **Objectives** This study aimed to evaluate the feasibility and effectiveness of an intensive teletherapy-based pSTM training program in individuals with lvPPA. Specifically, we examined (1) treatment effects on repetition of trained words and pseudowords, (2) generalization to untrained stimuli, (3) transfer to functional language tasks, and (4) maintenance over time. **Methods** Five individuals with biomarker-confirmed lvPPA participated in a multiple-case study. The intervention consisted of a 5-week intensive repetition training program (15 sessions) targeting pSTM through immediate and delayed repetition of words and pseudowords with increasing syllabic complexity. Outcomes were assessed at baseline, immediately post-treatment, and at 4-week and 3-month follow-ups. Primary outcome measures included repetition accuracy for trained and untrained items. Transfer was assessed using picture-naming and connected-speech tasks. Linear mixed-effects models were used to analyze longitudinal changes and interindividual variability.

Results Significant improvements were observed for both immediate and delayed repetition of trained words and pseudowords, with gains maintained up to 3 months post-treatment. Partial generalization effects were found for untrained items, particularly in delayed repetition, although these effects were less consistent over time and more robust for words than for pseudowords. No substantial or sustained transfer effects were observed for functional language tasks,

including picture naming and connected speech. Individual trajectories revealed marked heterogeneity, with baseline cognitive profiles, particularly global cognitive status and processing speed, accounting for a significant proportion of variance. **Discussion** Our findings support the feasibility as well as short- to medium-term effectiveness of a teletherapy-based pSTM intervention in IvPPA. While treatment effects were robust for trained material, generalization and transfer to functional language tasks remained limited, highlighting the task-specific nature of impairment-based training in neurodegenerative conditions. Delayed repetition emerged as a promising component to support generalization, potentially by fostering internal rehearsal mechanisms. Early, personalized interventions combining phonological training with functionally oriented language tasks may help enhance broader communicative outcomes.

P4.5 Addressing changes in decision-making capacity using hypothetical scenarios

Ms. Ingvild Winsnes¹, Ms. Mia Halvorsen², Ms. Elis Krogh², Dr Anna Volkmer³

¹University of Oslo, Oslo, Norway. ²Nord University, Bodø, Norway. ³University College London, London, United Kingdom

Introduction: Primary progressive aphasia (PPA) leads to a decline in language and cognitive function, and behavioural changes are not uncommon (Foxe et al., 2022; Ulugut et al., 2022). People with PPA and their family members have expressed a need for information about future changes and planning for them (Davies et al., 2024; Volkmer et al., 2024). The current clinical guidance that accompanies the legislation about planning for future decision-making capacity recommends that this issue should be raised by any health care professional working with people with dementia (NICE, 2018). Despite being a delicate topic, there is little guidance on what to say and how to say it. **Aim:** The current study aimed to explore how conversations about the topic of planning for changes in decision-making capacity take place in the manualised speech and language therapy intervention, Better Conversations with Primary Progressive Aphasia (BCPPA). **Methods:** Applied conversation analysis was used to analyse video recordings from four dyads (people with PPA and their family members), who had received the BCPPA intervention in Norway (Winsnes et al., 2025). Applied conversation analysis allows for the systematic study of social interactions and has been highlighted as the “gold standard” for analysing recorded clinical communication. **Results:** The analysis showed that the speech and language therapist created several opportunities for the dyads to discuss changes in decision-making capacity and how to plan for them using hypothetical scenarios. These are scenarios that do not relate specifically to the dyads; rather, they are presented as something general (i.e., relating to all people with PPA) or a scenario in the future which might or might not occur. **Discussion:** Hypothetical scenarios have been highlighted as a strategy for sensitively addressing future changes and planning for them in other fields, such as end-of-life in oncology (Ekberg et al., 2021). Results from the current study indicate that hypothetical scenarios are also a useful strategy for addressing changes and future planning with people with PPA and their family members. The BCPPA intervention may provide a framework which facilitates opportunities for these conversations.

P4.6 “More stable – stronger – firmer” – Effects of the biographic-narrative therapy ‘Cope PPA’ on the quality of life of people with PPA

Mrs. Mirjam Gauch^{1,2}, Mrs. Anna-Lena Köb¹, Ms. Julia Tanase³, Ms. Helen Klaus¹, Ms. Julia Feldmann¹, Ms. Johanna Jochmann¹, Dr. Katharina Geschke¹, Prof. Oliver Tüscher¹, Dr. Isabel Heinrich¹, Prof. Sabine Corsten²

¹Department of Psychiatry and Psychotherapy, University Medical Center of the Johannes Gutenberg University Mainz, 55131 Mainz, Germany. ²Faculty of Healthcare and Nursing, Catholic University of Applied Sciences Mainz, 55122 Mainz, Germany. ³School of Allied Health, Human Services & Sport, La Trobe University, Bundoora, Australia

Introduction: People with Primary Progressive Aphasia (PwPPA) often experience a negative self-image and a reduced Quality of Life (QoL). For individuals with stroke-related aphasia, biographic-narrative therapy can stimulate identity work and can lead to an improved QoL. To consider the specific needs of PwPPA and address impairments in their self-image, it seems appropriate to adapt the biographic-narrative therapy for this target group (Davies et al., 2024; Gauch et al., 2024). **Aims:** This study describes how the biographic-narrative therapy, according to Corsten et al. (2015), was adapted and evaluated in our clinical trial called ‘Cope PPA’. **Method:** The *Cope PPA* manual was developed based on the results of a focus group interview with PwPPA. It should be tested on a sample of 24 PwPPA in a randomised controlled trial with four measurement points. The therapy comprised a combination of five individual and seven group sessions as well as the use of music and art therapy elements. Inclusion criteria were a capacity to give consent and sufficient visual/auditory abilities of PwPPA. Exclusion criteria were the presence of severe depression (MADRS > 35) or severe cognitive deficits (MMST < 10). QoL was measured using the Stroke and Aphasia Quality of Life Scale (SAQOL-39g). Participants’ mood was assessed pre- and post-session using a Visual Analogue Scale (VAS). Linguistic and cognitive functions were measured to describe the course of the disease. At the very end of the intervention, PwPPA and their family members took part in half-hour semi-structured interviews. Scores from the SAQOL-39g and the VAS were evaluated using inferential statistics, while transcribed interviews were analysed using reflexive thematic analysis. Quantitative and qualitative data were combined in a parallel mixed methods design. **Results:** A total of 21 PwPPA were recruited. One of these was a screening failure, two withdrew for personal reasons and another opted to only attend the individual sessions. Thus, 17 PwPPA completed the

study according to the study protocol and were included in the final analysis. No significant differences in QoL were observed at the end of the intervention when comparing the therapy and waitlist control groups. However, mood improved significantly from pre- to post-session during both the first and final group sessions ($p < .05$) and during the last individual session ($p = .006$). Further data analyses are ongoing and will be finalized before the conference. Qualitative analysis revealed six themes: (1) *Participation required adherence*; (2) *Materials were considered remarkable*; (3) *Storytelling was conducted in an aphasia-free area*; (4) *Group participation created a sense of belonging*; (5) *Experiences encouraged self-reflection* and (6) *Coping is lengthy and ongoing*. **Discussion:** Although there are indications of therapy-specific effects on mood and feedback from participants is generally positive, there is no improvement in QoL. The perceived accessibility described in the interviews, the self-reflection that was initiated, and the sense of belonging perceived within the groups are consistent with the positive effects of biographic-narrative studies. To further investigate quantitative changes, other measuring instruments need to be evaluated. Maybe instead of measuring QoL, assessments regarding self-image should be conducted.

P4.8 Towards a consensus-based, best practice guideline for speech and language treatment for persons with PPA in the Netherlands

PhD Femke Nouwens¹, BA Tessa Heintjes¹, MD Graciëlle L.C. Williams¹, PhD Lize C. Jiskoot², MD, PhD Harro Seelaar²

¹Rijndam Rehabilitation, Rotterdam, Netherlands. ²Alzheimer Center Rotterdam, Erasmus MC - University Medical Center, Rotterdam, Netherlands

Introduction: Primary Progressive Aphasia (PPA) is a type of aphasia, with progression of language deficits as key symptom¹. As a consequence, persons with PPA (PwPPA) and their loved ones are faced with increasing communication problems, commonly leading to isolation. Thus, most PwPPA are referred to speech and language therapists (SL-therapists) for treatment and guidance². Due to the underlying degenerative process, PPA is significantly different from aphasia due to acute brain damage. Hence, the evidence for treatment approaches available for post-stroke aphasia is not applicable and evidence based guidelines are lacking. Moreover, this subgroup is often excluded from clinical trials, further hampering our understanding of the optimal treatment approach. **Aim:** to compose a Dutch, consensus based guideline for SLTs in order to optimally guide PwPPA. **Method:** a pragmatic approach was chosen in order to stay as close to Dutch daily practice as possible. In 2024, our working group hosted a workshop at the Annual Dutch Aphasia Conference to gather information on referral and treatment in the Netherlands. In 2025, we hosted a second workshop and collected information on the actual treatment choices that clinicians make, and asked what the scientific basis for their choices was. We also conducted a literature search for scientific evidence on the treatment and guidance of PPA. We focused on systematic reviews and included key papers from the International SLT/P PPA network. **Results:** the workshops provided us information on everyday clinical practice in the Netherlands regarding the treatment of PPA by SL-therapists. We found that there are large differences within the Netherlands with regards to the diagnostic and referral process. The content of the treatment also varied greatly. Although we explicitly asked for references to scientific evidence supporting clinical considerations, none were provided. This corroborated our intention to write a Dutch guideline. Thus, we cross-referenced the information from the workshops with the scientific evidence from the literature search. We then weighed all information carefully with regards to the evidence base, perspectives and demands from PwPPA and feasibility for the Dutch situation. This led to a draft version of the guideline. This draft guideline was criticized by SL-therapists with experience and affinity with PPA. According to their feedback, the definitive consensus-based best practice guideline for treating PwPPA in the Netherlands was finalized. **Discussion and conclusion:** results from two workshops with experienced aphasia SL-therapists outlined a very inconsistent healthcare landscape when it comes to the treatment and guidance of PwPPA in the Netherlands. This seems to be a consequence of the lack of clear guidelines and a frail evidence base. Thus, we constructed a consensus-based, best practice guideline for speech and language treatment for PwPPA. With this instrument we intend to guarantee equal and best treatment for all PwPPA, regardless of where they live in the Netherlands. During the conference we will present the definitive consensus-based practice guideline.

P4.9 Barcelona Scale for Buccophonatory Apraxia: Baseline and longitudinal motor-phonological profiles in primary progressive aphasia

Dr. Núria Montagut¹, Dr. Sergi Borrego¹, Mr. Jorge Herrero¹, Mrs. Cristina Vela¹, Mrs. Júlia Filella², Mrs. Estefanía García², Mrs. Sonia Marqués-Kiderle³, Mrs. Camille Wagner Rodríguez³, Dr. Mircea Balasa¹, Dr. Albert Lladó¹, Dr. Miguel Angel Santos Santos², Dr. Stephanie Grasso³, Dr. Raquel Sánchez-Valle¹

¹Hospital Clínic de Barcelona, Barcelona, Spain. ²Hospital de la Santa Creu i Sant Pau, Barcelona, Spain. ³University of Texas, Austin, Austin, Texas, United States

Introduction: The nonfluent variant of primary progressive aphasia (nfvPPA) is characterized by motor speech impairment and/or agrammatism, whereas other PPA variants, such as the logopenic variant (lvPPA), primarily present phonological deficits. Differentiating motor speech impairment from phonological deficits using objective measures remains challenging, particularly in early disease stages and for longitudinal disease monitoring. **Aims:** This study aimed to examine total and task-specific performance on a quantitative buccophonatory apraxia scale in order to identify which subtests best

discriminate between PPA variants and assess its longitudinal progression. **Method:** The Barcelona Scale for Buccophonatory Apraxia (Montagut et al., 2025), which comprises six subtests: orobuccolingual praxis (nonverbal), phonation, simple and alternating diadochokinesis, reading, and word repetition was administered to 19 healthy controls and 35 patients with primary progressive aphasia (15 nvPPA, 9 lvPPA, and 11 semantic variant PPA [svPPA]). For PPA patients the test was also performed longitudinally at 6 and 12 months from baseline. We compared scores between groups at baseline using ANOVA and pairwise comparison using Wilcoxon tests. We evaluated longitudinal changes by group using Wilcoxon paired tests and linear mixed effects models. Receiver operating characteristic (ROC) curve analyses were performed to evaluate the discriminative ability of total scores. **Results:** At baseline, total scores clearly distinguished nvPPA from the other PPA variants and controls. ROC analyses demonstrated perfect discrimination between nvPPA and controls (AUC = 1.00), excellent discrimination between nvPPA and svPPA (AUC = 0.91), and moderate discrimination between nvPPA and lvPPA (AUC = 0.68). Task-level analyses showed that alternating diadochokinesis provided the strongest baseline discrimination between lvPPA and nvPPA, consistent with motor speech planning deficits. Longitudinally, the test showed greatest progression in nvPPA cases for the global score and all subtests, demonstrating increasing divergence between nvPPA and other PPA subtypes. **Discussion:** These findings underscore the value of combining baseline and longitudinal task-level analyses to dissociate motor speech impairment from phonological deficits in primary progressive aphasia. Although orobuccolingual praxis did not significantly discriminate between lvPPA and nvPPA at baseline, it remained clinically informative as a nonverbal measure of motor impairment across disease progression. Alternating diadochokinesis emerged as the most sensitive baseline marker for differentiating lvPPA from nvPPA, while motor-demanding verbal tasks increasingly contributed to variant separation over time. In contrast, word repetition showed persistent overlap between variants, reflecting shared phonological impairment. Overall, the results support the clinical utility of the Barcelona Scale for Buccophonatory Apraxia and will inform the development of a shortened, motor-focused version of the scale for clinical and research applications.

P4.10 Validation of a new semantic property verification task allowing clinicians to discriminate between different primary progressive aphasia variants: Preliminary results

Alessa Hausmann¹, Dr Peggy d'Honinchtun^{2,3,4}

¹Service of Neuropsychology and Neurorehabilitation & Leenaards Memory Clinic, Lausanne, Switzerland. ²Service of Neuropsychology, CHUV, Lausanne, Switzerland. ³Université de Lausanne, Lausanne, Switzerland. ⁴Université de Neuchâtel, Neuchâtel, Switzerland

Introduction: Semantic impairments are a core feature of neurodegenerative language disorders, notably primary progressive aphasia (PPA). Such impairments may reflect semantic degradation¹, characterized by a loss of conceptual knowledge, or semantic deregulation², in which semantic representations remain partially preserved but are accessed inconsistently due to impaired control processes. Semantic knowledge is organized according to different types of information, including semantic categories (living vs. man-made entities), and semantic properties (sensorial/perceptual vs. functional properties), which may be differentially affected. In French, commonly used language assessment batteries provide valuable information for diagnosis of semantic deficits but do not allow clinicians to precisely characterize the nature of semantic impairment, with direct implications for clinical assessment and intervention planning. **Aims:** The present study aimed to develop and validate a French semantic property verification task with three main objectives: (1) Psychometric validation of the task including sensitivity to group differences (know-group validity), convergent validity, internal consistency and test-retest reliability. (2) Differentiation of semantic impairment (degradation vs. deregulation) across clinical groups, by examining performance patterns relative to healthy controls. (3) Exploration of semantic impairment profiles, by investigating potential dissociations between semantic categories (living vs. man-made entities) and semantic properties (sensorial vs. functional). **Methods:** The task was derived from the *Grémots*³ lexical access and word-picture verification subtests. Eighteen items were selected (9 living, 9 man-made entities). For each item, four verbal statements were created: two targeting sensorial properties (one true, one false) and two targeting functional properties (one true, one false). False statements were constructed using properties belonging to closely related semantic distractors. An initial comprehensibility check was conducted in nine healthy adults, and items not understood by at least 80% of participants were excluded. The final task under validation has so far been administered to 6 patients (2 semantic variant, 2 nonfluent variant, 2 logopenic variant) and 9 matched healthy controls recruited at the Leenaards Memory Clinic. Convergent validity was assessed using standard verbal and non-verbal semantic measures. Additional participants with PPA and healthy controls will be recruited to complete the sample. **Results:** Group comparisons showed that participants with the semantic and logopenic variants of PPA achieved significantly lower percentages of correct responses on the semantic questionnaire than healthy controls, whereas the nonfluent variant did not differ significantly from controls. Psychometric analyses demonstrated acceptable internal consistency (Cronbach's $\alpha = .685$) and good test-retest reliability (.725). Ongoing analyses will further characterize the nature of the semantic impairment (semantic degradation vs. deregulation) across clinical variants and examine whether semantic performance varies according to semantic category (living vs. man-made entities) and semantic properties (sensorial vs. functional), both within and across groups. **Discussion:**

This study introduces a novel French semantic property verification task with promising psychometric properties. By enabling a finer-grained characterization of semantic impairment, this tool has the potential to improve clinical diagnosis and support more targeted therapeutic interventions. Future work will focus on larger samples to refine category- and property-specific profiles of semantic impairment.

P4.11 Lexical retrieval deficits in primary progressive aphasia: Modulation by phonological and semantic naming context

Dr. Marco Calabria¹, Ms. María Sainz-Pardo¹, Mr. Francesco Ciongoli¹, Dr. Clara Martin², Dr. Simona Mancini², Ms. Júlia Filella³, Ms. Estefania Garcia³, Ms. María F. Porto^{4,5,6}, Dr. Iñigo Rodríguez-Baz³, Dr. Lucia Maure-Blesa³, Dr. Jesús García-Castro³, Dr. Sara Rubio-Guerra³, Dr. Ignacio Illán-Gala³, Dr. Juan Fortea³, Dr. Alberto Lleó³, Dr. Stephanie Grasso⁷, Dr. Miguel Ángel Santos-Santos³

¹Faculty of Health Sciences, Universitat Oberta de Catalunya, Barcelona, Spain. ²Basque Center on Cognition, Brain and Language, Donostia-San Sebastián, Spain. ³Sant Pau Memory Unit, Department of Neurology, IR Sant Pau, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain, Barcelona, Spain. ⁴Department of Cognition, Development and Educational Psychology, University of Barcelona, Barcelona, Spain. ⁵Cognition and Brain Plasticity Group, Institut d'Investigació Biomèdica de Bellvitge (IDIBELL), L'Hospitalet de Llobregat, Spain. ⁶Institute of Neurosciences, University of Barcelona, Barcelona, Spain. ⁷Department of Speech, Language, and Hearing Sciences, The University of Texas at Austin, Austin, Texas, United States

Introduction: Naming deficits are common in the semantic (svPPA) and logopenic (lvPPA) variants of primary progressive aphasia (e.g., Sebastian et al., 2018). However, the mechanisms underlying these impairments remain incompletely understood. While lvPPA is typically associated with prominent phonological deficits and svPPA with predominantly semantic impairments, growing evidence points to substantial overlap between variants in the types of naming errors observed (Polito et al., 2023). Moreover, although naming impairments are not usually a defining feature of the nonfluent variant (nfvPPA), alterations in phonological processing—partly overlapping with those seen in lvPPA—have been reported alongside articulatory deficits (Ash et al., 2010). These findings highlight the need to characterize the degree and nature of underlying impairments across PPA variants, as well as the extent to which phonological and semantic components are dissociable. **Aims:** The main aim of this study is to further characterize naming deficits across the three variants of PPA by disentangling the respective contributions of phonological and semantic processes. To this end, naming performance (accuracy and error types) in the same individuals was compared across two cyclic naming tasks: one emphasizing semantic processing and the other emphasizing phonological processing. **Methods:** Thirty patients with PPA (12 nfvPPA, 12 lvPPA, and 8 svPPA) and seventeen age-matched cognitively unimpaired controls completed two versions of a cyclic naming task. In the semantic version, participants named pictures under two conditions: (a) related, in which pictures belonged to the same semantic category, and (b) unrelated, in which pictures belonged to different semantic categories. In the phonological version, participants also named pictures under two conditions: (a) related, in which pictures shared an initial phonological segment, and (b) unrelated, in which pictures did not share an initial segment. Each task version comprised 128 images, organized into four blocks per condition. **Results:** First, linear mixed-effects analyses showed that PPA patients were less accurate and slower in naming compared with cognitively unimpaired controls, but no significant differences were observed among the three PPA variants (see Figure 1). Second, canonical discriminant analysis indicated that two functions accounted for the vast majority of the explained variance (Function 1 = 73.8%; Function 2 = 25.5%). The first function was strongly associated with semantic accuracy measures ($|r|s \geq .94$), as well as phonological accuracy measures ($|r|s \geq .84$), whereas the second function was primarily associated with phonological accuracy measures ($|r|s \geq .33$). Finally, negative binomial models showed that lvPPA had a higher probability of producing phonemic errors than the other PPA variants ($\beta = 2.53$, 95% CI [0.03, 5.02], $p = .047$), but a lower probability of producing phonetic errors compared with nfvPPA ($\beta = -3.26$, 95% CI [-6.59, -0.67], $p = .022$). **Discussion:** Naming deficits in PPA appear to be primarily driven by a combination of lexico-semantic and phonological impairments, whereas the independent contribution of phonological processes alone is relatively modest. Importantly, analyses of error types offer greater insight into the nature of lexical deficits, particularly for differentiating between lvPPA and nfvPPA patients.

P4.12 TEST-ME Survey: Exploring current practices in language assessment for multilingual individuals in clinical and research settings

Dr. Ana Sofia Costa¹, M.Sc. Alessa Hausmann², M.Sc. Arianna Frijó³, Dr. Boon Lead Tee^{4,5}, Dr. Mandy Wigdorowitz^{6,7,8}, Dr. Maria Teresa Carthery-Goulart^{9,10,11}, Dr. Petronilla Battista^{12,13}, Dr. Samir Diouny¹⁴, Dr. Salvatore Mazzeo^{15,3}, Dr. Adolfo M. García^{16,17,13}

¹RWTH Aachen University Hospital, Aachen, Germany. ²University of Geneva, Geneva, Switzerland. ³IRCCS "San Donato", Milan, Italy. ⁴Global Brain Health Institute, San Francisco, United States. ⁵University of California at San Francisco, San Francisco, United States. ⁶University of Alabama, Tuscaloosa, United States. ⁷University of Cambridge, Cambridge, United Kingdom. ⁸University of Johannesburg, Johannesburg, South Africa. ⁹University of Sao Paulo, Sao Paulo, Brazil. ¹⁰The University of Hong Kong, Hong Kong, Hong Kong. ¹¹Federal University of ABC, Santo André, Brazil. ¹²Institute of Bari, Bari, Italy. ¹³Global Brain Health Institute (GBHI), San Francisco, United States. ¹⁴Hassan II University, Casablanca,

Morocco. ¹⁵Vita-Salute San Raffaele University, Milan, Italy. ¹⁶Universidad de San Andrés, Buenos Aires, Argentina. ¹⁷Universidad de Santiago de Chile, Santiago, Chile

Introduction: Assessing speech and language difficulties in multilingual individuals presents unique challenges. Traditional assessment tools, rooted in monolingual norms, may fail to capture cross-linguistic patterns (e.g. priming, mixing, transfer), potentially leading to mischaracterizations, misdiagnosis, or underdiagnosis of speech and language disorders in multilinguals. Comprehensive data on current practices among speech and language clinicians and researchers concerning assessment for multilingual patients is limited, with previous studies focusing on specific aspects, such as general approaches to cognitive assessment. To bridge this gap, we designed TEST-ME (Testing Experiences & Strategies for Multilingual Evaluation), a focused survey on current language assessment practices for multilingual populations by professionals from various disciplines and world regions. **Methodology:** The survey was constructed using a systematic approach to effectively capture current practices on language assessment of multilingual individuals. First, we formed a representative focus group within the INCLUDE Network, comprising 10 clinicians and researchers affiliated across 16 different countries and working as speech-language pathologists, neuropsychologists, linguists, neurologists, and cognitive neuroscientists. Second, in semi-structured discussion sessions, we leveraged their expertise to identify key topics related to speech and language assessment practices in multilingual contexts, utilizing a four-step process of discussion, revision, ranking importance, and achieving consensus. Third, emerging topics were organized under six categories, trimmed for efficient administration, revised for clarity, and translated into eight languages. **Results:** The final survey comprised 44 items, organized into six categories, namely: demographics, training and experience, multilingualism definitions and practices, clinical and research best practices, obstacles and opportunities, and feasibility of clinical and research recommendations. The survey was designed as an anonymous online tool (implemented on Microsoft Forms) featuring multiple-choice, Likert-scale, and open-ended questions. A sampling strategy was established for participant recruitment through the INCLUDE Network, the International Society to Advance Alzheimer's Research and Treatment (ISTAART), the Collaboration of Aphasia Trialists (CATs), and identification of relevant national professional organizations. A pilot version of the survey is currently being evaluated. Finally, we established a data analysis plan contemplating analyses of (a) quantitative data (via descriptive and inferential statistics) to identify trends in assessment practices, and (b) qualitative responses (via thematic analyses) to capture common themes. **Discussion:** Prospective findings have implications for test design, adaptation, administration, and scoring, alongside new directions of basic and translational research in multilingualism. Overall, we aim to inform multilingual-sensitive tools that acknowledge this population's distinct linguistic profiles rather than gauge them by reference to monolinguals norms and procedures. More generally, through our cross-cultural approach, we aim to foster more inclusive, equitable practices of speech and language assessment in multilingual individuals and contexts.

P4.13 Partner-supported script training to maintain functional communication in advanced nonfluent primary progressive aphasia

Prof. Zsolt Cséfalvay¹, dr. Viktória Čiernik Kevická^{1,2}, Mgr. Tomáš Benko¹, MSc. Zuzana Fless³

¹Department of Communication Disorders, Comenius University, Bratislava, Slovakia. ²Institute of Informatics, Slovak Academy of Sciences, Bratislava, Slovakia. ³Communicative Disorders and Sciences Department, San Jose State University, San Jose, California, United States

Background: Advanced nonfluent primary progressive aphasia (nfvPPA) is characterized by profoundly reduced verbal output, leading to severe limitations in functional communication. In late-stage nfvPPA, conventional speech-language therapy (SLT) often produces minimal gains. Script training targets functional spoken discourse by automatizing personally relevant, context-specific utterances through intensive, repeated practice. Although involvement of communication partners is considered essential for daily communication, evidence for partner-supported interventions in advanced nfvPPA is scarce. **Methods:** Two individuals with advanced nonfluent/agrammatic primary progressive aphasia (nfvPPA), aged 65 and 72 years, participated in a 12-month hybrid intervention comprising once-weekly online speech and language therapy (SLT) sessions and four weekly partner-assisted home practice sessions conducted under clinician guidance. At baseline, both participants exhibited severely restricted verbal output, characterized predominantly by single-word responses to questions, minimal to absent spontaneous speech production, and relatively preserved single-word auditory comprehension. The intervention was based on a structured, hierarchical script-training approach. Therapy initially targeted highly familiar and high-frequency verbal material (e.g., proverbs), followed by tasks involving partial sentence completion, repetition after short delays, and completion cued by the initial word. Subsequently, functionally relevant and personally meaningful sentences reflecting everyday communicative needs were introduced. These sentences were practiced using immediate and delayed repetition as well as sentence completion tasks with progressively increasing demands on independent lexical and syntactic retrieval. Trained utterances were systematically embedded into daily routines to facilitate functional generalization. Language production outcomes were assessed using the DgAAA (Cséfalvay et al, 2018), while functional communication and psychosocial impact were evaluated with the Aphasia Impact Questionnaire (AIQ-21; Swinburn et al., 2018). **Results:** Both participants engaged in intensive partner-assisted script

training, with the systematic integration of up to ten highly functional sentences into everyday communicative interactions. In one participant, trained scripts were retained and functionally used for almost one year following the completion of script training, after which communication gradually shifted toward targeted single-word productions as verbal abilities declined. In the second participant, a marked deterioration in verbal output was observed approximately six months after script training; consequently, meaning-based gestures were introduced to represent previously trained scripts and were consistently employed until the end of life. Both participants and their communication partners evaluated the intervention as meaningful, acceptable, and feasible in everyday life. Importantly, script training supported durable learning and sustained functional communication over time, while the integration of gestures served as an effective compensatory strategy, enabling adaptive communication despite progressive verbal decline. **Conclusions:** Partner-supported script training delivered in a hybrid SLT framework can sustain functional communication and participation in advanced nvPPA. Structured home practice, systematic partner coaching, and context-specific scripts facilitate real-world communication, enhance interactional dynamics, and contribute to quality of life even in late disease stages. Active involvement of communication partners is a critical component for maintaining engagement and functional communication in progressive aphasia. These findings highlight the clinical utility of integrating partner-assisted strategies and multimodal supports in the management of advanced nvPPA. This research was supported by VEGA grant 1/0017/26 and project VV-MVP-24-0072.

P4.14

Understand better the verbal behavior of patients with PPA: Insights from qualitative analysis of speech therapy oral tests

Pr Thi Mai Mai Tran^{1,2}, Mrs Orlane Orlane², Mrs Nathalie Forestier³, Mrs Coline Carpentier³, Pr Thibaud Lebouvier^{3,4}, Mrs Aurore Mahut Dubos⁴

¹LILNcog (Lille Neurosciences & Cognition) UMR-S1172, University of Lille, Lille, France. ²CFUO (University training center for speech therapy), Department of Medicine, UFR3S, University of Lille, Lille, France. ³CMRR (Memory, Resource and Research Center), CHU (University Hospital) of the Lille, Lille, France. ⁴LILNcog (Lille Neurosciences & Cognition) UMR-S1172, INSERM, University of Lille, Lille, France

Introduction: Speech therapy assessments for Primary Progressive Aphasia (PPA) aim to confirm the diagnosis of language disorders at the forefront of a neurodegenerative condition and to specify the clinical form presented by the patient (non-fluent/agrammatical, semantic, logopenic). This assessment is mainly based on quantitative criteria (deficit scores on certain language tests such as naming or repetition) but also qualitative criteria (e.g., presence of agrammatism or a feeling of strangeness about words). **Aims:** Conduct of qualitative analysis of the oral productions of patients with PPA to the understanding of these patients' verbal behavior and identify relevant qualitative markers that could help refine the diagnosis and identify more targeted therapeutic approaches. **Methods:** Our exploratory study involves 15 patients with PPA (5 patients per variant) followed at the Memory, Resource and Research Center (CMRR) of the Lille University Hospital (CHU) and 15 matched control subjects. We studied their performance on 3 oral tests from the French-language assessment of neurodegenerative aphasia (GREMOTS, Bezy et al. 2016). The linguistic analysis focused first on 2 tests : (1) a confrontation naming of photos with aims the production of 36 nouns (controlled in terms of frequency, length, and semantic category) and (2) a narrative speech test based on story in pictures, presented in a PACE situation. The third complementary test was (3) a repetition task involving 10 infrequent and phonologically complex words. The Tran naming analysis grid (2018) took into account the types of errors (e.g. latency, visual errors, paraphasias) as well as strategies (e.g. formal approaches, referential circumlocutions, gestures) and comments (on the response or on the task). The narrative discourse was transcribed and analyzed using CLAN software (Macwhinney, 2009) and the grid proposed by Bezy et al. (2016), which provides information about propositional speech (as fluency, informativeness, prosody, intelligibility...). The nature of the errors (phonetic, phonological, or semantic) was studied in the word repetition test. The results of the 15 patients (5 nvPPA, 5 svPPA and 5 lvPPA) and the 15 control subjects were then compared quantitatively (scores in naming /36, in discourse /50 and repetition /10) and qualitatively. **Results:** Our results on this small sample show that qualitative analysis confirms and clarifies, for each of the three variants of PPA, the linguistic impairments described in the literature and complements the assessment by revealing specific verbal behaviors, particularly in the way linguistic deficits are managed in each of language situations explored. This framework thus offers the possibility of characterising not only errors but also the preservations and strategies developed by patients, and of constructing a therapeutic plan that takes these three elements into account jointly. **Discussion:** These findings open up clinical prospects for more individualized care, focused on functional communication and the development of compensatory strategies. The goal now is to continue this research by including more PPA patients and comparing their performance to another increase the number of patients per variant and to add a new group of 15 subjects with Alzheimer's disease.

P4.15 Using network science to guide treatment of word retrieval in individuals with logopenic primary progressive aphasia

Dr Thuy Anh Sally Nguyen¹, Dr Nichol Castro², Dr Penelope Monroe¹, Professor Joanne Arciuli³, Dr Cristian Leyton¹, Professor Michael Vitevitch⁴, Professor Olivier Piguet¹, Professor Kirrie Jane Ballard¹

¹University of Sydney, Sydney, NSW, Australia. ²State University of New York at Buffalo, Buffalo, NY, United States. ³Flinders University, Adelaide, SA, Australia. ⁴University of Kansas, Lawrence, KS, United States

Introduction: Word retrieval difficulty is a key marker of logopenic primary progressive aphasia (lvPPA), often with predominance of phonological paraphasias. The phonological relationships between words can facilitate or inhibit word retrieval across different tasks. The network science approach can quantify the connectedness between words, locally (e.g. neighbourhood density, referred to here as *degree*) and globally (e.g. *closeness centrality*), within a network. A word with high phonological degree has many words that vary from it by only one phoneme (e.g. /kæt/: pæt, mæt...cæt, cõt...cæp, cæn...). Closeness centrality measures average path-length from one word to all other words in the network (e.g. four steps from cat to pen: kæt-kæn-pæn-pen). Semantic network properties (e.g. degree on semantic associates, such as cat: dog, mouse, scratch...) also play a role in word retrieval, with phonological and semantic properties influencing healthy controls and individuals with fluent and nonfluent aphasia (Castro et al., 2020). **Aims:** In individuals with lvPPA, to assess whether (1) word retrieval intervention improves picture naming performance and (2) phonological and/or semantic network variables (i.e. degree, closeness centrality) influence picture naming accuracy at baseline, and/or improvement in naming accuracy after a 4-week word retrieval intervention. **Methods:** Multiple-baseline-across-participants and -behaviours designs were used to examine the efficacy of a traditional cueing-based word retrieval intervention. Participants were 4 individuals diagnosed with lvPPA by a neurologist specialised in PPA. Baseline testing of picture naming sampled 250 nouns from our custom-built network of 5029 common words defined by a phonological layer (Australian Learner's Dictionary; Blair et al., 1997) and the Australian semantic free-association database (De Deyne et al., 2019). Treated (n=40) and untreated words (n=20) were selected from words that each participant was unable to name during baseline. Target treatment dosage was 1600 trials: 100 trials/session, 4 sessions/week (1 – 2 in clinic, 2 – 3 at home), for 4 weeks.

Experimental probes were weekly, then 1-month post-treatment. Analyses, by participant, included visual analysis of probe data, effect size, and correlation between improvement score (accuracy in baselines vs. treatment probes) and network and psycholinguistic variables (i.e. degree, closeness centrality, frequency, acquisition age, word length) for treated words.

Results: Actual dosage was between 33 – 48% of target. Regardless, all participants showed large positive treatment-effects (Hedges' $g > 2.7$), and maintenance above baseline (Figure 1). For P1 and P2, baseline naming was facilitated by higher semantic degree but words with lower semantic degree showed greater improvement with treatment (Table 1). For P3, baseline and treatment performance were facilitated by higher phonological degree, higher word frequency and shorter word-length. Visual analysis for P4 suggested benefit for words with low phonological degree.

Discussion: Replicating extant research, PPA responds well to word-retrieval intervention with effects maintaining short-term post-treatment. Findings indicate network science can provide valuable insight into variables affecting baseline naming performance, and a word's responsiveness to treatment; and relevant variables differ across individuals within the same PPA variant. Future research using this approach may provide greater resolution for evaluating brain-behaviour associations for word retrieval within and across PPA variants.

P4.16 Spectral characterisation of EEG in primary progressive aphasia: Correlations with cognitive performance

Ms. Yadhira Barroso-Rosales¹, Dr. Lucía Fernández Romero¹, Dr Jordi Matías-Guiu Antem¹, Dr. Paloma Balugo Bengoechea², Dr Adela Fraile Pereda², Dr. María Valles Salgado¹, Dr. Cristina Delgado Alonso¹, Dr. Javier González Rosa^{3,4}, Dr. María Díez-Cirarda¹

¹Departamento de Neurología, Hospital Clínico San Carlos, Instituto de Investigación Sanitaria San Carlos (IdISCC), Madrid, Madrid, Spain. ²Departamento de Neurofisiología, Hospital Clínico San Carlos, Instituto de Investigación Sanitaria San Carlos (IdISCC), Madrid, Madrid, Spain. ³Instituto de Investigación e Innovación de Ciencias Biomédicas de Cádiz (INIBICA), Cádiz, Cádiz, Spain. ⁴Departamento de Psicología, Universidad de Cádiz, Cádiz, Cádiz, Spain

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative syndrome characterised by progressive language deterioration, with initial preservation of other cognitive functions. There are three main variants: non-fluent (nfvPPA), semantic (svPPA) and logopenic (lvPPA), which diverge in their linguistic profile and the neuroanatomical patterns affected. The lvPPA variant presents with Alzheimer's disease-like neuropathology, while the other variants are predominantly associated with frontotemporal lobar degeneration. Differentiation between variants can be challenging and thus, novel biomarkers are needed to improve the diagnosis and to further characterize the pathophysiology of PPA variants. **Aims:** The aim of this study was to characterise patterns of brain electrical activity in patients with PPA using electroencephalography (EEG) at rest, to identify differences between clinical subtypes and the control group, and to conduct a preliminary exploration of the relationship between EEG measurements and cognitive-linguistic performance.

Methods: A total of 101 patients with PPA (38 nfvPPA, 19 svPPA, 44 lvPPA) and 19 healthy controls were included. All patients underwent clinical and neuropsychological assessment, including Addenbrooke's Cognitive Examination-III and

Mini Linguistic State Examination. A resting EEG protocol was administered to all participants using a 19-channel bipolar system. Differences in spectral power between PPA variants and the control group were statistically analysed. **Results:** Neuropsychological assessment revealed differences in cognitive performance, with the nvPPA variant showing better cognitive realization in both the ACE-III and MLSE, especially when compared to the lvPPA variant. Spectral analysis revealed differences in spectral power between PPA variants. More specifically, the lvPPA variant exhibited an increase in the spectral power of the theta band compared to other PPA subtypes and healthy controls. This increase in spectral power was evident in frontal and temporal regions. Similarly, a decrease in the alpha band in the left parietoccipital region was observed in the lvPPA variant compared to the control group as a statistical trend. Correlation analyses between EEG measures and cognitive-linguistic realization showed a positive correlation between these electrophysiological changes and performance on tasks of attention, memory, visuo-perceptive skills, and different domains of language. **Discussion:** The lvPPA presents a different electrophysiological profile, characterised mainly by alterations in the frontotemporal theta band and parietoccipital alpha band, suggesting that the EEG signal is influenced by different neuropathological variants (Alzheimer's disease versus frontotemporal degeneration). Also, the relationship between electroencephalographic changes and observed cognitive-linguistic performance suggests the clinical relevance of these electrophysiological variations in guiding clinical diagnosis. **Keywords:** Primary progressive aphasia, EEG, spectral analysis, cognition.

P4.17 How often are verbal working memory and phonological deficits found in lvPPA? A task-level systematic review

Dr. Silke Coemans¹, Prof. Esli Struys¹, Dr. Seçkin Arslan², Prof. Stefanie Keulen¹

¹Vrije Universiteit Brussel, Brussels, Belgium. ²Université Côte d'Azur, Nice, France

Introduction: Logopenic primary progressive aphasia (LvPPA) is commonly associated with impaired repetition and reduced verbal working memory (VWM), often attributed to deficits in phonological processing and short-term maintenance of phonological information. Despite this clinical consensus, the empirical literature varies widely in tasks, scoring, and comparators, making it difficult to quantify how frequently deficits are observed and which tasks most consistently detect them. **Aims:** To systematically synthesise behavioural evidence on VWM and phonological processing in LvPPA, and to quantify (i) how often deficits are reported for each domain and (ii) which specific tasks most reliably show impairment, with the goal of disentangling phonological processing limitations from VWM storage/manipulation demands. **Method:** We conducted a systematic review following PRISMA principles. Group studies including participants diagnosed with LvPPA were eligible if they reported behavioural outcomes on VWM and/or phonological processing tasks. For each study, tasks were coded and harmonised at the task-family level (e.g., digit span backward; nonword repetition). We extracted LvPPA sample size, task variants (stimuli, test battery, scoring), outcome measures, and the direction of findings relative to healthy controls and/or published norms. For each task, we computed: frequency of use (number of studies), cumulative LvPPA sample size, number of studies reporting a deficit versus no deficit (and mixed/unclear where applicable), and cumulative LvPPA sample size falling within deficit vs no-deficit evidence. **Results:** Across included group studies, VWM was most frequently assessed using digit span. Deficits were reported most consistently for higher-load or manipulation demands: digit span backward was impaired in 35/40 studies, and sentence repetition in 20/22 studies. Digit span forward was also frequently reduced (30/39) but more variable than backward span. For phonological processing, tasks requiring sublexical assembly or manipulation showed high deficit rates: nonword repetition was impaired in 8/12 studies, and phoneme deletion was impaired in 2/2 studies. Word repetition showed mixed evidence (deficit in 12/22 studies), consistent with partial support from lexical knowledge and task differences. Low-load sublexical repetition (e.g., single phoneme repetition) could be preserved in some datasets, whereas more complex phonemic structure or perceptual classification paradigms showed variable sensitivity depending on stimulus properties and scoring. **Discussion:** Task-level quantification indicates that VWM deficits are reported in the majority of studies in LvPPA, particularly on tasks emphasising manipulation and serial order maintenance (digit span backward, sentence repetition). Phonological processing deficits are also common, especially when tasks minimise lexical-semantic support or require explicit phonological manipulation (nonword repetition, phoneme deletion). Mixed findings for simpler tasks and word repetition likely reflect heterogeneity in task parameters (length, phonotactics), scoring rules (accuracy vs error-type exclusions), comparators (norms vs controls), and disease stage. By mapping deficit rates across tasks that differentially tax storage, manipulation, and phonological assembly, this review helps disentangle the processes contributing to repetition impairment in LvPPA. These results provide a practical evidence base for selecting sensitive clinical and research measures to characterise LvPPA, track change, and target intervention.

P4.18 Emotional expression in connected speech in frontotemporal dementia

Dr. Chiara Gallangani^{1,2}, Dr. Eleanor Palser³, Ms. Brittany T. Morin², Ms. Amanda Gerenza², Dr. Anna Gilioli², Dr. Hulya Ulugut², Mr. Rian Bogley², Dr. Agustina Birba⁴, Mr. Ryan Newbury², Dr. Adolfo M. García^{4,5,6}, Dr. Jet M.J. Vonk², Dr. Joel H. Kramer², Dr. Bruce L. Miller², Dr. Katherine P. Rankin², Dr. Howard J. Rosen², Dr. William W. Seeley², Dr. Maria Luisa Gorno-Tempini², Dr. Virginia E. Sturm²

¹Department of Biomedical, Metabolic, and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy. ²Edward and Pearl Fein Memory and Aging Center, Department of Neurology, University of California, San Francisco, San Francisco, California, United States. ³Department of Psychology, Palo Alto University, Palo Alto, California, United States. ⁴Cognitive Neuroscience Center, Universidad de San Andrés, Buenos Aires, Argentina. ⁵Global Brain Health Institute, University of California, San Francisco & Trinity College Dublin, Dublin, Ireland. ⁶Universidad de Santiago de Chile, Santiago, Chile

Introduction: Connected speech offers a powerful window into language and emotion in frontotemporal dementia (FTD), including behavioral variant FTD (bvFTD) and semantic dementia (SD). SD primarily involves impaired semantic knowledge, manifesting either with left-predominant anterior temporal lobe (ATL) atrophy or right-predominant ATL atrophy. BvFTD is characterized by profound emotional changes related to frontal lobe atrophy. While connected speech tasks commonly assess language and object knowledge, tools that specifically assess the understanding and expression of emotion remain limited. This study investigated whether the Emotion Café, a novel, emotionally enriched picture description task, captures altered verbal emotional expression in FTD. **Methods:** We developed and administered the Emotion Café task to 43 healthy controls (HC), 9 individuals with SD, and 17 with bvFTD. Participants described a picture depicting multiple objects and people, each of whom displayed a specific negative or positive emotion. Speech samples were automatically transcribed, manually quality checked, and analyzed using large language model-based methods. Each phrase was classified by content (emotion words, people, objects, or content-empty phrases) and emotional valence (negative or positive). Outcomes were expressed as proportions normalized to the total number of phrases per participant. Group differences were assessed using Kruskal-Wallis tests, followed by Dunn's post-hoc comparisons with FDR correction. **Results:** Both SD ($p=0.016$) and bvFTD ($p=0.004$) produced fewer phrases containing emotion words than HC. Groups did not differ in object- or people-related phrases, but empty phrases were more frequent in SD ($p=0.026$) and bvFTD ($p=0.005$) than in HC. While bvFTD produced fewer phrases with negative ($p=0.008$) or positive ($p=0.037$) valence than HC, SD only produced fewer phrases with negative valence than HC ($p=0.004$). **Conclusions:** These findings suggest that emotional expression in connected speech is altered in SD and bvFTD. The divergent valence profile between SD and bvFTD suggests that emotional valence in language may be a useful linguistic-affective marker. This contrast also aligns with their distinct clinical profiles, with bvFTD characterized by broader blunting of emotional behavior, and SD typically showing a shift toward more positive emotional expression. These results provide initial evidence that the Emotion Café task captures clinically meaningful emotional language features in FTD.

P4.19 Semantic network analysis of verbal fluency in primary progressive aphasia

Dr Jordi A Matias-Guiú¹, Miss Valeria González-Baz², Dr Lucía Fernández-Romero¹, Dr Cristina Delgado-Alonso¹, Miss Silvia Oliver-Mas³, Miss Yadhira Barroso-Rosales⁴, Dr María José Gil-Moreno¹, Dr María Díez-Cirarda¹, Dr Alfonso Delgado-Álvarez¹

¹Hospital Clínico San Carlos, Madrid, Madrid, Spain. ²Universidad Complutense, Madrid, Madrid, Spain. ³Hos, Madrid, Madrid, Spain. ⁴Hospital Clínico San Carlos, Madrid, Spain

Introduction: Verbal fluency tasks are widely used in cognitive assessment. Novel methods such as semantic network analysis could provide novel insights about cognitive characteristics in patients with primary progressive aphasia (PPA). **Aims:** We conducted semantic network analysis in verbal fluency tasks in a large cohort of patients with PPA, categorized according to the 2011 consensus criteria, and healthy controls. **Methods:** We analyzed the items produced in two verbal fluency tasks (animals in 1 minute, actions in 1 minute) in 202 patients with PPA (78 non-fluent variant, 41 semantic variant, and 83 logopenic variant) and 28 healthy controls. Semantic networks were constructed based on co-occurrence of produced items. Community detection was performed using the Louvain algorithm following a data-driven approach and compared against predefined semantic clusters. Global network measures included average shortest path length (ASPL), clustering coefficient (CC), and modularity (Q). **Results:** In semantic fluency, healthy controls showed higher ASPL than PPA variants, reflecting broader semantic exploration. Louvain communities in controls displayed high internal heterogeneity, with multiple predefined semantic clusters distributed within each community, consistent with a flexible and richly interconnected semantic organization. The semantic variant of PPA showed a reduced number of communities with high internal homogeneity and dominance of one or two predefined clusters. This pattern suggests a collapse of semantic structure, with loss of conceptual differentiation and rigid lexical organization. The logopenic variant showed an intermediate profile, with several communities of mixed composition but partial dominance of specific categories. The number of detected communities was greater than in the semantic variant and comparable to the non-fluent group,

indicating partial preservation of conceptual differentiation but reduced network efficiency. The non-fluent variant showed a partial reduction of heterogeneity, with some communities dominated by specific categories while maintaining mixed composition, suggesting reduced flexibility and increased compartmentalization of lexical networks. Global network metrics supported these patterns. The semantic variant showed the highest ASPL, the lowest number of edges, high CC, and reduced modularity, indicating inefficient networks with strong local but weak global integration. The logopenic variant showed the lowest ASPL and CC with high modularity, reflecting compact but locally unstable networks. The non-fluent variant showed intermediate values, while controls presented the highest number of connections and modularity. In action fluency, controls again showed the highest ASPL. The non-fluent variant showed the highest CC, indicating dense and rigid local organization, whereas the logopenic variant consistently showed the lowest CC, suggesting reduced local cohesion and more diffuse semantic associations. **Discussion and Conclusions:** Semantic network analysis reveals distinct patterns of lexical–semantic organization across PPA variants that are not captured by traditional fluency scores. Healthy individuals show flexible, distributed networks, whereas the semantic variant exhibits profound simplification and rigidity consistent with degradation of conceptual knowledge. The non-fluent variant shows relatively preserved semantic structure, supporting the view that its deficits are primarily motor–syntactic. The logopenic variant presents highly connected but poorly clustered networks, compatible with inefficient lexical access. Network-based approaches provide sensitive markers of semantic disruption across PPA subtypes beyond total word counts.

P4.20 Automated analysis of discourse in primary progressive aphasias

Dr. Annette Glotfelty¹, Dr. Hugo Botha¹, Dr. Joseph R. Duffy¹, Dr. Leland R. Barnard¹, Dr. John L. Stricker¹, Dr. Neill R. Graff-Radford², Dr. Gregory S. Day², Dr. Jonathan Graff-Radford¹, Dr. Stuart J. McCarter¹, Dr. David T. Jones¹, Dr. Vijay K. Ramanan¹, Dr. Bradley F. Boeve¹, Dr. Clifford R. Jack¹, Dr. Ronald C. Petersen¹, Dr. Jennifer L. Whitwell¹, Dr. Keith A. Josephs¹, Dr. Rene L. Utianski¹

¹Mayo Clinic, Rochester, MN, United States. ²Mayo Clinic, Jacksonville, FL, United States

Introduction: Automated discourse analysis has emerged as a powerful tool for characterizing variants of Primary Progressive Aphasia (PPA). However, distinguishing between “fluent” variants, i.e., logopenic (lvPPA) and semantic (svPPA), remains a challenge. For example, measures of morphosyntactic and lexical components derived from natural language processing (NLP) have shown promise in differentiating fluent from nonfluent/agrammatic PPA (Lukic et al., 2024), but models relying on these features often struggle differentiating svPPA from lvPPA (Themistocleous et al., 2021). Recent advances of large language models (LLMs) provide the opportunity to look beyond isolated parts of speech to discourse coherence and topic adherence. This may be particularly beneficial for the differentiation of svPPA and lvPPA, as both variants present with word finding difficulties. **Aims:** We sought to identify automatically derived linguistic markers that differ among patients with lvPPA, svPPA, and cognitively normal controls. Specifically, we aimed to examine features obtained from existing NLP tools as well as LLMs, using patients’ discourse samples. **Methods:** 73 participants recruited from Mayo Clinic practice and research programs (MCSA, ADRC, NRG) completed an open-ended picture description task: 51 amyloid negative controls and 22 patients with PPA (12 lvPPA, 10 svPPA). Transcriptions were created with CrisperWhisper. NLP measures were calculated using spaCy and in-house code. We computed two different LLM based metrics. Gemma-7B was used to calculate surprisal for each word, defined as the negative log-probability of a given token given its preceding context. A context of 10 preceding words was contrasted with the entire previous transcript to compare near term versus overall coherence. A quantized version of Llama-70B that was previously used to identify key components in transcriptions from a set of 300 control participants was used to identify the number of components mentioned by our participants. These metrics were compared across groups using Kruskal-Wallis tests. **Results:** NLP measures indicated that patients with lvPPA used more pronouns and numbers, and fewer nouns, prepositions, and articles than controls. svPPA patients also used more pronouns than controls. LLM analysis showed that patients with lvPPA had a larger ratio of overall to immediate surprisal, suggesting loss of coherence during their description, while svPPA patients described fewer key components of the picture. **Discussion:** NLP-derived measures from a picture description task demonstrated clear differences between patients with fluent PPAs and controls, contributing to an overall picture of reduced word choice specificity and/or complexity in PPA. Like prior studies, these metrics were not robust at differentiating lvPPA from svPPA. In contrast, LLM-derived measures highlighted key differences between discourse produced by patients with lvPPA and svPPA. That is, patients with lvPPA continue to include meaningful, accurate content related to the picture’s narrative, though information is presented less coherently, possibly due to impairment in structural organization and topic adherence. Conversely, patients with svPPA include fewer references to essential elements of the picture, potentially due to loss of conceptual knowledge. However, their attenuated content is more structurally coherent. Future work will expand these findings to a larger, more heterogeneous sample across more phenotypes of progressive speech-language disorders.

P4.21 Syntactic comprehension difficulty in nonfluent variant primary progressive aphasia and post-stroke Broca's aphasia

PhD Nicoletta Biondo¹, PhD Maria Luisa Mandelli¹, PhD Maria V. Ivanova², BA Rian Bogley³, MA, CCC-SLP Willa Keegan-Rodewald¹, BA Siddarth Ramkrishnan¹, BA Mia Lin¹, MD Zachary A. Miller¹, PhD Juliana Baldo⁴, MD Jessica de Leon¹, PhD Nina F. Dronkers², MD, PhD Maria Luisa Gorno-Tempini¹

¹UCSF Fein Memory and Aging Center, San Francisco, United States. ²UC Berkeley, Berkeley, United States. ³-, United States. ⁴VA Northern California Health Care System, Martinez, United States

Introduction: Standard assessments of syntactic comprehension often contrast simple, canonical sentences (Active/SVO) with more complex, noncanonical ones (Passives, Object Clefts, Double Embeddings). However, sentences differ in *why* they are complex: Passives require reinterpreting who is acting on whom; Object Clefts require holding both participants in memory until the verb allows integration of who is doing what to whom; Double Embedding sentences are long but can be resolved using linear word order rather than complex syntax. These sentence types are often used interchangeably in clinical assessment. Considering them separately can reveal which linguistic and cognitive demands drive comprehension difficulty. Nonfluent variant primary progressive aphasia (nfvPPA) and Broca's aphasia are disorders that involve syntactic comprehension difficulty and left prefrontal damage caused by neurodegeneration or vascular disease. Very few studies have compared specific profiles of sentence comprehension impairment in the two groups. Such comparisons can reveal whether different sources of syntactic complexity are differentially affected across disorders with left prefrontal damage. **Aims:** This study examined how individuals with nfvPPA and Broca's aphasia comprehend sentences that differ in processing demands, to refine the clinical characterization of comprehension deficits in the two disorders and shed light on how left prefrontal damage affects syntactic processing. **Methods:** Comprehension was assessed using the CYCLE-R sentence-picture matching test in individuals with nfvPPA (n=25) and chronic post-stroke Broca's aphasia (n=21). Examples of the sentence types tested are provided in Table 1. Accuracy was analyzed using generalized linear mixed models with group, sentence type and their interaction as fixed effects, age, sex, and years of education as covariates, and random intercepts for participants. The extension of brain damage in the two groups was assessed by creating Brainnetome atlas region-based frequency maps (t1-weighted). **Results:** Object Clefts were significantly more difficult to understand compared to canonical Active/SVO sentences ($p < .001$), across groups. In contrast, accuracy for Passive and Double Embedding sentences did not differ significantly from Active/SVO sentences ($ps > .09$). The nfvPPA group showed significantly better overall performance than the Broca's aphasia group ($p < .001$). No group $\times$ sentence type interactions reached significance (all $ps > .35$). Frequency maps showed that atrophy in the nfvPPA group was mostly present in the left Prefrontal Gyrus, Inferior Frontal Gyrus, and Middle Frontal Gyrus, while lesions in the Broca's aphasia group extended over the insula, mid-to-posterior Superior Temporal Gyrus, and Inferior Parietal Lobule. **Discussion:** Comprehension difficulty emerged selectively for sentences requiring greater working memory resources (Object Clefts), across aetiologies. The group with Broca's aphasia also showed overall worse performance compared to the nfvPPA, arguably due to larger extension of brain damage. These findings highlight prefrontal contributions to managing specific aspects of syntactic complexity that go beyond the traditional simple/canonical vs complex/noncanonical distinction used in the clinical assessment of syntactic abilities. These findings refine diagnostic assessment of sentence comprehension abilities in nfvPPA and Broca's aphasia.

P4.22 Caring for persons living with primary progressive aphasia: An investigation of the male experience

Ms. Lauren R Dowden, Dr. Darby J Morhardt

Northwestern University, Chicago, Illinois, United States

Introduction: A primary progressive aphasia diagnosis presents the need for adaptation in many aspects of life including relational communication and progressive care dependency needs. While there is evidence that women comprise the majority of caregivers for persons living with dementia, little is known regarding sex and gender differences in the experience of caregiving. Studies on caregivers for persons living with PPA are rare and none have explored gender differences in the PPA caregiving role. **Aim:** To explore and add insight on the male caregiving experience for those caring for persons living with PPA. **Methods:** In 2020, the Northwestern Mesulam Institute began offering monthly online PPA care partner support groups. Approximately 40 care partners join per month across the country and internationally. Since 2022, 25 male care partners have joined the group and were invited to participate in a focus group to discuss their experience. Five males [4 spouses; 1 partner] agreed to participate, all Caucasian, 3 actively caring and 2 with spouses recently deceased. The video recorded focus group was held via Zoom and led by two licensed clinical social workers who qualitatively analyzed the transcription, compared initial coding and established emerging themes. **Results:** Several themes emerged from the qualitatively analyzed transcription: 1) Appreciating the PPA care partner support group; 2) Identifying with other men in the group; 3) Seeking support and managing needs for connection; 4) Identifying the contributions of male socialization (self-sufficiency and emotional stoicism); 5) Managing emotions (particularly self-criticism) around caregiving; 6) Recognizing the need for self-care and self-compassion. **Discussion:** Developing support interventions for

male care partners may offer increased connections to others experiencing something similar. Recognizing male caregiver approaches may differ from female approaches as well as societal constructs about self-sufficiency and emotional stoicism may impact male care partners seeking support. More research is needed on male dementia caregiving with a larger and more diverse sample

P4.23 External validation of sentence reading: Sentence repetition ratio for augmenting classification of logopenic variant primary progressive aphasia

Ms. Isidora Diaz-Carr, Ms. Donna Tippet, Mr. Voss Neal, Prof. Argye Elizabeth Hillis

Johns Hopkins Medicine, Baltimore, MD, United States

Introduction: In a study of 227 people with PPA, we found that a ratio of accuracy of reading: repetition using the same set of stimuli significantly differed across the three variants of PPA ($p < 0.00001$) (Ruch et al. 2022). The ratio also differed between nonfluent agrammatic variant (nfaPPA) versus logopenic variant (lvPPA) ($t(27) = 4.1$; $p = 0.0003$), the hardest variants to distinguish. The area under the curve for distinguishing logopenic from other variants was 0.85 (0.71-0.99), and diagnostic accuracy was 87.5% using a ratio of ≥ 2 for the original five sentences from the National Alzheimer's Coordinating Center (NACC) frontotemporal dementia battery ("old ratio") or ≥ 20 using five longer sentences ("new ratio"). The sentence reading:repetition ratio correlated with left superior temporal-inferior parietal atrophy ($r = 0.69$; $p = 0.0087$), but not with atrophy of regions associated with other variants. Here we tested the hypothesis an old ratio ≥ 2 or a new ratio ratio ≥ 20 has high sensitivity and specificity for detecting lvPPA, in a new set of individuals with well-characterized PPA. We have completed the analysis for 40 new participants with PPA, but we will have data for at least 239 participants by July. **Methods:** Individuals were given a modified version of the NACC battery for frontotemporal dementia, as well as five longer sentences for both sentence reading and repetition (see Ruch et al. 2022 for stimuli). A masked assessor, a speech-language pathologist well-published in PPA, DCT) unfamiliar with the participants, classified them using scores on the modified NACC battery and MRI reports, without scores on the longer sentences. We evaluated sensitivity and specificity for identifying lvPPA. We calculated the sentence reading:repetition ratio for both the original shorter sentences in the NACC battery (old ratio) and for the new longer sentences (new ratio), substituting 0.1 for 0 in repetition accuracy (because it is not possible to divide by 0). **Results:** A new ratio ≥ 20 or an old ratio ≥ 2 correctly identified 10/16 individuals classified as lvPPA, but identified 8 svPPA and 4 unclassifiable as having possible lvPPA. Importantly, it identified none of the nfaPPA (those hardest to distinguish from lvPPA) as having possible lvPPA. In this preliminary assessment of 40 participants, this combination of the new ratio and the old ratio had a sensitivity of 46% and specificity of 33% for identifying lvPPA versus all other PPA variants, but a sensitivity of 83.3% and a specificity of 100% for distinguishing lvPPA from nfaPPA in this preliminary analysis of 40 individuals with PPA. **Discussion:** Disproportionate difficulty repeating sentences relative to reading aloud the same sentences is a useful marker of impaired phonological working memory, a key feature of lvPPA. It can be quantified using a ratio of accurately read sentences: accurately repeated sentences. It is important to use both short and long sentences, because some people with lvPPA will perform at ceiling with short sentences, while others will perform at floor with longer sentences. These ratios are especially helpful in distinguishing lvPPA from nfaPPA, which is otherwise difficult.

Day 2 Platform Session 5 – Natural History and Clinical Characterisation

4:10 PM - 5:10 PM

5.1 The impact of sociodemographic factors on clinical profiles of patients with primary progressive aphasia

BSc Parsa Afrooz^{1,2}, PhD Mahsa Dadar^{1,2}, PhD Maxime Montembeault^{1,2}

¹Douglas Research Centre, Montreal, Quebec, Canada. ²McGill University, Montreal, Quebec, Canada

Introduction: Emerging evidence suggests that sociodemographic factors may be clinically relevant modifiers of primary progressive aphasia (PPA), with some studies reporting greater language impairments in females with PPA¹, poorer naming performance in more highly educated PPA patients², and greater temporal lobe asymmetry in older individuals with semantic variant PPA³. However, these few existing studies are based on small sample sizes, rarely examine PPA variants separately, and seldom account for sociodemographic effects on cognition that are already observed in the general population. **Aims:** Therefore, the present study investigates the impact of sex, age, and education on comprehensive clinical profiles in a large PPA cohort, stratified by variant and controlling for effects already present in healthy controls (HC). **Method:** Data were obtained from the National Alzheimer's Coordinating Center. The sample included 450 HCs, 142 individuals with semantic (svPPA), 130 individuals with non-fluent (nfvPPA) and 178 individuals with logopenic (lvPPA) variants of PPA. Clinical profiles were assessed using the Uniform Data Set version 3 and the Frontotemporal Lobar Degeneration (FTLD) Module battery (Multilingual naming test, irregular word reading, semantic associates, Northwestern anagram test, sentence repetition test, trail making test B, Benson figure copy and recall, revised self-monitoring scale). Two-way ANOVAs, conducted separately for each PPA variant, examined cognitive and language differences across diagnosis groups (PPA variant vs. HC) and sociodemographic factors, testing sex–diagnosis, age–diagnosis, and education–diagnosis interactions, controlling for disease severity. **Results:** Sex–diagnosis interactions emerged across PPA variants. Females with svPPA and lvPPA demonstrated greater impairments than males, including poorer irregular word reading in svPPA and worse confrontation naming in lvPPA. In contrast, males with nfvPPA showed more severe grammatical impairment than females. Education showed limited effects: higher education was not associated with reduced core deficits in lvPPA or nfvPPA and was linked only to milder non-core impairments in svPPA (grammar, visuospatial abilities). Age–diagnosis interactions varied by variant. In lvPPA, older age was associated with poorer confrontation naming. In svPPA and nfvPPA, older participants showed less severe core language deficits (better irregular word reading in svPPA, better sentence repetition in nfvPPA) but greater impairments in non-language cognitive domains (executive function). **Discussion:** Our results suggest that sex, education, and age shape the clinical expression of PPA variants in distinct ways. First, sex differences emerged in opposing directions across variants. The reasons for this reversal remain unclear, and future studies should investigate whether it reflects variant-specific network vulnerabilities, differences in frontal vs temporal language systems, or other biological factors. Second, higher education may not have as much of a protective effect in PPA as it does in other dementias. Third, age appears to influence the distribution of deficits in FTLD-associated PPA variants (svPPA and nfvPPA): younger individuals tend to show relatively focal and severe core language impairments, whereas older individuals present a broader, less specific profile with milder core deficits and relatively greater non-core impairments, possibly reflecting increased clinical heterogeneity or co-occurring pathologies. These findings underscore the importance of considering sociodemographic factors to improve diagnostic precision and support more individualized clinical approaches.

5.2 Detecting presymptomatic speech and language changes in genetic frontotemporal dementia with natural language processing

Dr Arabella Bouzigues^{1,2}, Dr Franco Ferrante³, Dr Agustina Birba⁴, Ms Eve Ferry-Bolder², Ms Eva Cullen², Dr Lucy L Russell², Ms Phoebe H Foster², Ms Sophie Farley², Dr Rhian Convery², Prof John C van Swieten⁵, Dr Lize C Jiskoot⁵, Dr Harro Seelaar⁵, Dr Daniela Galimberti⁶, Prof Rik Vandenberghe⁷, Dr Robert Laforce⁸, Dr Elizabeth Finger⁹, Dr Rose Bruffaerts¹⁰, Dr Maxime Bertoux¹¹, Prof Thibaud Lebouvier¹¹, Dr Eino Solje¹², Prof Johannes Levin¹³, Prof Giuseppe di Fede¹⁴, Dr Alexander Thomson¹⁵, Dr Isabelle le Ber¹⁶, Dr Peter Körtvélyessy¹⁷, Dr Matthias Schroeter¹⁸, Prof Giancarlo Logroscino¹⁹, Prof Markus Otto²⁰, Dr Ignacio Illán-Gala²¹, Dr Johanna Krüger²², Dr Benedetta Nacmias²³, Dr Alexander Gerhard²⁴, Dr Tobias Langheinrich²⁴, Dr Simon Ducharme¹, Dr Isabelle Santana²⁵, Prof Maria Carmela Tartaglia²⁶, Prof Mario Masellis²⁶, Prof Alexandre de Mendonça²⁷, Prof James B Rowe²⁸, Dr Caroline Graff²⁹, Dr Fermin Moreno³⁰, Dr Matthis Synofzik³¹, Prof Barbara Borroni³², Dr Raquel Sanchez-Valle³³, Prof Jonathan D Rohrer², Dr Adolfo Garcia³, Dr Maxime Montembeault¹

¹Douglas Research Centre, Montréal, Canada. ²University College London, London, United Kingdom. ³Cognitive Neuroscience Center of San Andres University, Buenos Aires, Argentina. ⁴Instituto Universitario de Neurociencia, Universidad de la Laguna, Buenos Aires, Argentina. ⁵Erasmus Medical Center, Rotterdam, Netherlands. ⁶Fondazione Ca' Granda, IRCCS Ospedale Policlinico, Milan, Italy. ⁷Ku Leuven, Leuven, Belgium. ⁸Université Laval, Québec,

Canada. ⁹University of Western Ontario, London Ontario, Canada. ¹⁰University of Antwerp, Antwerp, Belgium. ¹¹Université de Lille, Lille, France. ¹²University of Eastern Finland, Kuopio, Finland. ¹³Ludwig-Maximilians Universität München, Munich, Germany. ¹⁴Fondazione IRCCS Istituto Neurologico Carlo Besta, Milan, Italy. ¹⁵University of Oxford, Oxford, United Kingdom. ¹⁶Institut du Cerveau, Paris, France. ¹⁷Charité Universitätsmedizin Berlin, Berlin, France. ¹⁸Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany. ¹⁹University of Bari, Bari, Italy. ²⁰Martin-Luther-University Halle-Wittenberg, Halle, Germany. ²¹Hospital de la Santa Creu i Sant Pau, Barcelona, Spain. ²²University of Oulu, Oulu, Finland. ²³University of Florence, Florence, Italy. ²⁴University of Manchester, Manchester, United Kingdom. ²⁵University of Coimbra, Coimbra, Portugal. ²⁶University of Toronto, Toronto, Canada. ²⁷University of Lisbon, Lisbon, Portugal. ²⁸University of Cambridge, Cambridge, United Kingdom. ²⁹Karolinska Institutet, Stockholm, Sweden. ³⁰Donostia University Hospital, San Sebastian, Spain. ³¹University of Tübingen, Tübingen, Germany. ³²University of Brescia, Brescia, Italy. ³³University of Barcelona, Barcelona, Spain

Introduction: Speech and language impairments are found across frontotemporal dementia (FTD) and highly correlate with caregivers' psychological and general health. Genetic FTD, caused by mutations in *C9orf72*, *GRN* or *MAPT* genes, offers a unique opportunity to detect subtle changes before clinical diagnosis. **Aims:** This study aimed to characterise early digital speech and language changes in a large multilingual cohort of presymptomatic genetic FTD mutation-carriers using natural language processing tools. We aimed to determine whether these changes varied by genetic group and between languages. **Methods:** We analysed spontaneous speech recordings (free-speech tasks) from 620 participants from the GENFI cohort in English, Dutch and Spanish. We extracted acoustic and linguistic features using natural language processing. Extracted features were divided, *a priori*, into 9 categories (lexical richness, word properties, sentence/utterance-level, voice quality, pitch, talking intervals, concreteness, noun/verb granularity and psycholinguistic). Within these categories, feature values were normalised, direction-aligned and averaged to create composite scores for each participant. We applied linear models to compare composite scores between mutation-carriers and mutation-negative controls, as well as between genetic groups. Models included language, age, sex and education as predictors. **Results:** Presymptomatic mutation-carriers differed significantly from controls showing differences in voice quality ($\beta = -0.012$, $p = 0.024$) and pitch ($\beta = 0.013$, $p = 0.031$). Within carriers, no significant differences were observed between genetic subgroups (*GRN*, *MAPT*, *C9orf72*) for any composite ($p > 0.05$). We found strong language effects for every composite score explaining substantial variance (up to $R^2 = 0.95$). There were significant language effects across several composites. Compared to English, our results showed lower lexical richness and higher sentence/utterance-level values in both Dutch and Spanish as well as markedly higher concreteness and lower pitch in Spanish. Effects of age, sex and education were mostly small. **Discussion:** Our results highlight the ability for speech and language markers to dissociate genetic FTD mutation-carriers from controls at presymptomatic stages. More work is required to further examine whether genetic group-specific differences can be teased apart and how these may present in different languages. Such research could yield scalable, culturally adaptable tools for early FTD detection and monitoring, as well as inform selection and endpoints for future clinical trials.

5.3 Divergent cognitive and behavioural timelines across primary progressive aphasia syndromes

Professor Muireann Irish, Dr. Samuel Warren, Dr. Tao Chen, Professor Olivier Piguet

The University of Sydney, Camperdown, NSW, Australia

Introduction: Non-linguistic cognitive and behavioural features are increasingly recognised as meaningful contributors to disease burden in primary progressive aphasia (PPA). Little is known, however, about the temporal emergence of these features across PPA syndromes, or how they differ between left- and right-predominant semantic dementia. **Aims:** The objective of this study was to use Event-Based Modelling (EBM) to clarify the sequencing of cognitive and behavioural symptoms in PPA, to inform diagnosis and clinical management. **Method:** Data from 135 PPA participants were analysed, including 37 left-predominant semantic dementia (SD-L), 20 right-predominant semantic dementia (SD-R), 35 progressive non-fluent aphasia (PNFA) and 43 logopenic progressive aphasia (LPA). For comparison, 108 participants with behavioural-variant frontotemporal dementia (bvFTD) and 86 cognitively healthy controls were included. Global cognition was assessed using the Addenbrooke's Cognitive Examination-III (ACE-III), focusing on Attention, Language, and Fluency subscales. Behavioural dysfunction was measured using the Cambridge Behavioural Inventory-Revised, focusing on abnormal behaviours, apathy, and rigidity. Kernel density estimation EBMs were run for each disease group relative to controls, with data regressed for age, sex, and education. Model robustness was assessed using leave-one-out cross-validation across 10 iterations, yielding over 5,000 model runs. Finally, voxel-based morphometry analyses were conducted across the patient cohort ($n=243$) to identify grey matter correlates of each cognitive and behavioural feature, controlling for age, sex, education, scanning site, and total intracranial volume, and corrected for Family Wise Error at $p < 0.05$. **Results:** Event-based modelling revealed syndrome-specific timelines of symptom emergence. In SD-L, cognitive impairments (language, fluency, attention) emerged early, preceding behavioural changes. In contrast, SD-R demonstrated an early emergence of behavioural symptoms, with abnormal behaviours, apathy and rigidity appearing shortly after initial language changes.

PNFA and LPA showed largely similar trajectories, differing primarily in the timing of the initial cognitive feature, with fluency emerging earliest in PNFA and attention in LPA. In contrast, bvFTD exhibited early behavioural disturbances (apathy, rigidity, abnormal behaviour), with cognitive changes appearing later in the disease timeline. Voxel-based morphometry identified distinct neural substrates underlying these patterns. Cognitive impairments mapped to bilateral temporal/limbic regions (language, fluency) and posterior cortical regions (attention), while behavioural symptoms corresponded to predominantly right-sided orbitofrontal, anterior cingulate, and insular atrophy, with additional subcortical involvement (amygdala, hippocampus, nucleus accumbens) for rigidity. **Discussion:** Cognitive and behavioural features in PPA follow syndrome- and hemisphere-specific timelines, most clearly reflected in the early versus late emergence of behavioural changes in right- and left-predominant semantic dementia. These trajectories are underpinned by predominantly right-lateralised prefrontal and striatal atrophy, providing a biological marker of disease staging. Together, these findings refine phenotypic models of PPA and highlight the value of systematic behavioural assessment for diagnosis, disease monitoring, and carer support.

Virtual poster abstracts

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V1 Teletherapy communication partner training for Alzheimer's with prominent language difficulties: Discourse outcomes.

Mr Richard Talbot¹, Professor Jason D Warren², Professor Rosemary Varley¹, Associate Professor Anna Volkmer¹

¹University College London, London, London, United Kingdom. ²Dementia Research Centre, London, London, United Kingdom

Introduction: Alzheimer's pathology accounts for around 60-70% of dementia diagnoses (World Health Organisation, 2025). Communication difficulties are common in Alzheimer's disease (AD). People with AD often produce fluent but tangential discourse, with word finding difficulties prevalent in conversations. Better conversations with primary progressive aphasia (BCPPA) is a communication partner training intervention co-designed with and for people with dementia and their communication partners, often a friend, spouse or relative. Outcomes of this intervention have hereto focussed on changes in conversation behaviours, rather than discourse. This study investigates whether BCPPA has any impact on discourse in people with communication difficulties associated with AD. **Aims:** This study aims to: (1) Examine whether participation in BCPPA leads to measurable changes in discourse among people with Alzheimer's disease. (2) Assess the extent and characteristics of any changes across structured and unstructured discourse tasks. **Method:** Participants with Alzheimer's disease (including typical Alzheimer's, posterior cortical atrophy and logopenic variant primary progressive aphasia) and a communication partner were recruited from two National Health Service organisations to participate in a randomised controlled pilot study. This repeated measures crossover study compared 4-8 weeks of BCPPA delivered via teletherapy to a no treatment wait list condition. Participants were assessed on two monologic discourse measures: a picture description (highly structured) and a personal narrative (highly unstructured). Discourse assessment was multilevel and theoretically informed (Dipper et al., 2021). **Results:** Preliminary discourse analysis suggests changes at the macrostructural level, with gains in story grammar and narrative organization. The full discourse outcomes will be presented. **Discussion:** Demonstrating discourse changes alongside conversation behaviour changes following BCPPA may strengthen intervention implementation and support sustainability by offering additional meaningful outcomes to both participants and therapists. This study adds to the developing evidence base for communication partner training interventions for those living with AD and their communication partners.

V2 Multi-level language impairments across behavioural variant FTD, Alzheimer's disease and psychiatric disorders

Dr Agnès Denève, Dr Maxime Bertoux, Prof Thibaud Lebouvier

Inserm, Lille Neuroscience & Cognition, Lille, France

Introduction/aim: Language is essential to social communication. Its complexity and hierarchical organization, from low-level operations to high-order integrative processes, may provide valuable diagnostic insights beyond classical aphasia syndromes. However, systematic investigations in these conditions, particularly in behavioural variant frontotemporal dementia (bvFTD), remain scarce. To refine differential diagnosis, an exhaustive characterization of language functions is required. **Methods:** We systematically compared multi-level language functioning across bvFTD, Alzheimer's disease (AD) and primary psychiatric disorders (PPD), within an integrative neurolinguistic framework distinguishing lexical, syntactic and discursive levels, together with a cross-modal transposition/transcoding dimension. A total of 85 patients (including 34 with bvFTD, 30 with AD, 21 with PPD) and 40 matched healthy controls underwent an extensive language assessment using the GREMOTs battery, specifically developed for the neurodegenerative clinical context. Composite, quantitative as well as qualitative indices were computed for each linguistic level. Structural MRI data were analysed using voxel-based morphometry ($p < 0.05$ corrected for multiple comparisons). **Results:** All clinical groups exhibited lexical impairments relative to controls, with bvFTD presenting the most severe and widespread deficits across fluency, naming and comprehension (partial eta-squared, η^2 , ranging from .18 to .49). AD and PPD showed milder lexical inefficiencies (η^2 = .11—.39 and η^2 = .07—.29, respectively). Syntactic processing was also more impaired in bvFTD (η^2 = .03—.27) than in AD and PPD (η^2 = .02—.07 and η^2 = .00—.15, respectively). At the discourse-level, bvFTD patients displayed key deficits (η^2 = .05—.29), with pervasive pragmatic breakdowns whereas AD and PPD showed milder integrative deficits with

preserved global coherence ($\eta p^2=.00-.17$ and $\eta p^2=.02-.13$). Transcoding and transposing tasks revealed minor deficits, mainly in bvFTD ($\eta p^2=.01-.25$). A logistic regression identified that a subset of 12/23 tasks accurately classified 85.9% of bvFTD cases (sensitivity: 57.6%; specificity: 95.6%). The analysis of the types of responses (including errors) allowed to provide a more comprehensive group profiling. In bvFTD, language performance related to widespread frontotemporal and posterior (including cerebellar) atrophy, whereas AD showed more restricted frontal and temporal involvement. PPD displayed smaller fronto-temporal, insular and precuneal associations. **Discussion:** In conclusion, these findings delineate a graded, multi-level linguistic profile across neurodegenerative and psychiatric conditions. bvFTD is mainly characterized by pervasive lexical and discursive-pragmatic impairments, alongside syntactic difficulties, while AD and PPD primarily show lexical inefficiencies with preserved syntax. Convergent neural evidence supports a distributed network model of language integrating frontal-insular control and temporal semantic systems. Embedding such multi-level assessments into clinical practice could enhance diagnostic precision and provide valid cognitive endpoints for future trials.

V3 The Australian PPA Guide to Norwegian – A resource with accessible information about PPA

Ms Ingvild Winsnes¹, Dr Karianne Berg², Dr Hedda Døll³, Ms Nina Helen Erikstad⁴, Ms Line Haaland-Johansen², Dr Monica Norvik⁵, Ms Vanessa Seidler Krone⁶

¹University of Oslo, Oslo, Norway. ²Nord University, Bodø, Norway. ³Sunnaas Rehabilitation Hospital, Nesodden, Norway. ⁴Statped, Oslo, Norway. ⁵UiT The Arctic University of Norway, Tromsø, Norway. ⁶LHL, Oslo, Norway

Introduction: People with primary progressive aphasia (PPA) report that there is a lack of accessible information about PPA and the trajectory of the disease, and that searching for information online is overwhelming (Ho et al., 2023). Thus, there is a need for accessible information about PPA. *The PPA Guide*, developed in Australia, is a resource that provides accessible information about PPA (Taylor-Rubin et al., 2023). The current study, which is an ongoing project with the last data collection in January 2026, aimed to linguistically and culturally adapt the PPA guide for use in Norway. **Methods:** The adaptation process was based on guidelines for adapting health information (ECDC, 2016). The PPA Guide was (1) translated by a professional translator, (2) reviewed by the project group to ensure accuracy of subject-specific terminology, (3) reviewed with end-users (people with PPA, family members, and speech and language therapists) through focus groups, and (4) revised based on feedback from step 3. Follow-up focus groups to review the revised version are planned for the spring of 2026. Finally, we will proofread the guide before finalising the design, disseminate the Norwegian PPA guide, and evaluate the project. **Results:** Similar to the findings in Ho et al.'s (2023) study, the family members in the current project searched online for information, which they experienced as overwhelming. All end-users highlighted the PPA Guide as a much-needed resource, and only minor changes were suggested to make it more linguistically and culturally appropriate. **Discussion:** This ongoing study indicates a need for accessible information about PPA in Norwegian and that the PPA Guide could serve as a resource for people with PPA, their family members, and speech and language therapists.

V4 Early-onset primary progressive aphasia with pre-morbid autism: Multidisciplinary assessment and partner-inclusive treatment across cognitive-communication domains

Mr. Craig J Beale¹, Dr. Simona Treidler², Dr. Brian Lebowitz¹

¹Stony Brook University Hospital, Stony Brook, NY, United States. ²Stony Brook University Hospital, Stony Brook, NY, United States

Introduction. This case describes a 26-year-old man with developmental history of autism spectrum disorder (ASD) who presented with progressive cognitive-linguistic decline. This case underscores the importance of multimodal assessment—integrating biomarkers, neuroimaging, longitudinal SLP observation, and caregiver input—in establishing differential diagnosis and improving early identification of PPA in atypical, young-onset presentations. Young onset cases are uncommon and present unique diagnostic and care challenges, particularly when neurodevelopmental comorbidities such as ASD are present, necessitating coordinated, multidisciplinary evaluation and management. **Aims.** We aimed to (a) characterize the clinical and neuroimaging profile of an individual with early-onset PPA and pre-morbid ASD and (b) describe outcomes of a multidisciplinary, speech-language pathology-anchored program integrating restitutive, compensatory, and partner-inclusive interventions. **Methods.** A single-case, longitudinal design was used. Neurology, neuropsychology, neuroradiology, and speech-language pathology jointly conducted differential diagnosis and care planning. Medical workups included brain imaging (CT, MRI, and PET scans), neuromuscular evaluation with muscle biopsy, metabolic and genetic testing, and EEG. PET-MRI (July 2019) revealed bilateral parietal and left anterior temporal hypometabolism, with repeat imaging (March 2023) supporting a diagnosis of primary progressive aphasia (PPA). Standardized language and cognitive-communication assessment employed the Arizona Battery for Cognitive-Communication Disorders—Second Edition (ABCD-2), which samples Mental Status, Episodic Memory, Language Comprehension, Language Expression, and Visuospatial Construction across 17 subtests (Bayles & Tomoeda, 2019). Scores were tracked across four testing dates over ~3.5 years. Intervention combined (1) restitutive therapy (2) compensatory supports and (3) partner-inclusive training. **Results.** Baseline testing confirmed language-led impairment consistent with PPA and preserved non-language cognition relative to language deficits. Across four timepoints, raw scores demonstrated

domain-specific trajectories: relative stability in Mental Status, mixed change in Language Comprehension and Expression, and decline in Episodic Memory and Visuospatial Construction subtests. Compared with Young Controls norms, several subtests remained within ± 1 SD, whereas Repetition and higher-level naming/definition measures fell below the control mean. Following the integrated program, we observed trained-target gains (naming and script practice), maintained use of compensatory strategies (external supports, reading/writing scaffolds), and care-partner-reported improvements in communication confidence and reduced frustration—findings that align with emerging evidence for behavioral treatment in PPA and the additive value of care-partner training (Volkmer et al. 2020). **Discussion.** This case illustrates (i) feasibility and clinical utility of multidisciplinary management in early-onset PPA with ASD, and (ii) the complementary roles of restitutive, compensatory, and partner-inclusive approaches. Given the heterogeneity of PPA and limited pharmacologic options, coordinated care with proactive communication supports appears essential, and current literature supports SLP-led intervention with partner training as a core component of best practice (Gorno-Tempini et al. 2011). Future work should examine phenotype-specific responses (including imaging-supported classification) and longer-term maintenance, with attention to neurodevelopmental comorbidities (Gorno-Tempini et al. 2011, Volkmer A, Rogalski E, Henry M, et al. 2020).

V5 Processing of real-world soundscapes primary progressive aphasia

Miss Sophie A Froud, Dr Benjamin A Levett, Dr Jessica B Jiang, Miss Tina D Mello, Dr Lucy B Core, Dr Chris JD Hardy, Professor Jason D Warren

University College London, London, United Kingdom

Introduction: In daily life, we are required to decode the complex, dynamic sound mixtures that surround us in order to navigate the auditory world, identify salient acoustic events and write them into memory. This process places intense computational demands on the hearing brain, and is vulnerable early in the course of neurodegenerative diseases such as dementias led by communication difficulties (primary progressive aphasia, PPA). However, despite intense interest in the link between hearing and dementia, there remain few clinical tests or markers to index hearing brain functions relevant to everyday listening environments in people living with these diseases. **Aim:** To create a novel clinical test of hearing brain function in everyday listening environments for people living with dementia. **Methods:** We created a new brain hearing test requiring the identification of 15 common, everyday acoustic environments or ‘soundscapes’, and administered this to participants representing canonical PPA syndromes, Alzheimer’s disease (AD) and cognitively-well, age-matched individuals. Soundscape stimuli were digitally synthesised to sample a range of natural and manmade acoustic environments, normed for identifiability in healthy older listeners. Physiological (cardiac and skin conductance) responses were recorded during soundscape processing. All participants had comprehensive general neuropsychological and peripheral hearing assessments. **Results:** Taking general cognitive and peripheral hearing performance into account, diagnostic groups within the participant cohort showed separable behavioural and physiological profiles of soundscape processing. **Discussion:** The processing of real-world soundscapes captures a critical aspect of everyday hearing that is vulnerable in PPA syndromes. Soundscapes are a novel tool to bridge the gap between standard clinical tests and daily life functioning, that could help guide the development of functional biomarkers and interventions for major dementias.

V7 Automated item-level word properties of verbal fluency as digital markers of semantic variant primary progressive aphasia in Spanish-speaking Latinos

Mr. Lucas F Sterpin¹, Dr. Florentina Morello-García², Mr. Nicolás Pelella¹, Mr. Jeremías Inchauste¹, Mr. Franco J Ferrante^{1,3,4}, Mr. Gonzalo N Pérez^{1,3,4}, Dr. Jet M J Vonk⁵, Dr. Agustina Birba^{1,6,7}, Dr. Lucía Amoroso^{1,8,9}, Dr. Marilu Gorno-Tempini⁵, Dr. Agustín Ibáñez^{1,10,11}, Dr. Adolfo M García^{1,12,13}

¹Cognitive Neuroscience Center, Universidad de San Andrés, Buenos Aires, Argentina. ²Institute of Neurosciences (INEU), Fleni-CONICET, Ciudad Autónoma de Buenos Aires, Argentina. ³National Scientific and Technical Research Council (CONICET), Ciudad Autónoma de Buenos Aires, Argentina. ⁴Faculty of Engineering, University of Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina. ⁵Memory and Aging Center, University of California, San Francisco, San Francisco, California, United States. ⁶University Institute of Neuroscience, University of La Laguna, Tenerife, Spain. ⁷Faculty of Psychology and Speech Therapy, University of La Laguna, Tenerife, Spain. ⁸Basque Center on Cognition, Brain, and Language, San Sebastián, Spain. ⁹Ikerbasque, Basque Foundation for Science, Bilbao, Spain. ¹⁰Global Brain Health Institute, Trinity College, Dublin, Ireland. ¹¹Latin American Brain Health Institute (BrainLat), Universidad Adolfo Ibáñez, Santiago, Chile. ¹²Global Brain Health Institute, University of California, San Francisco, San Francisco, California, United States. ¹³Departamento de Lingüística y Literatura, Facultad de Humanidades, Universidad de Santiago de Chile, Santiago, Chile

Introduction: Verbal fluency tasks reveal broad semantic memory alterations. Thus, they are particularly crucial in diagnosing people with semantic variant primary progressive aphasia (svPPA). However, their informativeness, applicability and reliability is often limited by the coarse, effortful and often inconsistently applied nature of standard word count scoring methods. Recent studies with English-speaking cohorts offer promising alternatives by leveraging digital word

property analysis, i.e., automatically quantifying the psycholinguistic characteristics of each item produced. Here, we extend this approach to Spanish-speaking Latinos with svPPA, an underserved population at increased risk of all-type dementia and in need of scalable and cost-effective tools to meet challenging testing demands. **Aims:** To evaluate digital word properties as potential markers of svPPA in a Spanish-speaking cohort. **Methods:** Seventy-seven participants recruited from the ReDLat consortium (namely, 36 svPPA patients and 41 controls matched for age, years of education and gender proportion) performed semantic ('animals') and phonemic (/p/) fluency tasks. We computed audio features (pitch, voice quality, speech timing) from the whole recording, and item-level properties (frequency, phonemic length, phonological neighbors, concreteness, granularity, semantic and phonological variability) from each word. To assess between-group discriminability, we fitted a Logistic Regression classifier with a 5-fold nested cross-validation pipeline that included recursive feature elimination and Bayesian hyperparameter optimization, repeated across ten seeds. Scores were bootstrapped to obtain 95% confidence intervals. As a control, we re-run the models after shuffling participant labels. **Results:** For the semantic fluency task, the model trained with word properties alone yielded good classification [ROC-AUC = 0.91 (0.81-0.96)], surpassing the one trained with audio features alone [0.77 (0.66-0.87)] and matching the one combining both features types [0.91 (0.82-0.95)]. Shuffling labels resulted in the expected chance-level results [0.49 (0.39-0.57)]. Top features included granularity, number of phonemes, concreteness, and semantic variability. Conversely, the models trained on phonemic fluency features alone yielded near-chance results [Word properties = 0.57 (0.44-0.67); audio = 0.59 (0.49-0.70); combination = 0.61 (0.50-0.72)]. Model performance did not improve upon combining both fluency tasks [best ROC-AUC = 0.90 (0.81-0.95)]. **Discussion:** Our results show that digital word property analyses of semantic fluency tasks can robustly detect svPPA in Spanish-speaking Latinos, as previously found in English-speaking cohorts, tentatively because they reveal altered semantic search patterns. These tools can serve as an objective, automated resource for scalable clinical testing to enhance healthcare equity in this underserved population.

V8

Development and application of the Brazilian Portuguese version of the Mini-Linguistic State Examination for the diagnosis and classification of primary progressive aphasia

Dr. Maria Teresa Carthery-Goulart^{1,2,3}, Mr. Lucas Oliveira Mourão², Ms Isabel Junqueira de Almeida², Dr. Marcela Silagi^{4,2}, Dr. Barbara Costa Beber⁵, Dr. Ricardo Nitritini⁶, Dr. Sonia Maria Dozzi Brucki²

¹Human Communication, Learning, and Development Unit, Faculty of Education, The University of Hong Kong, Hong Kong, Hong Kong. ²Cognitive and Behavioral Neurology Unit, Divisão de Clínica Neurológica do Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Sao Paulo, SP, Brazil. ³Center of Mathematics, Cognition and Computing, Universidade Federal do ABC, Sao Bernardo do Campo, SP, Brazil. ⁴Departamento de Fonoaudiologia da Universidade Federal de Sao Paulo, Sao Paulo, SP, Brazil. ⁵Health Sciences Department, Universidade Federal de Ciências da Saúde de Porto Alegre, Porto Alegre, RS, Brazil. ⁶Cognitive and Behavioral Neurology Unit, Divisão de Clínica Neurológica do Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, Sao Paulo, Sao Paulo, Brazil

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative syndrome characterized by a gradual and progressive decline in language abilities as the most prominent and initial symptom. According to the current consensus criteria (Gorno-Tempini et al., 2011), approximately two-thirds of PPA cases can be classified into three main clinical variants: nonfluent/agrammatic PPA (nfvPPA), semantic PPA (svPPA), and logopenic PPA (lvPPA). The remaining one-third of cases present with mixed features or other distinct presentations (often referred to as mixed PPA or PPA-plus). The Mini-Linguistic State Examination (MLSE), developed by Patel et al. (2021), is a brief, clinically oriented assessment tool designed to identify, classify, and monitor different presentations of PPA. It employs an error-classification approach to extract detailed diagnostic information from a set of speech-language tasks and evaluates five core language domains: motor speech, phonology, semantics, syntax, and working memory, across 11 tasks. **Aims:** The present study had two main objectives: (1) to describe the translation and cross-cultural adaptation process of the MLSE into Brazilian Portuguese, including the main modifications implemented, and (2) to evaluate the application of the Brazilian version in classifying PPA variants in a Brazilian clinical sample. **Method:** The study was approved by the Research Ethics Committee of the Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo (HCFMUSP; CAAE: 52094121.7.0000.0068). The sample comprised 22 individuals with PPA (4 nfvPPA, 4 svPPA, 8 lvPPA, and 6 mxPPA) and 62 age, sex, and education-matched healthy controls. PPA diagnoses were established by an interdisciplinary team according to current consensus criteria (Gorno-Tempini et al., 2011) and supported by a comprehensive neuropsychological assessment and neuroimaging. Symptom duration ranged from 2 to 3 years across PPA cases. **Results:** Controls and PPA participants did not differ significantly in age (61.76 ± 11.19 vs. 66.00 ± 7.66 years, $p=0.299$), sex distribution (62.9% vs. 63.6% female, $p=0.951$), or years of education (15.16 ± 4.37 vs. 14.50 ± 3.89 years, $p=0.548$). Compared with controls, the PPA group exhibited markedly lower scores on the Mini-Mental State Examination (MMSE; 20.41 ± 7.23 vs. 28.65 ± 1.35), Addenbrooke's Cognitive Examination-Revised (ACE-R; 59.26 ± 19.2 vs. 89.46 ± 6.92), and MLSE total score (74.40 ± 12.27 vs. 97.61 ± 4.10), as well as on all five MLSE domains (Motor-speech: 26.18 ± 4.57 vs. 29.94 ± 0.30 ; Phonology: 26.36 ± 3.42 vs. 29.68 ± 0.71 ; Semantics: 13.09 ± 3.82 vs. 19.47 ± 0.76 ; Syntax: 5.64 ± 3.34 vs. 9.61 ± 0.77 ; Working memory: 4.91 ± 3.25 vs. 9.39 ± 1.18 ; all $p<0.001$). MLSE administration time was also significantly longer in the PPA group (17.34 ± 4.00 vs. 11.13 ± 2.41 minutes, $p<0.001$). Subtype analysis revealed distinct impairment profiles. The nonfluent/agrammatic variant (nfvPPA; $n=4$) showed

the lowest mean MLSE total score (66.25 ± 8.01) and the most severe deficits in Motor-speech (18.00 ± 3.08), Syntax (2.75 ± 3.11), and Working Memory (3.25 ± 3.70). The logopenic variant (lvPPA; $n=8$) had the lowest Phonology score (25.38 ± 3.67), while the semantic variant (svPPA; $n=4$) exhibited the lowest Semantics score (10.00 ± 3.24). Participants with mixed PPA ($n=6$) showed a mean MLSE total score of 70.00 ± 10.78 . In the control group, MLSE total score correlated positively with years of education ($r=0.56$, $p<0.001$). **Discussion:** Our preliminary findings indicate that the Brazilian Portuguese version of the MLSE is a promising tool for screening PPA and assisting in the classification of its clinical variants, consistent with results from the original English version. Further validation studies in Brazil are being conducted, including evaluation of psychometric properties and establishment of age and education adjusted cut-off scores.

V9 Assessing the utility of the Quick Aphasia Battery (QAB) in primary progressive aphasia

Ms. Zoe Ezzes^{1,2}, Dr. Lisa D Wauters³, Dr. Isabel E Allen⁴, Dr. Boon Lead Tee⁴, Mr. Rian Bogley⁴, Ms. Mia Lin⁴, Mr. Siddharth Ramkrishnan⁴, Ms. Diana A. Rodriguez⁴, Dr. Maria Luisa Mandelli⁴, Dr. Stephen M. Wilson⁵, Dr. Maya L Henry³, Dr. Zachary A. Miller⁴, Dr. Maria Luisa Gorno Tempini⁴

¹San Diego State University, San Diego, CA, United States. ²University of California, San Diego, San Diego, CA, United States. ³University of Texas at Austin, Austin, TX, United States. ⁴University of California, San Francisco, San Francisco, CA, United States. ⁵University of Queensland, Brisbane, Queensland, Australia

Introduction: PPA is a neurodegenerative syndrome characterized by a gradual decline in speech and/or language abilities (Mesulam, 2001). There are three primary subtypes: the nonfluent variant (nfvPPA), the logopenic variant (lvPPA), and the semantic variant (svPPA) (Gorno-Tempini et al., 2011). It can be difficult to accurately diagnose PPA and phenotype by variant, in part because most language batteries are designed for aphasia due to stroke. The *Quick Aphasia Battery* (QAB; Wilson et al., 2018) is a freely available assessment tool that is both quick to administer and comprehensive in speech and language domains assessed, but its utility in PPA has not yet been systematically evaluated. **Aims:** We aimed to determine first whether the QAB could effectively capture speech and language impairment in PPA, and second whether the QAB could be used to accurately classify PPA variants. **Method:** We administered the QAB to 37 individuals with clinically diagnosed PPA (15 nfvPPA, 12 lvPPA, 10 svPPA), all of whom underwent additional comprehensive behavioral testing. The QAB language quotient was calculated for all participants and compared to the published diagnostic threshold indicating presence of aphasia (Wilson et al., 2018). We assessed concurrent validity by correlating QAB summary scores (seven domain-specific calculated scores, one overall language quotient) with corresponding language and neuropsychological tasks. Analysis of Variance was conducted to assess significance of between-group differences for each individual QAB summary score. Discriminant analysis was conducted to assess how well all QAB summary scores together could differentiate between variants. Further discriminant analyses were carried out to assess the utility of substituting other language measures for QAB subcomponents in improving classification accuracy. **Results:** The QAB language quotient met the diagnostic threshold for aphasia in 31 out of 37 participants. In the remaining six participants, two were motor-speech-dominant presentations of nfvPPA with mild, emerging agrammatism; three were in early disease stages and performed similarly on other tests; and one had mild semantic impairment that was better captured by other tests. Individual QAB summary scores were significantly correlated with predicted tasks from other behavioral measures, apart from Sentence Comprehension (Table 1). Five of the eight summary scores showed significant differences between variants (Word Comprehension, Sentence Comprehension, Word Finding, Grammatical Construction, and Speech Motor Programming). The discriminant analysis revealed that the QAB accurately classified 94.6% of cases into their diagnosed variant (90% of svPPA, 100% of nfvPPA, and 91.7% of lvPPA; Figure 1). Classification accuracy increased to 97.3% when substituting the Bayles Repetition task for the QAB Repetition score, resulting in 100% classification accuracy for lvPPA. Other substitutions trialed did not improve classification. **Discussion:** The QAB accurately identified aphasia in most individuals with PPA, supporting its clinical use. QAB summary scores accurately classified most participants by PPA variant in a discriminant analysis. Further work may validate summary score cutoffs to support accurate variant diagnosis in a clinical setting. Future directions also include repeating the analysis with a larger sample and considering whether modifications would be warranted to create a version of the QAB specifically for use in PPA.

V10 A speech-language pathologist delivered communication and counseling intervention for primary progressive aphasia: Mixed methods findings

Dr. Kristin Schaffer Mendez¹, Dr. William S. Evans², Dr. Lisa D. Wauters³, Dr. Christina D. Dutcher³, Ms. Christina Philburn⁴, Dr. Megan M. Young⁵, Dr. Maya L. Henry³

¹The University of St. Augustine, Austin, TX, United States. ²The University of Pittsburgh, Pittsburgh, PA, United States. ³The University of Texas at Austin, Austin, TX, United States. ⁴Coco Psychotherapy and Education, Austin, TX, United States. ⁵New Mexico State University, Las Cruces, NM, United States

Introduction: Individuals with primary progressive aphasia (PPA) are susceptible to threats to their emotional well-being. Thus, treatment models that incorporate psychosocial approaches, in addition to speech-language intervention, may offer a means of more comprehensively addressing the needs of the whole person with PPA. Although counseling falls within the speech-language pathology scope of practice, research pertaining to its implementation in PPA is modest.¹ As such, studies

that investigate the feasibility and benefit of counseling in this population are warranted to inform evidence-based practice. **Aims:** The goals of this study were to examine the acceptability, feasibility, and preliminary results of a novel intervention, provided by a speech-language pathologist, that combines speech-language treatment (i.e., Video Implemented Script Training for Aphasia (VISTA)² or Lexical Retrieval Cascade Treatment (LRCT)³ with counseling (i.e., aphasia-modified cognitive behavioral therapy (CBT)) for individuals with different PPA subtypes. **Methods:** Nine individuals with PPA participated in the intervention (three with nonfluent/agrammatic variant; three with logopenic variant; three with semantic variant). The speech-language intervention included either VISTA or LRCT. In VISTA, tailored scripts were developed and trained via tasks targeting accurate production and functional usage of scripted content. With LRCT, participants were trained to name personally relevant words, with the goal of promoting self-cueing. During aphasia-modified CBT, participants examined connections amongst communication-related thoughts, feelings, and behaviors and learned ways to adaptively respond to their aphasia. Sessions were held twice weekly for six to twelve weeks, depending on treatment type and participant performance. Sessions lasted between 45 to 90 minutes. Communication and counseling independent practice tasks were completed during non-treatment days. Acceptability was assessed using the Client Satisfaction Questionnaire-8 (CSQ-8) and a semi-structured interview at post-treatment. Feasibility was measured via intervention adherence, independent practice engagement, retention, assessment completion, inter-rater reliability, and fidelity ratings. Speech-language outcomes were examined using hypothesis testing via simulation across pre-to-post-treatment timepoints for all participants and from pre-treatment to follow-up timepoints for six participants. To measure counseling outcomes, group-level phenomenological analyses were conducted using pre- and post-treatment interviews. Additionally, counseling outcomes were evaluated using Wilcoxon signed-rank tests from psychosocial scales. **Results:** Results show that this novel intervention is acceptable and feasible. Regarding speech-language outcomes, all participants demonstrated significant improvement following treatment, with five of six participants demonstrating maintenance of treatment gains up to one-year post-treatment. With respect to counseling outcomes, group-level themes identified at post-treatment included *Acceptance*, *Gratitude*, and *Counseling and Coping Strategy Usage*. A sensitive quantitative psychosocial measure was not identified. **Discussion:** Pairing aphasia-modified CBT with a speech-language intervention for individuals with different PPA subtypes is acceptable and feasible. Preliminary outcomes show positive communication impacts, positive qualitative treatment responses, and that alternative psychosocial scales may be warranted in a future efficacy trial.

V11

Mini-Linguistic State Examination (MLSE.cz): Czech adaptation and validation of a screening tool for primary progressive aphasia

Mgr Kamila Ludka¹, Mgr Štěpánka Philippová¹, Mgr Martina Hladká¹, Mgr Markéta Štěpánková¹, MUDr., Ph.D., MBA Tom Philipp^{2,3}

¹Department of Speech and Language Therapy, Thomayer Hospital, Prague, Czechia. ²Department of Rehabilitation and Rheumatology, Thomayer hospital, Prague, Czechia. ³3rd Faculty of Medicine, Charles University, Prague, Czechia

Introduction: The Mini-Linguistic State Examination (MLSE), developed by Patel et al. (2019), is a brief language screening tool designed to identify and differentiate the main variants of primary progressive aphasia based on the analysis of linguistic error types. The MLSE has been developed as an international instrument, with parallel adaptations into multiple languages to ensure cross-linguistic applicability. Within this framework, a Czech version of the test has been developed and is currently undergoing validation. **Aims:** The aim of this poster is to present the final Czech adaptation of the Mini-Linguistic State Examination (MLSE.cz) and to outline preliminary findings from its ongoing validation. **Methods:** MLSE.cz is a brief screening assessment with an administration time of approximately 15–30 minutes. It evaluates five key language domains—phonology, articulation, semantics, grammar, and working memory—using an error-based scoring approach consistent with the methodology of the original MLSE. The Czech version was developed through a structured translation process, followed by language- and culture-specific adaptations of test items. Pre-norming was conducted in a healthy Czech-speaking population. The final version is currently being administered to patients with clinically diagnosed PPA and to healthy controls as part of a validation study. **Results:** The poster presents the final version of MLSE.cz, examples of adapted test items, and an overview of the language domains assessed across individual subtests. Clinical observations indicate that the test is time-efficient and well tolerated in clinical settings. Validation data demonstrate differential sensitivity across MLSE domains. Sentence repetition was the most sensitive indicator, with patients with PPA achieving a mean accuracy of 46.7% compared to 94.8% in healthy controls. Writing showed the second largest deficit (50.0% vs. 97.6%). Sentence comprehension II was more sensitive than sentence comprehension I (66.7% vs. 70.0% in PPA), while naming emerged as an additional highly sensitive domain (54.2% in PPA vs. 97.3% in controls), comparable to writing performance. These findings are consistent with patterns reported in other language adaptations of MLSE. **Discussion:** MLSE.cz represents the Czech adaptation of an internationally developed screening tool for the assessment of language impairment in PPA. Ongoing validation aims to establish its diagnostic properties and generate Czech normative data. Once completed, MLSE.cz has the potential to enhance the assessment and characterization of language deficits in Czech-speaking patients with PPA and related neurodegenerative disorders, and to facilitate cross-linguistic research collaborations.

V12 Initial outcomes of a personalized anomia intervention combined with computer-based spaced-retrieval training for PPA

Dr. Mara Steinberg Lowe¹, Dr. Amy Vogel-Eyny²

¹CUNY Queens College, Queens, NY, United States. ²CUNY Hunter College, New York, NY, United States

Introduction: Anomia is among the earliest and most distressing symptoms for people living with primary progressive aphasia (PPA), a language-led neurodegenerative syndrome¹. Existing anomia treatments are adapted from post-stroke aphasia models and lack a maintenance-based approach tailored to PPA's progressive nature¹. Spaced retrieval training (SRT) is one approach to supporting maintenance of gains. Anki, a computerized, adaptive version of SRT, presents information to be recalled over increasing time intervals² using an adaptive algorithm designed to maximize retention of learned content³. **Aims:** This poster presents outcomes from a clinical trial designed to evaluate the feasibility and effectiveness of an intervention that combines a personalized and established language training program (Lexical Cascade Treatment¹) with a computer-based SRT program for individuals with PPA. **Method: Participants.** Six English-speaking participants diagnosed with semantic or logopenic PPA without concomitant motor speech impairments were included. **Stimuli.** Individualized stimuli consisted of 48 personally-relevant words, distributed across 4 semantic categories, selected by the participant and care partners. Half the words were trained while the others were not. Half of the words in each set were randomly selected to be included in the home practice Anki condition. **Procedure.** This study used a multiple baseline single-subject experimental design. During baseline sessions, personalized stimuli were probed to establish baseline performance and selected stimuli were randomized into trained and untrained sets. Images and text were added to Anki for the words assigned to that condition. During treatment, Lexical Cascade Treatment was provided for trained stimuli and participants practiced at home using Anki for 30 minutes each day. All stimuli were probed again one week and one month after the treatment. Standardized speech language and cognitive language assessments, patient-reported outcome measures and feasibility data were collected before and after treatment. **Results:** Data analysis is ongoing and has been completed for 2 participants (see Figure 1). Both participants showed improved accuracy for trained targets one week after treatment, with sustained gains at the one-month follow-up for one of them. One participant with semantic PPA demonstrated better performance for Anki-trained targets compared to those trained without Anki. In contrast, the other participant with logopenic PPA did not show Anki-related gains, which suggests that this approach may vary depending on the PPA variant. However, we interpret the Anki-related findings cautiously, as the participants did not complete the targeted amount of at-home, spaced retrieval training. **Discussion:** Preliminary data is consistent with prior research suggesting efficacy of Lexical Cascade Treatment for the treatment of anomia in PPA1. However, variable performance patterns were noted across participants for words targeted via Anki. Because the Anki flashcards emphasized semantic features rather than phonological cues, this approach may have been particularly well-suited for people with semantic PPA—highlighting the importance of aligning treatment content with the individual's underlying impairment profile. While there was good adherence to in-person intervention, participants did not meet the targeted amount of at-home, independent practice. Future research should focus on improving user experience and compliance in home-based spaced retrieval programs for people with PPA.

V13 Divergent mechanisms of anomia in Alzheimer's disease versus FTLD-TDP-C with primary progressive aphasia

MS Loreece G Haddad¹, BS Lauren Ables-Torres¹, MS Michelle Los¹, PhD Sandra Weintraub^{1,2}, PhD Tamar Gefen^{1,2}, MD Marek-Marsel Mesulam^{1,3}, PhD Elena Barbieri^{1,4}

¹Mesulam Institute for Cognitive Neurology and Alzheimer's Disease and the Kathryn Aring Piper Center for Frontotemporal Cognitive Disorders, Northwestern University, Chicago, IL, United States. ²Department of Psychiatry and Behavioral Sciences, Northwestern University, Chicago, IL, United States. ³Department of Neurology, Northwestern University, Chicago, IL, United States. ⁴Department of Physical Medicine and Rehabilitation, Northwestern University, Chicago, IL, United States

Introduction: Primary progressive aphasia (PPA) is a progressive language disorder that can be caused by various neurodegenerative diseases including Alzheimer's disease (PPA-AD) and TDP-43 proteinopathy Type C (PPA-TDP-C, see Mesulam et al., 2022). Word-finding difficulties (i.e., anomia) are common in PPA but may take different forms. In the semantic variant (svPPA, caused in 90% of cases by TDP-C), severe naming deficits co-occur with severe word comprehension impairment and progressive dissolution of the conceptual boundaries between members of the same category (i.e., semantic blurring). In svPPA, anomia is due to verbal conceptual knowledge loss (e.g., knowing the difference between lion and zebra) (Mesulam et al., 2013). In other forms of PPA, anomia co-occurs with phonological errors or circumlocutions (Leyton et al., 2014), and is likely due to difficulty accessing the word phonological representation, which may be overcome by providing a phonemic cue (i.e., the first sound of the word). **Aims:** This study investigates whether semantic and lexical-phonological anomia are distinctly associated with TDP-C and AD pathology in early stages, respectfully. **Methods:** Thirty-two individuals with autopsy-confirmed AD (n=22) or TDP-C (n=10) neuropathological diagnosis who scored within mild to normal range on the Western Aphasia Battery – Revised

Aphasia Quotient (WAB-AQ: 71.7-97) were included. Participants underwent a standard language battery that included tests for picture naming (Boston Naming Test, BNT) and word comprehension (Peabody Picture Vocabulary Test, PPVT). Participants also performed a computerized word-to-picture matching task (Picture Pairs Test, PicPairs) where they heard single words depicting objects and were instructed to point to the corresponding object from a selection of two. Object choices either belonged to the same semantic category (related items, e.g., celery and radishes) or different semantic categories (unrelated items, e.g., celery and violin). Using the average and standard deviation from a group ($n = 34$) of healthy participants, Z-scores were computed for accuracy (acc) and reaction time (RT) on the PicPairs, separately for related and unrelated trials. Z-scored RTs were correlated with percentage of successful phonemic cues on the BNT. **Results:** While the two groups did not differ in aphasia severity (WAB-AQ) or performance on the Mini-Mental State Examination, the PPA-TDP-C group exhibited lower accuracy and longer RTs than the PPA-AD group for related (but not unrelated) items on the PicPairs. Across groups, longer RTs to related (but unrelated) trials were associated with poor efficacy of phonemic cues in the face of naming difficulty. The PPA-TDP-C group benefited less from phonemic cues than the PPA-AD group, that is they were still unable to name an object even when provided the first sound of a word describing it. **Discussion:** Individuals with PPA-TDP-C had greater difficulty understanding verbal concepts denoting members of the same semantic category, while those with PPA-AD showed similar responses to verbal concepts regardless of their semantic association. Lack of efficacy of phonemic cues for failed items on the BNT and its association with performance on the PicPairs reinforce the finding that anomia in TDP-C stems from impaired verbal conceptual knowledge and not from difficulty retrieving the word phonological representation.

V14 Communication profiles in young onset Alzheimer's disease: Insights from a case series

Ms Jessica Molloy^{1,2}, Ms Grainne O'Shea¹

¹Regional Specialist Memory Clinic, St James' Hospital, Dublin 8, Ireland. ²Clinical Speech and Language Studies, Trinity College, Dublin, Ireland

Introduction: Young onset Alzheimer's disease (YOAD) is a rare subtype of dementia characterized by onset of cognitive impairment before age 65. Language and communication difficulties are accepted as a clinical feature of YOAD but to date the communication profile of people with YOAD has not been systematically studied or comprehensively reported (Suarez-Gonzalez et al., 2021). YOAD patients are a clinically heterogeneous group and may present with diverse symptom profiles. Communication symptoms and needs in YOAD may also evolve and change in line with overall neurodegeneration and cognitive decline as the disease progresses. Improved SLT care has been highlighted as an unmet need in people with non-language led dementias such as YOAD (Volkmer et al., 2024). A clearer understanding of communication impairments across the disease course may support more responsive and person-centred SLT care. **Aims:** To describe the communication profiles of individuals with YOAD by presenting three cases assessed at different stages of disease progression. **Methods:** 3 patients diagnosed with YOAD and referred to SLT were included. Patient 1:58-year-old male, 1.5 years post-diagnosis (3 years post-onset). Patient 2:60-year-old female, 4 years post-diagnosis (8 years post-onset). Patient 3:56-year-old female, 4 years post-diagnosis (6 years post-onset). Self-reported communication concerns, formal assessment results, SLT-observed symptoms, and relevant demographic information were analysed descriptively. **Results:** Patient 1's communication profile is characterised by mild-moderate confrontational naming difficulty, dyslexic and dysgraphic errors. Patient 2's communication profile is characterised by dysfluency, logopenic discourse, mild agrammatism, moderate confrontational naming difficulty, impaired repetition, and dyslexic errors. Patient 3's communication profile is characterised by limited verbal discourse, confabulatory output, reduced sentence comprehension and impaired social pragmatics. All patients' communication were compounded by impairments in other cognitive domains, most notably visuoperceptual, which affected naming, reading and writing. All patients demonstrated activity and participation limitations related to communication impairments. SLT interventions differed between participants and across disease stages. **Discussion:** This case series outlines communication profiles of 3 patients with young onset Alzheimer's disease presenting at different stages of disease course. It highlights the heterogeneity of communication presentations in YOAD and the additional complexity introduced by co-occurring cognitive impairments. Findings underscore the importance of flexible, stage-responsive SLT approaches that adapt to evolving communication needs across the disease course. Further research is needed to fully understand the range of communication symptoms that may present in YOAD in order to deliver effective and person-centred SLT care.

V15 Environmental adaptations and family support in Alzheimer's disease: A case study

B.Sc. Joana Prata¹, MSc Sara Figueiredo¹, MSc Paula Valente¹, PhD Maria Matos²

¹Portuguese Institute of Aphasia, Matosinhos, Porto, Portugal. ²Escola Superior de Saúde da Universidade de Aveiro, RISE-Health, Aveiro, Aveiro, Portugal

Introduction: Alzheimer's disease (AD) is a form of dementia characterised by global, progressive and irreversible deterioration of cognitive functions, with significant impact on autonomy, functional abilities, family dynamics, social participation, and well-being. These changes require ongoing environmental adaptations and the empowerment of the support network to promote quality of life for all involved and support long-term condition management. **Aims:** To describe a case study in which an approach centred on environmental adaptations and family support was adopted for a person with AD, with the aim of promoting communication, functionality, autonomy and well-being for both the individual and their caregivers throughout the progression of the disease. **Methods:** This case study concerns a 58-year-old engineer who sought support at the Portuguese Aphasia Institute (IPA) in August 2022, presenting with cognitive and communication difficulties with functional and professional impact. Although symptoms began in 2019, a formal diagnosis of AD was only confirmed in June 2023. A multidisciplinary assessment was conducted, covering linguistic, cognitive, functional and emotional abilities, as well as family needs. The intervention took place over three years and included Speech and Language Therapy, Neuropsychology, Psychology, and Music Therapy, focusing on implementing adaptive strategies with the family. These included creating visual supports for task sequencing, structured schedules with reminders, a medication organiser box, reducing distracting stimuli, and communication partner training. In the final phase of the intervention, a gradual transition was made to a specialised day centre for people with AD, ensuring continuity and generalisation of previously implemented strategies, promoting the user's progressive adaptation, consistency across contexts, and the maintenance of functionality and well-being. **Results:** The intervention optimised the participant's communicative and functional effectiveness, reduced frustration associated with activities of daily living, and promoted greater predictability and organisation in daily routines. Environmental adaptations facilitated the execution of basic and instrumental tasks, while communication training and psychoeducation contributed both to improved communicative effectiveness and to a deeper understanding of the condition. Improvements were observed in family interaction, greater adequacy of support strategies, and maintenance of social participation over an extended period of disease progression. **Discussion:** This case highlights the positive impact of a person-centred approach, focused on the person's needs, the family and the environment. Environmental adaptations and the empowerment of the support network proved essential for prolonging autonomy, enhancing participation and promoting emotional well-being. Early and continuous intervention, adjusted to the progression of the condition, enabled a structured transition to community-based services, reinforcing the importance of multidisciplinary follow-up throughout the course of AD.

V16 Impact of an online support group on the burden of caregivers of people with primary progressive aphasia

MSc Rita Correia¹, BSc Joana Gomes¹, PhD Maria Matos²

¹Portuguese Institute of Aphasia (IPA), Matosinhos, Porto, Portugal. ²Escola Superior de Saúde da Universidade de Aveiro, RISE-Health, Aveiro, Aveiro, Portugal

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative condition characterised by the progressive decline of language and communication, resulting from the degeneration of the brain's language networks (Gorno-Tempini et al., 2011). This condition has a significant impact on informal caregivers, who frequently experience high levels of emotional, physical, and social burden, compromising their well-being and quality of life. Structured support interventions may facilitate access to information, emotional support, and the sharing of experiences. **Objective:** To assess the impact of an online support group for caregivers of people with PPA on perceived burden and on caregivers' sense of confidence and safety in providing care. **Methods:** The intervention consisted of an online support group led by a psychologist from the Portuguese Aphasia Institute (IPA), delivered across three editions (March–May 2024; June–September 2024; February–May 2025), totalling 27 sessions. Eight caregivers participated in the first edition and six in each of the following editions, with no overlap. The sessions addressed psychoeducation on PPA, self-care strategies, emotional support, and experience sharing. Caregiver burden was assessed using the Zarit Burden Interview (Gonçalves-Pereira et al., 2010) before and after each edition. A post-intervention online questionnaire evaluated confidence, perceived usefulness of the strategies, and satisfaction, complemented by qualitative comments. **Results:** In the first edition (n=8), a global reduction in burden of 37.5% was observed, with a decrease in intense burden (from 2 to 1 caregiver), a reduction in mild burden (from 62.5% to 25%), and an increase in caregivers reporting no burden (from 12.5% to 50%). In the second edition (n=6), the proportion of caregivers with intense burden decreased from 80% to 66.7%, accompanied by an increase in mild burden from 20% to 33.3%, suggesting a shift towards more moderate stress levels. In the third edition (n=6), results remained broadly stable, with 50% of caregivers presenting intense burden, 25% mild burden, and 25% no burden. In the post-intervention satisfaction questionnaires, most participants reported feeling more confident and informed about the caregiving process.

(1st edition: n=5/8; 2nd edition: n=2/6; 3rd edition: n=5/6). Regarding the usefulness of the strategies discussed in the group, many participants felt they had acquired knowledge or practical strategies to deal with the challenges of PPA (1st edition: n=4/8; 2nd edition: n=3/6; 3rd edition: n=4/6). Testimonials also highlighted the importance of sharing experiences, mutual support, and discussing relevant strategies and information. **Discussion:** The results suggest that the online group reduced caregiver burden, particularly in the first two editions, and promoted confidence and a sense of preparedness for caregiving. The shift from intense to moderate burden indicates improved caregiver adaptation. These findings align with previous evidence showing that support and educational interventions increase knowledge, reduce isolation, and strengthen coping strategies (Taylor-Rubin et al., 2020). Thus, online groups emerge as an accessible and effective response to the emotional and practical needs of caregivers, contributing to their well-being and to the sustainability of care. **Keywords:** Primary Progressive Aphasia; informal caregivers; burden; online support group; quality of life.

V17 Brain morphometric correlates of language performance in older adults

Dr. Svetlana Malyutina¹, Ms. Ekaterina Rodionova¹, Ms. Nadezhda Psaryova¹, Dr. Victor Savilov², Ms. Elena Kurmysheva², Ms. Anastasiya Spiridonova², Ms. Natalia Osipova², Dr. Alisa Andriushchenko^{2,3}

¹HSE University, Moscow, Russia. ²Mental Health Clinic No. 1 named after N.A. Alexeev, Moscow, Russia. ³Moscow State University, Moscow, Russia

Introduction. Although the language function is notably resilient to cognitive changes in healthy aging, it can be affected by neurodegenerative conditions. In primary progressive aphasia (PPA), language symptoms are even the first manifestation of a neurodegenerative disease. Thus, subtle changes in the language function can potentially be clinically used as early markers of neurodegeneration in older adults at the pre-dementia stage. Previous research has already linked language performance to specific neurodegeneration patterns (for example, Amici et al., 2007) but most studies have used a limited set of language tasks, lacking comprehensive assessment that would encompass different language levels and be sufficiently sensitive to subtle language changes at early pre-dementia stages. **Aims.** Our study aimed to establish morphometric (grey-matter volume) correlates of performance at different levels of the language function in non-demented older adults. **Methods.** Participants were 210 community-dwelling non-demented older adults (age: M = 69.84, SD = 6.85, Montreal Cognitive Assessment (MoCA) total score: M = 24.03, SD = 3.03; 175 females). They were tested with a variety of tasks targeting different aspects of language performance: a naming-by-definition task assessed lexical retrieval; a sentence comprehension task assessed morphosyntactic processing; a spontaneous speech task measured speech fluency; and the Rey Auditory Verbal Learning Test assessed verbal memory. Each participant underwent structural T1-weighted MRI, with the resulting images processed via the standard CAT12 segmentation pipeline. Grey-matter volumes were extracted for 16 left- and right-hemispheric regions of interest (ROIs). We used multivariate multiple linear regression to evaluate whether grey-matter volumes in each ROI, corrected for total intracranial volume, could be predicted by language performance measures when accounting for age, gender, education and the total MoCA score. **Results.** Data analysis for the speech fluency and verbal memory tasks is in progress and will be completed by the time of presentation. Preliminary analysis including naming-by-definition and sentence comprehension data identified that higher naming accuracy was associated with a generally higher grey-matter volume across ROIs, with an additional significant correlation with bilateral inferior frontal gyri, right precuneus and right supramarginal gyrus. Sentence comprehension accuracy was associated with grey-matter volume in bilateral inferior temporal gyri and left superior temporal gyrus. Naming latency and sentence reading speed were not significantly associated with grey-matter volume in any ROI. **Discussion.** The study identified patterns of neurodegeneration associated with lower lexical retrieval and morphosyntactic processing performance in non-demented older adults. By the time of presentation, associations with speech fluency and verbal memory will also be explored. In the preliminary analysis, greater deficits in lexical retrieval were associated with generally decreased grey-matter volumes across bilateral ROIs. On the other hand, more compromised morphosyntactic processing was more specifically associated with a grey-matter volume decrease in bilateral temporal lobes, speculatively most consistent with frontotemporal dementia (Boccardi et al., 2003). The findings suggest that language performance measures at different linguistic levels may potentially serve as pathology-specific early markers of neurodegenerative disorders.

V18 Graph theory analysis of network alteration in Primary Progressive Aphasia due to underlying AD and TDP-43 Type C

Mr Jordan Q Behn¹, Dr Jane Stocks¹, Mr Daniel Gutstein¹, Dr Todd Parrish^{1,2,3}, Dr Elena Barbieri^{1,4}, Dr M Marsel Mesulam^{1,5}

¹Mesulam Institute for Cognitive Neurology and Alzheimer's Disease, Northwestern University, Chicago, Illinois, United States. ²Department of Radiology, Northwestern University, Chicago, Illinois, United States. ³Department of Biomedical Engineering, Northwestern University, Chicago, Illinois, United States. ⁴Department of Physical Medicine and Rehabilitation, Northwestern University, Chicago, Illinois, United States. ⁵Department of Neurology, Northwestern University, Chicago, Illinois, United States

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative syndrome characterized by progressive disruption of left-hemisphere language functions caused by distinct underlying neuropathologies, including Alzheimer's Disease (AD)

or TDP-43 Type C (TDP-C). Graph theory provides quantitative metrics to assess brain network organization and may offer insight into how the language network breaks down in PPA. **Aims:** The aim of this study was to apply graph-theoretic analysis of resting-state fMRI to compare global efficiency and network segregation in a PPA cohort with either autopsy-confirmed AD or TDP-C to assess disease-specific patterns of network disruption. **Methods:** Resting-state fMRI data were analyzed from participants with PPA due to AD (n = 36), PPA due to TDP-C (n = 14), and healthy controls (n = 31). Whole-brain resting-state functional connectivity matrices were constructed using the 360-region Glasser cortical parcellation, with established network assignments. Graph-theoretic analyses were performed in R. Global efficiency of whole brain information exchange was calculated as the average inverse shortest path length, and network segregation was calculated for each hemisphere of the language network and a control network (dorsal attention) to assess the balance between within-network specialization and between-network integration. Group differences in global efficiency were evaluated using age-adjusted analysis of covariance. Network segregation differences were analyzed using linear mixed-effects models with fixed effects of group, hemisphere, and their interaction; multiple comparisons were corrected with false discovery rate. Exploratory analyses examined relationships between graph-theoretic metrics and clinical variables, including language performance, regional atrophy, and disease duration. **Results:** Global efficiency was reduced in PPA-AD relative to controls. No such reduction was observed in TDP-C. For language-network segregation, controls and AD showed greater left- than right-hemisphere segregation, whereas TDP-C did not, suggesting a reduction in the normally asymmetric and greater network segregation in the hemisphere dominant for language. Reduced left-hemisphere segregation was associated with longer disease duration in TDP-C. **Discussion:** PPA associated with underlying AD or TDP-C pathology shows distinct patterns of network disruption. In PPA-AD, the language network becomes less globally efficient, suggestive of inter-network disconnection. In contrast, PPA-TDP-C shows selective loss of left-lateralized language-network segregation without a global integration deficit, suggesting vulnerability of key language-network nodes rather than diffuse network failure, consistent with the preservation of many non-language capabilities observed in TDP-C associated PPA.

V19 **LatAmDART: Spanish adaptation of the DART and preliminary clinical findings in emotion processing**

Dr Maria Eugenia Tabernero¹, Dr Eduardo Leonardelli², Dr Florentina Morello-García³, Ms Loana De Los Santos⁴, MD Carolina Ardohain Cristalli⁴, Dr Ricardo Allegri^{3,4}, Dr Jose Alberto Avila-Funes⁵, Dr Nilton Custodio⁶, Dr Rosa Montesinos⁶, Dr Diana Matallana Eslava⁷, Dr Agustín Ibañez^{8,9}, Dr Claudia Duran Aniotz¹⁰, MSc Marcelo Maito⁹, Dr Guido Rocatti⁹, Dr Katherine Rankin¹¹, MD Nahuel Magrath-Guimet^{4,12}

¹Cognitive Neurology Center, Buenos Aires British Hospital - CONICET, Buenos Aires, Argentina. ²Pontifical Catholic University of Argentina, Buenos Aires, Argentina. ³Institute of Neurosciences (INEU), Fleni-CONICET, Buenos Aires, Argentina. ⁴Department of Cognitive Neurology, Fleni, Buenos Aires, Argentina. ⁵Instituto Nacional de Ciencias Medicas y Nutrición Salvador Zubirán, Mexico DF, Mexico. ⁶Unidad de Investigación y Docencia, Instituto Peruano de Neurociencias, Lima, Peru. ⁷Pontificia Universidad Javeriana, Bogota, Colombia. ⁸Global Brain Health Institute (GBHI), Dublin, Ireland. ⁹Cognitive Neuroscience Center, University of San Andres, Buenos Aires, Argentina. ¹⁰Center for Social and Cognitive Neuroscience, Adolfo Ibañez University, Santiago de Chile, Chile. ¹¹Fein Memory and Aging Center, University of California San Francisco (UCSF), San Francisco, California, United States. ¹²Global Brain Health Institute (GBHI), San Francisco, California, United States

Introduction: Emotion recognition is a key domain of social cognition, often disrupted in neurodegenerative syndromes, including primary progressive aphasia (PPA). While deficits are typically more pronounced in behavioral variant frontotemporal dementia (bvFTD), increasing evidence indicates that the semantic variant of PPA (svPPA) and the right temporal variant frontotemporal dementia (rtvFTD) present impairments in emotion recognition and naming, likely due to semantic loss for socioemotional concepts. To assess these difficulties, the Dynamic Affect Recognition Test (DART) was developed as a brief, video-based tool in English to measure emotion identification deficits in persons with dementia. However, culturally adapted tools for non-English-speaking populations remain scarce. **Aims:** This study aims to adapt the DART to neutral Latin American Spanish (LatAmDART) and conduct a preliminary analysis of its performance. **Methods:** The study was conducted in two phases. Phase 1 involved the adaptation of the DART to a neutral Spanish version (LatAmDART), following international guidelines for linguistic and cultural adaptation of neuropsychological instruments. Phase 2 consisted of a preliminary evaluation of LatAmDART performance across clinical groups and healthy controls (HC). A total of 99 participants were recruited from Mexico, Peru, Colombia, and Argentina through the RedLat Consortium. The sample included 58 HC, 16 bvFTD, 15 individuals with amnesic Alzheimer's disease (AD), 5 svPPA, 2 logopenic variant PPA (lvPPA), 1 nonfluent variant PPA (nfvPPA), and 2 rtvFTD. All participants completed the LatAmDART. Scores were summarized using medians and interquartile ranges (IQR) per diagnostic group. Quartiles were computed using the default interpolation method in R (type 7). **Results:** In Phase 1, scripts were translated and back-translated into neutral Spanish, then reviewed by 12 non-medical volunteers from eight Latin American countries. Twelve actors fluent in neutral Spanish were trained to replicate the facial expressions and postures from the original videos. Two versions of each stimulus plus a practice item were recorded. An expert panel reviewed all materials, requested the re-recording of six videos, and approved the final set. The resulting LatAmDART comprises 12 video stimuli, two per basic emotion (happiness, sadness,

anger, fear, disgust, and surprise). In phase 2, mean age $\pm$ SD (% female) were: HC 58.1 $\pm$ 12.3 (57%), bvFTD 65.1 $\pm$ 8.3 (50%), AD 69.3 $\pm$ 7.6 (73%), svPPA 63.4 $\pm$ 3.4 (60%), lvPPA 63.0 $\pm$ 9.9 (100%), nvPPA 59.0 (100%), and rtvFTD 62.0 $\pm$ 14.1 (50%). Median (IQR) LatAmDART scores (max = 12) were: HC 11 (10–11), AD 7 (7–9.5), bvFTD 9 (6–9.25), rtvFTD 4 (2.5–5.5), svPPA 7 (6–8), lvPPA 6 (5.5–6.5), nvPPA 8 (8–8). **Discussion:** This study presents the Spanish adaptation of the DART across Latin America (LatAmDART), offering a culturally adapted, time-efficient, and practical tool to assess socioemotional processing. Preliminary results mirror the patterns observed with the original version of the DART, supporting the adequacy of the adaptation. They also suggest that individuals with PPA show reduced performance in emotion identification tasks. However, sample sizes were small, and continued cohort expansion is needed. Future studies should explore whether performance differs across PPA variants, which may help refine the clinical utility of the LatAmDART.

V20 PPA Tele-Savvy: An online pilot intervention with caregivers of persons living with primary progressive aphasia

Dr. Darby J Morhardt¹, Ms. Lauren R Dowden²

¹Northwestern University, Chicago, IL, United States. ²Northwestern University, Chicago, Illinois, United States

Introduction: A PPA diagnosis leads to complex psychosocial issues compounded by complicated terminology and an uncertain progression and pathology. Dementia caregiver interventions do not match PPA families' needs for tailored support. **Aims:** 1) To identify PPA families' most pressing challenges and find ways the existing evidence-based caregiver intervention Tele-Savvy should be adapted. (2) To pilot the resulting PPA Tele-Savvy intervention with PPA care partners in 7 weekly 90 minute videoconferences using formative evaluation to address communication, cognitive and behavioral changes, and assist caregivers in achieving competence in the caregiving role. **Methods:** Fourteen spousal caregivers participated in Aim 1 and identified ways Tele-Savvy was helpful and ways it was not. Revisions were incorporated into the resulting PPA Tele-Savvy caregiver intervention. Fifteen spousal caregivers participated in 2 pilot interventions (n=9, n=6) involving seven 90-minute weekly videoconference sessions, mindfulness exercises, PPA-specific manual readings, and homework assignments. Pre-post evaluations of depression, caregiver competency, burden, PPA knowledge, quality of life and dyadic interaction were administered. **Results:** Pre-post results demonstrated trends in decreased caregiver depression, increased competency, decreased burden, increased PPA knowledge and significant increased positive dyadic interaction. Qualitative analysis of video transcriptions and evaluative focus groups revealed: increasing knowledge of PPA, learning new approaches of communication and connection, adjusting expectations, initiating care planning, and assessing self-care. **Discussion:** PPA Tele-Savvy demonstrates the feasibility of a tailored PPA caregiver intervention and yields positive results for improving caregiver well-being, competence, knowledge, with positive effects on the dyadic relationship. Further testing in a larger trial is warranted.

V21 Cerebellar neuromodulation improves naming in primary progressive aphasia

Dr. Rajani Sebastian¹, Ms. Becky Lammers¹, Ms. Jamie L Murter¹, Dr. Argye E Hillis^{2,1,3}, Ms. Donna C Tippet^{1,2,4}

¹Department of Physical Medicine and Rehabilitation, Johns Hopkins University School of Medicine, Baltimore, Maryland, United States. ²Department of Neurology, Johns Hopkins University School of Medicine, Baltimore, Maryland, United States. ³Department of Cognitive Science, Johns Hopkins University, Baltimore, Maryland, United States. ⁴Department of Otolaryngology--Head and Neck Surgery,, Johns Hopkins University School of Medicine, Baltimore, Maryland, United States

Introduction: We investigated whether anomia therapy coupled with right cerebellar transcranial direct current stimulation (tDCS) improves naming of trained nouns and verbs in participants with primary progressive aphasia (PPA) more than anomia therapy alone. The benefit of anodal right cerebellar tDCS combined with individualized speech-language intervention was reported in a case series of bilinguals with PPA, suggesting that the cerebellum is a promising stimulation site¹. Our work and that of others in chronic stroke suggest that cathodal stimulation of the cerebellum can facilitate naming^{2,3} through the disinhibition of Purkinje cells to activate cortical language regions through cortico-cerebellar pathways. **Aim/Hypothesis:** We hypothesized that 15 sessions of cathodal tDCS over the right posterolateral cerebellum + anomia therapy would be associated with greater improvement in naming of trained nouns and verbs from pre-treatment to post-treatment, compared to anomia treatment alone (i.e., in the sham condition). **Methods: Participants:** Six participants (2 F, 4 M; mean age = 67.17 years $\pm$ 12.27; mean Western Aphasia Battery-Revised (WAB-R) Aphasia Quotient (AQ) = 70.52 $\pm$ 14.65) with PPA were included in this study. All participants were right-handed, with at least a high school education, and had anomia. **Study Design and Procedure:** A randomized, double-blind, sham-controlled, within-subject crossover trial design was utilized. Participants took part in two intervention phases of 15 treatment sessions (3–5 sessions per week) with tDCS + naming therapy and sham + naming therapy, or the opposite order. Each intervention phase was separated by a washout period of two months. **Aphasia Assessment and Treatment:** Stimuli consisted of 44 pictures, divided into a set of 22 nouns and 22 verbs, which depicted everyday activities. Semantic and lexical cueing was used to treat noun and verb retrieval and to facilitate production of subject + verb + object phrases. **tDCS:** tDCS was administered using the Soterix 1x1 clinical trial device for 25 minutes to the right cerebellum, and the reference electrode was placed over the right shoulder. **Results:** As shown in Figure 1, participants showed greater gains in naming trained nouns and verbs

in the tDCS condition compared to the sham condition (i.e., behavioral therapy alone). Importantly, for trained verbs, there was enhanced naming accuracy in the tDCS condition in contrast to worsened naming accuracy in the sham condition. Decline in naming was noted for untrained nouns and verbs in both the tDCS and sham conditions. However, less decline occurred with tDCS compared to sham in untrained verb naming. Greater improvement in functional communication, as reflected by scores on the Communication Activities of Daily Living-3 (CADL-3), was found in the tDCS condition compared to the sham condition. Improvement in overall language function, as reflected by WAB-R AQ, was attained in the tDCS condition compared with decline in overall language ability in the sham condition. **Discussion:** These preliminary results are quite promising and highlight the therapeutic potential of cerebellar tDCS to augment anomia treatment in all three PPA variants by improving naming accuracy of trained items and generalizing the naming of untrained verbs and functional communication tasks.

V22

Cerebellar degeneration and its integrative network contributions to language function in Chinese-speaking primary progressive aphasia

Dr. Yu Chen¹, Dr. Fangda Leng¹, Dr. Ta-Fu Chen², Dr. Lorinda Kwan-Chen Li-Ying³, Dr. Yu-Chen Chuang⁴, Dr. Maria Luisa Mandelli¹, Dr. Raymond Y. Lo⁵, Dr. Joshua Tsoh^{6,7}, Dr. Andrew Lung-Tat Chan⁸, Dr. Adrian Wong⁷, Dr. Vincent Mok⁷, Dr. Tin Yee Connie Yan⁹, Dr. Yu Sun¹⁰, Dr. YiChen Lee², Dr. Yu-Wen Cheng², Dr. Chin-Hsien Lin², Dr. Cheng-Hsuan Li², Dr. Jet Vonk¹, Dr. Howard J. Rosen¹, Dr. William W. Seeley¹, Dr. Joel H. Kramer¹, Dr. Bruce L. Miller¹, Dr. Katherine P. Rankin¹, Dr. Maria Luisa Gorno-Tempini¹, Dr. Boon Lead Tee¹

¹University of California, San Francisco, San Francisco, CA, United States. ²National Taiwan University Hospital, Taipei, Taiwan. ³The Education University of Hong Kong, Hong Kong, Hong Kong. ⁴Taipei Veterans General Hospital, Taipei, Taiwan. ⁵St. Mary's Hospital, Taipei, Taiwan. ⁶Prince of Wales Hospital and ShaTin Hospital, Hong Kong, Hong Kong. ⁷The Chinese University of Hong Kong, Hong Kong, Hong Kong. ⁸Queen Elizabeth Hospital, Hong Kong, Hong Kong. ⁹Mercy Mental Health, Werribee, Australia. ¹⁰En Chu Kong Hospital, Taipei, Taiwan

Background. The cerebellum is densely interconnected with cerebral language networks and is increasingly recognized as a key contributor to higher-order cognitive and speech processes. Nevertheless, its role in primary progressive aphasia (PPA) remains insufficiently characterized, particularly in Chinese-speaking populations. As prevailing models of language network disruption are largely derived from Indo-European languages, brain-behavior relationships underlying linguistic features that vary across or are absent from Indo-European languages, such as lexical tone, remain poorly understood. To address this gap, we investigate the network-level contributions of cerebellar subregions to language function in Chinese-speaking individuals with PPA. **Methods.** The study included 33 individuals with PPA (14 logopenic, 10 nonfluent/agrammatic, and 9 semantic variants) and 31 healthy controls drawn from the Chinese Language Assessment in PPA (CLAP) project. Five language tasks were included for analysis: single-word comprehension, semantic association, sentence repetition, tone-twister task, and tone production errors during repetition of tonal phrases. Volumes of cerebellar subregions associated with social-linguistic, multiple-demand, and motor networks were extracted using a functional cerebellar parcellation. Cortical volumes from language-relevant networks (control, limbic, temporoparietal, and somatomotor networks) were included to account for cerebral contributions. To explore cerebellar contributions to language performance while addressing high collinearity between cerebellar and cortical atrophy, we applied sequential regression and partial least squares correlation (PLSC). We then conducted dominance analysis to further delineate the relative contributions of cerebellar and cortical structures to language functions. **Results.** Incorporating cerebellar measures into regression models significantly improved prediction of language performance beyond models accounting solely cortical network volumes and demographic characteristics. PLSC revealed a dominant latent dimension accounting for 89.3% of the shared covariance between brain structure and language performance. Cerebellar contributions were selective to tone production errors, with no significant brain-behavior covariance observed for semantic tasks (single-word comprehension and semantic association) or for auditory verbal short-term memory tasks such as sentence repetition. The observed latent dimension was characterized by strong loadings from right-lateralized cerebellar subregions spanning social-linguistic, multiple-demand, and motor (mouth) networks, alongside weaker contributions from cortical regions within the phonological loop. Specifically, dominance analysis demonstrated that cerebellar subregions collectively accounted for 86.8% of the explained variance in tone production errors after accounting for cortical network contributions, indicating that the cerebellum emerged as a particularly strong driver of tone production. **Conclusions.** In Chinese-speaking individuals with PPA, cerebellar degeneration and its interaction with cerebral language networks play a critical role in tone production, a core linguistic function not captured by cortex-centric models derived from non-tonal languages. Importantly, these effects were domain-specific and could not be fully explained by cortical network engagement alone, underscoring a selective role for cerebellar networks in linguistically demanding speech processes such as lexical tone production. These findings identify cerebello-cerebral network interactions as a key biological substrate of language impairment in PPA and underscore the importance of studying linguistically diverse populations. Furthermore, right cerebellar subregions may represent promising targets for future neuromodulatory and behavioral interventions aimed at preserving tone and speech production in PPA.

V23 Machine learning application of asymmetrical atrophy measures to differential neuropathological diagnosis

Ms. Sarah Simon, Mr. Daniel Gutstein, Dr. Jane Stocks, Mr. Jordan Behn, Ms. Eunbi Kwon, Dr. Elena Barbieri, Dr. M.-Marsel Mesulam, Dr. Todd Parrish

Northwestern University, Chicago, IL, United States

Introduction: Primary progressive aphasia (PPA) is a neurodegenerative dementia syndrome involving a progressive loss of language functions, which are lateralized to the left hemisphere of the brain in most people. Across PPA variants, atrophy is greater in the left than in the right hemisphere, but shows different patterns depending on the underlying pathology causing PPA^{1,2}. PPA can be caused by variety of neuropathologies, including Alzheimer's disease (AD) and Frontotemporal Lobar Degeneration (FTLD) with TDP43 proteinopathy Type C (henceforth TDP-C). **Aims:** This study aims to explore the efficacy of quantitative measures of atrophy asymmetry as a tool for aiding the differential diagnosis of PPA and their underlying pathologies. **Methods:** Cortical thickness and subcortical volume values were obtained from the first available structural scans using the Glasser Atlas (n = 180 ROIs) and the Tian atlas (n = 31 ROIs), respectively for 44 PPA participants (n=30 AD, n=14 TDP-C).³ Given the limited availability of autopsy-confirmed cases, we restricted our analysis to TDP-C and AD. Laterality indices (LIs) were then calculated between left and right hemispheres to clarify the directionality of the asymmetric atrophy. Using the LIs, we applied a logistic regression model in an n-1 cross-validation framework to classify patients into three diagnostic contrasts: AD versus control, TDP-C versus control, and AD versus TDP-C using either cortical data, subcortical data, or both together. We then examined feature importance to identify which ROIs most significantly contributed to diagnostic classification. **Results:** Our cortical models separated the groups well, with AUC values between 0.963 and 1.000. Parietal and frontal regions mattered most when comparing AD to controls, while temporal areas were key for identifying TDP-C. Subcortical features performed even better, with perfect separation (AUC 1.000) for both diseases versus controls, and nearly perfect results (AUC 0.989) when differentiating the two conditions. The striatum was crucial for detecting AD against controls, while hippocampal and amygdala subregions were crucial for differentiating between TDP-C and AD. When combining cortical and subcortical data, performance remained strong with perfect discrimination for TDP-C versus controls and for AD versus TDP-C (both AUC 1.000) and lower but still excellent results for AD versus controls (AUC 0.975). **Discussion:** These results suggest that atrophy asymmetry can act as a valuable clinical biomarker for the differential diagnosis of AD and TDP-C in PPA. AD showed widespread parietal-subcortical changes, while TDP-C had focal temporal-limbic damage that matches findings from autopsy studies. Notably, subcortical structures displayed excellent performance for diagnostic discrimination. The hippocampal subfields and striatal regions seem to capture early pathological changes that might not be obvious on standard clinical reads. These specific regional markers could help develop automated diagnostic tools or guide radiologists toward the most informative brain regions during clinical assessment.

V24 Mutual quality of life in a primary progressive aphasia dyad

Miss Madison Jax Watson, Dr. Juhi Kidwai

Southern Illinois University, Carbondale, IL, United States

Introduction: Quality of life and perceived stress are significantly affected in individuals with neurodegenerative conditions like primary progressive aphasia (PPA). Limited access to PPA-specific education and disorder management resources may exacerbate caregiver burden, negatively influencing both relational functioning and shared well-being. **Aim:** This study examined the effects of weekly dyad-based therapy combined on mutual quality of life and perceived stress in a single PPA dyad over a 10-month period. **Methods:** The dyad consisted of a 70y/F with PPA and her 73y/M spouse, who served as her primary caregiver. The individual with PPA (lwPPA) demonstrated deficits in word retrieval, topic maintenance, and memory skills. We used the Boston Diagnostic Aphasia Examination (BDAE), Cognitive Linguistic Quick Test (CLQT), Boston Naming Test (BNT), and Multifactorial Memory Questionnaire-9 (MMQ-9) alongside fMRI reports to establish a cognitive-linguistic profile, confirm a diagnosis of semantic variant PPA, and develop individualized dyad-based therapy goals. A single-case pre-test, multiple post-test design was employed with outcome measures collected at four time points: March 2025 (T1), May 2025 (T2), August 2025 (T3), and December 2025 (T4). Weekly therapy sessions between March-May and August-December included 30 minutes of direct intervention with concurrent caregiver education, followed by 20 minutes of dyad-based activities and 10 minutes of structured review of educational resources. Mutual quality of life and perceived stress were assessed using the Mutuality Scale and Modified Perceived Stress Scale (mPSS). Caregiver- and lwPPA-specific education questionnaires were administered pre- and post-intervention. Weekly Likert-scale ratings assessed perceived utility of educational resources during the first intervention phase, and Goal Attainment Scaling (GAS) was used weekly during the second intervention phase. **Results:** Baseline assessment revealed difficulty engaging in meaningful conversation, elevated caregiver stress, and a shared limited understanding of PPA. Mutuality Scale scores varied across time points; at T3 and T4, caregiver scores were 59 and 58, and lwPPA scores were 57 and 52, respectively. Caregiver mPSS scores reflected reduced perceived stress and increased

confidence in supporting communication, and the caregiver reported that therapy participation supported the lwPPA's adjustment to the diagnosis. The lwPPA demonstrated a 32% reduction in perceived stress from T1 to T2, with a 23.53% increase from T2 to T3. Following intervention, both dyad members reported increased understanding of PPA and improved communication strategies. Caregiver education questionnaire scores increased by 80.86% following the first intervention phase and by an additional 16.36% following the second phase. However, the lwPPA's education questionnaire scores showed a 31.06% decrease from T1 to T2 and a 6.06% decrease from T3 to T4. GAS final scores were +2 for all caregiver and lwPPA goals at T4. Weekly Likert-scale responses at T2 indicated that word retrieval strategies and communication tips were perceived as highly useful and frequently applied in daily life. **Discussion:** Findings suggest that dyad-based speech-language therapy combined with caregiver education may positively influence communication, caregiver understanding, and perceived stress in dyads affected by PPA. These results underscore the importance of integrating caregiver education and relational support into intervention models and highlight the need for broader dissemination of PPA-specific resources.

V25 From English to Italian: A toolkit for coding adult neurological speech and language disorders

Ms. Allegra Benzini¹, Ms. Simona Aresta¹, Ms. Cinzia Palmirotta¹, Dr. Alyssa M. Lanzi^{2,3}, Dr. Petronilla Battista¹, Dr. Gaia C. Santi¹

¹Istituti Clinici Scientifici Maugeri IRCCS, Laboratory of Neuropsychology, Bari, Italy. ²Department of Communication Sciences & Disorders, University of Delaware, Newark, Delaware, United States. ³Delaware Center for Cognitive Aging Research, University of Delaware, Newark, Delaware, United States

Introduction: Computerized Language Analysis (CLAN) is a widely used system for the analysis of speech and language that is transcribed and coded using the CHAT tool in clinical and research contexts. CHAT provides standardized conventions for representing speech output and coding linguistic errors, making it a key tool for the assessment of typical and pathological language production. However, CHAT and CLAN were originally developed for English, and the application of their conventions to languages with different structures, such as Italian, poses methodological and interpretative challenges. Although these instruments have great potential, they currently lack a language-specific adaptation for Italian analysis of language and speech. The absence of tailored guidelines complicates their use for Italian clinicians and researchers, who often encounter a mismatch between the instructions outlined in the CHAT and CLAN manuals and their applicability to Italian linguistic structures. **Aim:** The present study aims to adapt CHAT transcription [LA2] symbols and error coding conventions to the structural properties of Italian, resulting in a ready-to-use Italian Toolkit for clinicians and researchers, particularly those working with adults with neurologically based speech and language disorders. **Methods:** CHAT transcription symbols and error coding conventions were systematically reviewed. Inclusion criteria were restricted to symbols applicable to adult speakers with neurologically based language disorders, including post-stroke aphasia and neurodegenerative conditions such as Mild Cognitive Impairment (MCI) and Primary Progressive Aphasia (PPA). Symbols related to child language, or to irrelevant phenomena were excluded. The adaptation process focused on two aspects: transcription symbols used to represent spoken language and error coding conventions used to classify linguistic deviations.[3] Symbols were evaluated for their linguistic relevance to Italian and their clinical informativeness in describing adult neurological speech and language. **Results:** Out of 58 transcription symbols meeting the inclusion criteria, 44 (75.9%) were retained, while 14 (24.1%) were excluded. Among retained symbols, 41 (93.3%) were directly translatable into Italian, whereas 3 (6.8%) required language-specific adaptations. Regarding error coding, 10 symbols were identified as appropriate for Italian clinical speech, with 40% requiring adaptation to reflect Italian-specific phonological, phonetic, and morphological rules. A new error coding category was also introduced to capture articulatory errors, common in adult neurological populations, thereby enhancing the clinical interpretability of transcriptions. **Discussion:** These findings highlight the importance of cross-linguistic and population-specific adaptation of language analysis tools to ensure valid and clinically meaningful assessment of adult neurological speech and language. This Italian Toolkit improves applicability, sensitivity, and clinical relevance, offering a linguistically grounded, ready-to-use framework for analyzing neurological speech and language disorders.

V26 Digital approaches in speech and language rehabilitation in primary progressive aphasia (PPA): A systematic review

Dr Paola Santacesaria, Ms Roberta Tomasoni, Ms Cinzia Palmirotta, Ms Allegra Benzini, Dr Gaia C. Santi, Ms Serena Tagliente, Ms Chiara Griseta, Ms Simona Aresta, Dr Petronilla Battista

Istituti Clinici Scientifici Maugeri IRCCS, Laboratory of Neuropsychology, Bari, Italy

Introduction: Primary Progressive Aphasia (PPA) is a neurodegenerative syndrome characterised by a progressive language decline, resulting in significant communication difficulties. Digital and technology-supported speech and language therapy (SLT) rehabilitation may improve intervention accessibility, engagement, and viability by supporting higher therapy intensity, reducing travel demands, and extending access to specialist services, which are particularly limited for individuals with PPA. Evidence from post-stroke aphasia telerehabilitation literature indicates good feasibility and acceptability, with outcomes often comparable to in-person therapy, although barriers remain, including limited high-quality trials and

variable generalisation beyond trained tasks. Despite the growing number of studies, no systematic and comprehensive synthesis has examined the effectiveness and implementation of digital SLT interventions specifically in PPA. **Aims:** To systematically evaluate technology-supported interventions targeting all relevant aspects of communication in PPA, including language and cognitive-linguistic abilities, functional communication, participation, and generalisation, across asynchronous, synchronous, and hybrid delivery modalities. **Method:** This review was conducted in accordance with PRISMA guidelines. A systematic search of three databases was performed using predefined search terms aligned with the research questions, including studies published up to November 2025. Articles meeting the inclusion criteria were reviewed, and their level of evidence and risk of bias were assessed using modified versions of the American Speech-Language-Hearing Association (ASHA) Levels of Evidence and the Appraisal Point System (APS). **Results:** A total of 22 studies reported treatment outcomes for 262 individuals with PPA (60 nvPPA, 54 svPPA, 88 lvPPA), all reporting improvements. Digital interventions targeted word retrieval, script training, and functional communication using computer- or tablet-based applications (including self-directed practice tools), custom web-based programs, and videoconferencing-supported therapy delivered asynchronously, synchronously, or in hybrid formats. Few studies demonstrated generalisation to untrained items ($k=9/22$), which was limited and absent in later disease stages. In contrast, maintenance of positive effects over time was reported in most studies that included follow-up assessments ($k=16/18$). Overall, the studies showed adequate methodological quality, although 4 of the 22 were rated as low quality. According to ASHA criteria, most studies provided level IIb–III evidence, with only one study reaching level Ib and no level I evidence identified. The highest levels of evidence came from 11 experimental and quasi-experimental studies, including 2 controlled group and 9 single-subject design studies. **Discussion:** The available evidence supports the use of digital speech and language interventions for individuals with PPA, highlighting their relevance as a service-delivery approach in contexts where access to specialist rehabilitation is limited, while underscoring the need for further high-quality studies.
