BIG SKY APHASIA PROGRAM
UNIVERSITY OF MONTANA

Big Sky Aphasia Program Intensive Comprehensive Aphasia Program (ICAP) Implementation Manual

Contents

CHAPTER 1: Overview of the Big Sky Aphasia Program's Intensive Comprehensive Aphasia Program

Mission & Philosophy

The mission of the Big Sky Aphasia Program (BSAP) at the University of Montana is to provide high-quality, cost-effective, research-driven speech and language therapy to individuals with aphasia and associated deficits resulting from stroke and traumatic brain injury, while serving as a clinical training facility for graduate student clinicians who attend the School of Speech, Language, Hearing, and Occupational Sciences in the Speech-Language Pathology graduate program at the University of Montana.

The intensive comprehensive aphasia program (ICAP) at the University of Montana was initially implemented during the summer of 2011 and has continued to be developed over the years with various interprofessional collaborations between speech–language pathologists, a family counselor, physical therapists, occupational therapists, and pharmacists. We continue to explore interprofessional experiences in an ongoing manner each year. The BSAP ICAP has clearly defined intensity parameters and is designed to treat the patient-family care partner unit. The BSAP ICAP implements comprehensive, evidence-based therapy to address multiple modalities using strategies, community engagement experiences, and recreational opportunities individualized to each patient–family care partner unit. A primary mission of the BSAP ICAP is to serve families in the Mountain West region of the United States and to serve families living rurally who do not have regular, ongoing access to post-acute aphasia services, while providing training for graduate student clinicians in speech–language pathology and other health care professions. Delivering the ICAP in the university clinic context allows us to keep program costs low to best serve families engaged in the rehabilitation process for the chronic condition of aphasia.

Program Principles & Goals

- Individuals with aphasia can benefit from intensive speech-language therapy, regardless of aphasia type, severity, or time post-onset.
- Aphasia interventions must be grounded in current evidence of best practices and based upon principles of neurobiological recovery and neuroplasticity.
- Aphasia treatment should be holistic, targeting the impairment along with activity and participation restrictions according to the World Health Organization's International Classification of Functioning, Disability, and Health (WHO, 2001).
- Aphasia treatment should be patient-centered, individualized, evidence-based, and incorporate client values, interests, and skills consistent with the Life Participation Approach to Aphasia (LPAA).
- Aphasia treatment should include a variety of service delivery models including individual, group, conversation, and technology-based therapies.
- The "patient" should be defined as the individual with aphasia and their family care partners.
- Family care partner education, training, and support are vital components of effective aphasia therapy and contribute to the wellness of the patient-family care partner unit.

What is an Intensive Comprehensive Aphasia Program (ICAP)?

Intensive comprehensive aphasia programs (ICAPs) are an emerging service delivery model for rehabilitation of aphasia following stroke or brain injury. The number of ICAPs across the country/world is increasing due to a desire to approach aphasia rehabilitation from a holistic and biopsychosocial foundation, while also implementing intensive therapy, which has been found to yield effective therapeutic outcomes (Rose et al., 2021). The overarching goal of an ICAP is to maximize communication potential and improve life participation. In short, ICAPs are multi-faceted and take into consideration the many aspects of communication needs faced by persons with aphasia and their family care partners.

ICAPs provide intensive intervention for stroke survivors with aphasia, infusing principles of neuroplasticity, patient-centered care, and the Life Participation Approach to Aphasia (LPAA) in the context of the World Health Organization's International Classification of Functioning, Disability, & Health (WHO-ICF). The ICAP model is defined as: (1) **intensive:** providing a minimum of 3 hours of daily treatment over a period of at least 2 weeks; (2) **comprehensive:** applying a variety of evidence-based treatment approaches, technologies, and session types (individual, group, interprofessional, patient-family education) that target impairments, activity limitations, and participation restrictions; and (3) **cohort model:** including individuals with aphasia and their care partners who begin and end the program at the same time.

Daily therapy in the context of an ICAP should include individual sessions, group sessions, technology-based therapy, and patient and family-caregiver education. Persons with aphasia and their family caregivers who are enrolled in an ICAP may receive as many as 120 hours of focused language therapy over the span of one month, whereas a person in a standard therapy model receives approximately 8 to 12 hours of therapy during the same time frame. Research has demonstrated positive patient outcomes across a variety of impairment-based and psychosocial domains (see comprehensive list in References).

Who are ICAPs Best Suited For?

ICAPs are designed to treat both stroke survivors with aphasia and their family care partners - most frequently during the post-acute phase of rehabilitation and recovery from stroke. Preliminary research conducted by Babbitt and colleagues (2016) suggested that younger participants responded to the ICAP intervention model to a greater degree than did older participants. No other individual factors (e.g., gender, aphasia type, aphasia severity) were found to impact outcomes associated with the ICAP model. Participants should be medically stable and be able to maintain alertness and attention all day. Research suggests that approximately 11% of stroke survivors with aphasia who enroll in ICAPs do not make gains, indicating that the majority of people who enroll in ICAPs make gains in language and psychosocial function (Babbitt et al., 2016).

In a survey of international ICAPs by Rose and colleagues (2021), admission criteria across 14 ICAPs was reported as follows:

- **Aphasia** as primary diagnosis, without associated cognitive deficits.
- **Time post stroke and aphasia severity** as inclusionary criteria varied across programs.
- **Age** (for 9 of 14 ICAPs) as inclusionary criteria varied across program (i.e., 18 and older).
- **Medical stability** required for some programs.
- **Endurance** (3 of 14 ICAPs); ability to sit for four hours per day or the ability to participate in treatment for duration of program.
- **Independent with ADLs/toileting** was required for 10 of the 14 ICAPs.

In a systematic scoping review of ICAPs (Monnelly et al., 2021), inclusion criteria in the reviewed studies included:

- Participants with any type or severity of chronic (non-progressive) aphasia.
- Participants with aphasia could be due to any etiology acquired in adulthood.
- Significant others/care partners of stroke survivors with aphasia (no inclusionary criteria).

Stroke survivors with aphasia who participate in the Big Sky Aphasia Program make significant and meaningful gains towards their language function (i.e., speaking, reading, writing, and understanding others) and communicative participation skills (e.g., emailing, texting, holding conversations). Outcomes data collected from our program (2015-2019) show improvements across language domains and non-verbal problem solving (Griffin-Musick, et al., 2020, 2021). Participants with aphasia and their families have also reported an improved sense of well-being, a better understanding of aphasia and stroke rehabilitation, and report that they are better able navigate daily life with aphasia. Qualitative data we have collected (Off et al., 2022) from some of our participants suggests that stroke survivors with aphasia report both challenges (e.g., communicating with people with a wide range of language ability) and successes (e.g., building friends) while working in the cohort model.

The BSAP ICAP Participants

The participants of the BSAP ICAP include stroke survivors with aphasia and their family care partner(s). To apply to the BSAP ICAP, persons with aphasia must be over the age of 18 years, medically stable, able to tolerate intensive therapy, and have minimal to mild comorbid cognitive impairments. That is, participants must have sufficient attention, memory, and executive function to engage in high-intensity therapies. We do not exclude participants on the basis of aphasia type, severity, or time post-onset. Concomitant apraxia of speech, dysarthria, and/or mild cognitive impairments are treated simultaneously with aphasia impairments.

Eight families are enrolled in each ICAP session. The number of family care partners per person with aphasia is not limited, but typically one to two family care partners participate for the duration of the program. Optimally, we strive to have one consistent care partner present for the duration of the ICAP; however, in some cases, multiple

family care partners will alternate care throughout the program to ease the time commitment for each. Family care partners often include spouses, siblings, parents, children, or friends of stroke survivors with aphasia. Care partners are not required if the person with aphasia is living independently.

What does the BSAP ICAP Offer?

The ICAP at the University of Montana is designed with clearly defined intensity parameters, a concern for patient, family care partner, and clinician perspectives, and a focus on comprehensive therapy that addresses multiple modalities using strategies and community-based engagement and/or recreational opportunities that are individualized and personally meaningful (i.e., salient) to the person with aphasia and their family care partner(s).

The BSAP ICAP includes individual sessions, small group sessions (e.g., conversation group, narrative group, communication partner training group), large group sessions (e.g., Aphasia Community Group, Aphasia Clubs), and weekly care partner psychoeducation, and communication skill and strategy training.Technology-based therapies, applications, and multi-modal communication strategies are infused throughout the program. We also provide weekly community engagement activities (e.g., adaptive fishing, aphasia-friendly art museum tours, aphasia-friendly movie-going, aphasia-friendly wildlife biology experiences) to directly target generalized use of learned communication techniques and strategies and to support a Life Participation Approach to Aphasia.

The frequency and intensity of the BSAP ICAP has evolved since its inception in 2011 to meet the needs of our participants and their family care partners. We began documenting our intensity parameters in 2014. Table 1 provides a summary of our intensity parameters from 2014-2023.

Table 1. BSAP ICAP Frequency and Intensity Parameters

BSAP ICAP Session	Number of Hours Per Day	Number of Days Per Week	Number of Weeks	Total Treatment Hours
Fall 2014	3	3	4	36
Fall 2015	3	3	5	45
Summer 2015	4	4	4	64
Summer 2016	4.5	4	4	72
Summer 2017A	4.5	4	4	72
Summer 2017B	4.5	4	3	54
Summer 2018	5	4	4	80
Summer 2019	5	4	4	80
Telehealth Summer 2020	5	3	3	45
Summer 2021	5	4	4	80
Summer 2022	5	4	4	80
Summer 2023	5	4	4	80

Prior to beginning treatment, stroke survivors with aphasia participate in a comprehensive evaluation to determine their individual linguistic and communicative strengths and needs and to determine their current level of psychosocial well-being. The program culminates with post-treatment testing to assess treatment outcomes and a family conference to discuss progress and to make recommendations for home programming and further services. The cost of the program has fluctuated from year to year. The cost for Summer 2023 ICAP was $2900. Scholarship opportunities are often available to support out of pocket payment. Total ICAP costs include pre- and post-treatment assessment, all treatment and care partner services and associated costs, weekly community engagement activities, and weekly hosted lunches.

We also collaborate with other health professions, services, and universities to provide additional educational, health, and wellness services as follows:

- We collaborate with The School of Physical Therapy and Rehabilitation Science at the University of Montana which houses the UM Physical Therapy Clinic, with experts in neurological rehabilitation. We collaborates with physical therapy as follows: (1) to arrange ongoing physical therapy while the ICAP is in program, (2) to arrange access to the physical therapy adaptive gym that is monitored by graduate student clinicians and their supervisors in the physical therapy program; and (3) to provide in-services during the course of the ICAP to individuals with aphasia and/or their care partners about physical therapy health and strategies.
- We collaborate with PharmD students in the Skaggs School of Pharmacy to provide consultations, conduct medication reviews, and provide education about medications and their relationship to stroke and brain injury rehabilitation.
- We often collaborate with the School of Social Work at the University of Montana to provide no charge consultations with graduate students working on their master's degrees in social work. These consultations allow graduate students in Social Work to assess needs and support families living with aphasia to identify and customize individualized resources for BSAP ICAP families (e.g., caregiving respite, funding sources, etc.).
- We often consult and collaborate with Dr. Kirsten Murray, who is a licensed family counselor and Professor in the Department of Counseling at the University of Montana.
- We collaborate with MonTech, a state-funded, free resource, housed on the University of Montana campus, to provide consultations and to evaluate needs for augmentative and alternative communication (AAC), assistive technology (AT) devices, and adaptive equipment.
- Beginning in fall 2025, the School of Speech, Language, Hearing, & Occupational Sciences at the University of Montana will launch its first cohort of occupational therapy students. We will infuse clinical training for these students into our ICAP. Currently, we collaborate with community-based occupational therapists to provide strategies, adaptive ADL demonstrations, and consultations.
- We collaborate with Dr. Victoria Scharp and her student researchers at Idaho State University to conduct research and share expertise about our 4-week ICAP and Dr. Scharp's 1-week modified ICAP (mICAP). Collectively, we are committed to supporting the rural mountain west aphasia community.

CHAPTER 2: ICAP Graduate Student Clinician Training

Primary assumption: graduate student clinicians are capable of delivering high-quality, high-intensity, patient-centered, evidence-based therapies when provided sufficient pre-ICAP training accompanied by in vivo ICAP training, mentorship, and supervision.

Eight graduate student clinicians are assigned to each ICAP session. Each graduate student clinician is paired with one family with aphasia for the entire duration of the ICAP. The two ICAP Directors or BSAP Clinical Supervisors supervise these eight graduate student clinicians; four graduate student clinicians (and their assigned patients with aphasia) are assigned to each ICAP Director/Clinical Supervisor. These consistent relationships provide the optimal context in which to develop clinical skills, to provide high quality supervision and mentorship, and to develop strong rapport across the cohort of individuals with aphasia, family caregivers, graduate student clinicians, and supervisors.

Clearly defining expectations and creating an environment of mentorship, collaboration, and teamwork are essential components of training graduate student clinicians in the context of an ICAP. We convey the following to graduate student clinicians via email before they begin ICAP training: *"We have high expectations, and the demand of this intensive program is extremely high. You will be exhausted and emotionally drained every day of the ICAP. But the pay-off is high. You will develop clinical skills that can be applied to any clinical setting, with any type of patient or family caregiver. You will also be inspired and impassioned. The professional and clinical skills you will develop in a very short amount of time is exceptional."*

Graduate Student Clinician Assignment to the ICAP

Graduate student clinicians are assigned to the BSAP ICAP session by the School of Speech, Language, Hearing, and Occupational Sciences' (SLHOS) Clinic Director and Externship Placement Coordinator in collaboration with the SLHOS Clinical Team. The BSAP ICAP Directors are part of the SLHOS Clinical Team and have the opportunity to review the student assignments during the academic term that precedes the ICAP. ICAP Directors ensure that all graduate student clinicians assigned to the ICAP rotation have the resilience and foundational clinical skills necessary for an intensive experience. Graduate student clinicians have the opportunity to request the BSAP ICAP rotation during their advising sessions.

Once student clinician assignments have been finalized and reported to the ICAP Directors, the ICAP Directors email graduate student clinicians an ICAP welcome letter (see **Appendix A***, ICAP Graduate Student Clinician Welcome Letter*). The welcome letter reviews the expectations for the ICAP clinical rotation, offers tips for preparing for the ICAP experience, and instructs graduate student clinicians to read ICAP research articles to provide a theoretical understanding of the ICAP model of service delivery. Students are also asked to read several articles that describe the BSAP ICAP model specifically (e.g., Off et al., 2019; Griffin-Musick et al., 2020, 2021).

The next part of the process is to match each graduate student clinician with one of the enrolled families living with aphasia (i.e., the stroke survivor with aphasia and their family care partner(s)). One graduate student clinician is assigned to one stroke survivor with aphasia (and their family care partners) for the duration of the ICAP. The ICAP Directors assign the family-graduate student clinician pairs. In most cases, ICAP Directors have previously worked with the assigned students – either in an academic course or in another clinical rotation. The ICAP Directors discuss the known strengths and weaknesses or ask other SLHOS faculty to provide feedback about the strengths and weaknesses of each graduate student clinician.

Once the stroke survivors with aphasia have been accepted, invited, and enrolled in the ICAP, the ICAP Directors consider the strengths, weaknesses, and interprofessional skills of each graduate student clinician and pair them with the family with aphasia that is most in line with their characteristics. To get to know the families we will be working with, we conduct a telehealth interview and aphasia screening (i.e., Quick Aphasia Battery) with each family with aphasia. These interviews allow us to assess interpersonal aspects of the families and explore social interests, hobbies, and activities that may be in line with those of our graduate student clinicians. The ICAP Directors then have several discussions about which clinician is the best fit for each family with aphasia. Some factors that we consider when making these matches are clinical strengths and weaknesses; previous background skills and experiences; interpersonal communication style and known personality characteristics; and known interests, hobbies, and activities. Ultimately, we want to ensure that the families feel comfortable communicating and conversing with their assigned clinician. **A positive family-clinician dynamic is essential for a successful intensive rehabilitation experience.**

SLP Graduate Level Coursework

Graduate student clinicians who participate in the BSAP ICAP must be enrolled in a graduate program in speech-language pathology. They must have completed or be concurrently enrolled in a graduate level course on aphasia. At the University of Montana, this course is *SLP 565: Aphasia.* Typically, our campus-based graduate student clinicians will have completed two in-house clinical rotations by the time they participate in the ICAP. The ICAP may be the first clinical rotation for our distance students who come to campus for the first time during the summer of their first year of graduate school. We balance the number of campus-based and distance-based students for each ICAP so that peer mentorship facilitates learning for the less experienced clinicians.

ICAP Graduate Student Orientation Program

Graduate student clinicians who are assigned to the BSAP ICAP rotation must participate in the BSAP ICAP Graduate Student Orientation. This orientation program is administrated by the ICAP Directors (see **Appendix B**, *ICAP Graduate Student Clinician Orientation Manual*). The schedule of the orientation program varies from year to year depending on the academic calendar and the timing of the ICAP clinical rotation. Regardless of the schedule, the topics of the orientation are consistent across years. Table 2 provides a summary of the content provided during the orientation program.

Table 2. Summary of BSAP ICAP Orientation Program

Description	Topics Covered	Student Independent Activities
ICAP Overview	Patient/family-centered care and the ICAP philosophy and theoretical foundations, BSAP ICAP practicum overview, principles of neuroplasticity implemented during BSAP ICAP, syllabus review, EMR introduction, patient/family assignments	EMR scavenger hunt to review patient files and to find specific info about assigned patient Clinic and materials lab tour
Treatment Training & Planning	Review documentation procedures, introduce aphasia treatment approaches, introduce LPAA, introduce communication strategies, introduce	Develop daily themes and related core concepts and vocabulary Plan group leadership scheduling

	aphasia technology, applications and software, introduce weekly themes and schedules, review EBP treatment approaches, EBP demonstrations with real-time feedback from ICAP Directors	Complete an EBP treatment assignment Practice one EBP treatment approach with peer to demonstrate to team
Diagnostic Evaluation Training & Planning	Introduction to the diagnostic protocol for pre/post-ICAP testing; ICAP directors demonstrate motor speech exam and hearing screening; students observe two diagnostic evaluations of locally-based ICAP participants, led by each of the ICAP Directors	In pairs, practice administering all diagnostic assessments

Orientation Topic #1: ICAP Overview

The in-person, on-campus, BSAP ICAP orientation program begins by showing the documentary film "Speechless" followed by a debriefing session, led by the ICAP Directors/BSAP Clinical Supervisors. Graduate student clinicians are encouraged to discuss and ask questions about aphasia, living with aphasia, and the impact that aphasia has on families. The purpose of showing the movie at the start of the orientation is to infuse a patient- and family-centered focus from the start of the ICAP training.

ICAP Directors provide the student clinicians with the *ICAP Graduate Student Clinician Orientation* document along with a binder of materials that they will need during the ICAP. We encourage students to individualize their binders, adding materials and resources that pertain specifically to their assigned family. ICAP Directors then provide a tutorial about the ICAP model of service delivery including the underlying philosophy and theoretical foundations of the ICAP model. This discussion-based tutorial encourages students to contribute their understanding of what constitutes "intensive" and "comprehensive" components of the ICAP model and how an ICAP differs from "intensive aphasia therapy". Three foundational elements we infuse into our ICAP model are discussed during this tutorial: (1) principles of neuroplasticity stemming from the works of Smith and Jones (2008) and Kiran and Thompson (2019); (2) the World Health Organization's International Classification of Functioning, Disability, and Health (WHO-ICF; 2001); and (3) the Life Participation Approach to Aphasia (LPAA; Chapey et al., 2000). ICAP Directors encourage students to brainstorm ideas about how these theoretical foundations might be applied during the ICAP; the ICAP Directors then describe concrete examples about how these theoretical foundations have been applied in previous ICAP sessions.

Once the theoretical foundation of the ICAP service delivery model has been sufficiently discussed and student questions have been answered, the ICAP Directors/BSAP Clinical Supervisors provide an overview of the current ICAP schedule and its various components. Graduate student clinicians are directed to the *BSAP ICAP Syllabus* (see Appendix C), the BSAP ICAP online learning platform (i.e., Moodle), the BSAP ICAP website, and the BSAP Facebook Page for additional resources and information that will supplement their learning during orientation and during the ICAP experience.

The ICAP Directors/BSAP Clinical Supervisors then provide students with a verbal and written description of each graduate student clinician's clinical assignment (i.e., the patient/family with whom they will be

paired). We provide a brief verbal description of each patient/family and any relevant information that the student may need that might not be available in the electronic medical record (EMR). Treatment room assignments are finalized at this time. Student clinicians are directed to review the patient EMR files during scheduled independent work time.

The ICAP Directors/Clinical Supervisors assign graduate student clinician pairs to lead/facilitate one *Care Partner Psychoeducation and Communication Training Group* per week. Each pair of students is provided a template of a presentation with a general topic to cover. Each student clinician team is asked to research the topic and update information to be current and relevant/individualized for the current cohort of families. Each team of students meets with the ICAP Directors/Clinic Supervisors to review their plan for the *Care Partner Psychoeducation and Communication Training Group.* During the ICAP, one ICAP Director/Clinical Supervisor attends and oversees the care partner group to support the graduate student clinicians.

Student clinicians are provided a tour of the clinic and materials lab space and asked to locate materials they may need during the ICAP. During this time, clinicians are asked to complete a "scavenger hunt" on the EMR to structure their file review process and to find specific information about their patient. Students turn in their completed EMR Scavenger Hunt form to demonstrate what they learned about their patient. This topic ends with a 1-hour unstructured Q&A session. The ICAP Directors/Clinical Supervisors ensure that students have accessed the EMR successfully and that students feel comfortable with the information that they accessed.

Orientation Topic #2: Treatment Training & Planning

Preliminary training for treatment planning begins with a tutorial of BSAP ICAP documentation procedures including: (1) use of the EMR to write ICAP-specific SOAP Notes and to book clinic rooms, (2) use of Calipso to document ICAP-specific clinical clock hours; and (3) use of ICAP-specific reporting templates (e.g., *BSAP ICAP Summary of Progress*). Students are provided the opportunity to locate all relevant documentation materials and templates on the online learning platform (i.e., Moodle).

Following the introduction to documentation processes, the ICAP Directors/Clinical Supervisors provide a brief introduction about communication techniques for individuals with aphasia (e.g., AphasiaAccess's LPAA video tutorials) and share BSAP resources for treatment including treatment binders that have been created for many of the evidence-based treatment approaches regularly used during the ICAP (e.g., Semantic Feature Analysis, etc.). These binders include research articles about the treatment approach and previous student-clinician created treatment tutorials, tips, and materials. The ICAP Directors/Clinical Supervisors then discuss and briefly demonstrate various aphasia technologies (i.e., tablets, smart phones, computers), software (i.e., ORLA), aphasia applications (e.g., MakeWrite), and treatment applications (e.g., Constant Therapy, Tactus Therapy) that may be used throughout the ICAP. Various low tech and high tech AAC techniques, devices, and applications are briefly reviewed.

Student clinicians are provided time to work independently to develop weekly themes and subthemes. The ICAP Directors/Clinical Supervisors provide the weekly themes (e.g., Science & Technology) and ask the student clinicians to develop daily sub-themes (e.g., Nature, Space) and associated core concepts and vocabulary. We have found that a weekly thematic context grounds language learning in meaningful topics and provides structure for the student clinicians as they create treatment materials and conversational topics/prompts that are individualized to their patient's level of functioning. We align our

weekly themes with the recreational/community-engagement outing that we have arranged. We make attempts to provide experiences that are in line with family-reported hobbies and interests to optimize rich communicative contexts and to maximize conversational engagement. To ensure that each cohort is engaged in the content, we do not generally recycle content. Instead, we check in with the families at the end of each treatment day to inquire about subthemes that are particularly interesting or relevant. See Table 3 for a sample weekly theme schedule.

Table 3. Sample Weekly Theme & Group Schedule

ICAP Week	Sample ICAP Themes	Sample Recreational or Community-Engagement Outings	Sample Weekly Aphasia Clubs
Week #1	Arts & Culture	Missoula Art Museum: Aphasia-Friendly Guided Installation Viewing & Hands-On Activity	Painting/Drawing/Art appreciation, Writing & Poetry, Karaoke, Music, Book Club
Week #2	Science & Technology	UM Star Gazing Room: Private Showing; Missoula Smokejumper Center: Private Tour; Wildlife Biologist Tutorial	Smart Phone Apps for Aphasia; Nature Club; Book Club
Week #3	Sports & Hobbies	Tour of UM Football Stadium; Adaptive Fishing; Choose Your Own Adventure (golf, board games/cards, nature walk) @ university golf course and restaurant	Basketball, Photography, Gardening, Cooking; Book Club
Week #4	Media Week	Roxy Movie Theatre: Private Movie Showing (patient-selected movie)	Trivia, Movie Reviews; Book Club

We ask student clinicians to work collaboratively to develop concept and vocabulary targets that vary by length and complexity. During this independent work time, student clinicians also plan their leadership schedule (and fill out a leadership plan) for facilitating the aphasia groups that take place during the ICAP (i.e., opening/closing sessions, Aphasia Clubs, Aphasia Community Group, hosted lunches, recreational/community-engagement outings). See Table 4 for a sample worksheet that students fill out to develop themes and leadership schedules. We have found that providing a structure for collaboration is essential to help student clinicians successfully carry out the different types of treatment sessions over the course of the four weeks. Over the years of implementing this ICAP, we have found that students benefit from organizing all leadership schedules and plans during the orientation week, instead of letting them plan on a weekly basis. We have also found that is necessary to schedule time during our weekly planning days during the ICAP (i.e., Mondays) for students to dedicate to group treatment planning. After students have had some independent work time to develop themes and leadership plans, we reconvene. The ICAP Directors provide a didactic overview of various evidence-based aphasia treatment approaches (e.g., Sematic Feature Analysis, Conversation Partner Training, Verb Network Strengthening Treatment, etc.).

Table 4. Group Leadership Plan Worksheet

Weekly Themes	Days	Daily Subthemes	Concepts & Vocabulary	Opening/Closing Session Leadership	Aphasia Clubs Leadership	Aphasia Community Group Leadership
Arts & Culture	Tues:					
	Wed:					
	Thurs:					
	Fri:					
Science & Technology	Tues:					
	Wed:					
	Thurs:					
	Fri:					
Sports & Hobbies	Tues:					
	Wed:					
	Thurs:					
	Fri:					
Media Week	Tues:					
	Wed:					
	Thurs:					
	Fri:					

Students are then instructed to break into pairs to practice one evidence-based practice (EBP) treatment approach. Each student selects an EBP approach that they are planning to implement with their patient, reviews the approach, and practices implementing the approach with their peer. We work with students to ensure that two students do not select the same approach. Student clinicians then reconvene with the ICAP Directors/Clinical Supervisors and demonstrate the EBP approach that they practiced earlier. This hands-on demonstration allows ICAP Directors/Clinical Supervisors to provide real-time feedback and identify possible problems with treatment implementation prior to the first session with the patient. Conducting these demonstrations as a group allows for all eight students to learn multiple treatment approaches in a hands-on manner. In many cases, the ICAP Directors/Clinical Supervisors will follow-up a student's demonstration with their own demonstration of how to implement the treatment approach more effectively. Student clinicians report that this experiential learning opportunity increases their clinical confidence and brings to life the approaches that they read about. When appropriate, the ICAP Directors/Clinical Supervisors also direct students to good examples of publicly available video demonstrations of these treatment approaches.

Orientation Topic #3: Diagnostic Evaluation Training & Planning

The ICAP Directors introduce the student clinicians to the pre-treatment diagnostic evaluation. The ICAP Directors/Clinical Supervisors demonstrate the hearing screening and motor speech examination and then provide an overview of each assessment tool and associated response form(s)/protocols. Students are provided copies of all diagnostic protocols/response forms in their orientation packets to begin reviewing on their own. Student clinicians are then asked to break into pairs to begin practicing the BSAP ICAP diagnostic protocol. Students are allotted 2.5 hours to practice. After this period of independent practice,

the students reconvene with the ICAP Directors to discuss scoring consistency, diagnostic fidelity, and general diagnostic procedures that require attention to detail.

Over the past few years, we have found that students greatly benefit from observing diagnostic evaluations prior to conducting them independently. As part of the orientation process, we schedule two patients for their diagnostic evaluations one week or so prior to the start of the ICAP. For obvious reasons, we only schedule patients who live in or very near to Missoula for these early evaluation sessions. From 9:00-10:00 am students and ICAP Directors/Clinical Supervisors prepare for the diagnostic evaluation. The treatment room is set up with all relevant diagnostic materials, and video recordings and a student viewing room are set up. From 10:00 am – 1:00 pm one of the ICAP Directors/Clinical Supervisors conducts the evaluation with the graduate student clinician assigned to the patient in the room as an assistant. All other student clinicians are required to observe the entire session from the viewing room. The ICAP Director/Clinical Supervisor not directly involved in the evaluation session sits with the student clinicians in the viewing room to discuss the evaluation as it is being conducted, providing real-time commentary and feedback about both the administration of the evaluation and the patient's responses/behaviors. Following a lunch break, the student clinicians reconvene with the ICAP Directors/Clinical Supervisors to debrief about the diagnostic evaluation. Students are then excused to work independently to continue hands-on practice of the diagnostic protocol as needed and to finalize an evidence-based practice (EBP) assignment. This process is repeated on one other day with a second patient. Following the second evaluation, the students meet with the ICAP Directors/Clinical Supervisors to score the protocols together, review manuals and scoring procedures, and plan for the following week.

Orientation Topic #4: Miscellaneous Planning & Instruction

We schedule one orientation day for miscellaneous planning and instruction and final diagnostic evaluation planning. During many ICAPs, we schedule interprofessional education/practice experiences for our health professions students on the University of Montana campus. When these experiences occur, we train our graduate student clinicians to perform as simulated aphasia patients. Two hours are dedicated to training our students to be simulated patients for other health professions students. We also schedule two hours for the student clinicians to plan for group treatment sessions. Students also use this time to continue to practice and prepare for their upcoming diagnostic evaluation sessions. Plenty of time is provided to answer remaining questions.

BSAP ICAP Interprofessional Education & Practice Opportunities

The School of Speech, Language, Hearing, & Occupational Sciences frequently collaborates with other health professions from the University of Montana or Montana State University to provide interprofessional education (IPE) and interprofessional practice (IPP) opportunities for students in the health professions. The summer BSAP ICAP provides an optimal context for these experiences. During the ICAP Graduate Student Orientation Program, the ICAP Directors often facilitate IPE and IPP experiences with other health professions. For example, we often collaborate with the College of Nursing who has access to a "stroke suit" simulation experience. In return, we offer an "aphasia simulation" experience for the nursing students, during which our graduate student clinicians become the person with aphasia and provide a challenging communication environment in which nursing students must problem solve using recently taught communication strategies and

multimodal support techniques. These IPE and IPP experiences are dynamic and organized each year as new opportunities emerge. These early interprofessional experiences provide a strong foundation in collaborative health care for all health profession students.

ICAP Graduate Student Group & Independent Preparation

Successfully running the BSAP ICAP requires a significant amount of daily planning on the part of the graduate student clinicians and the ICAP Directors/Clinical Supervisors. Graduate student clinicians are required to independently prepare the following:

- **Individualized goals for each family living with aphasia.** Preliminary goals are developed during an initial telehealth-based meeting with the ICAP Directors and the families prior to on-campus arrival. These goals are then further specified over the course of the first two treatment days of the ICAP.
- **Weekly lesson plans for all individual and group sessions.** Student clinicians develop weekly lesson plans for their family living with aphasia. These lesson plans are often modified each morning before the ICAP begins, with support from the ICAP Directors/Clinical Supervisors.
- **Daily SOAP Notes in the EMR.** Our university clinic requires graduate student clinicians to write one SOAP note per day, detailing all aspects of the ICAP (i.e., individual, group sessions, community outings, etc.).
- **Daily therapy materials.** Therapy materials, aphasia-friendly documents, low-tech or high-tech AAC (as needed), caregiver materials are developed over the course of the ICAP.
- **Wrap Up Documentation and Materials.** Written "*Summary of Progress Report*" detailing pre- and post-treatment assessment scores and interpretations, individualized goals, and a summary of treatment approaches implemented, and progress made towards individualized goals, referrals, and recommendations. Students then consolidate this formal Summary of Progress into an aphasia-friendly "Report Card" that is used to support the final debriefing. Student clinicians are asked to develop a menu-driven home program for their assigned family living with aphasia. Home programming is designed to provide approximately one month of activities that support continued practice of skills and techniques that were taught during the ICAP. These aphasia-friendly home programs are tailored to each family.

The eight graduate student clinicians are also responsible for collaborating with each other to develop lesson plans, activities, and materials/resources for all group sessions (i.e., conversation groups, Aphasia Community Group, aphasia clubs, and community/recreational outings). ICAP Directors/Clinical Supervisors debrief with the student clinicians daily to ensure that goals and therapeutic approaches, materials, and activities are appropriate, and evidence based.

Clinical Supervision in the Context of an ICAP

The supervision demand for the ICAP is extremely high. ICAP Directors and/or Clinical Supervisors supervise the graduate student clinicians. Each supervisor is aligned with four graduate student clinicians (and thus four families living with aphasia). ICAP Directors/Supervisors provide 90-100% supervision for pre- and post-treatment assessment to ensure diagnostic fidelity. ICAP Directors/Supervisors provide a minimum of 25% supervision of all treatment sessions. Supervision includes: (1) supervising student clinicians during treatment; (2) reviewing lesson plans and treatment materials daily; (3) reviewing SOAP notes daily; (4) reviewing progress reports and other assignments, and (5) providing debriefing and problem-solving sessions daily. The ICAP Directors/Supervisors are on site from 8:00 am to 5:30 or 6:00 pm daily during the ICAP orientation and during the ICAP itself.

Chapter 3: BSAP ICAP Implementation – Stroke Survivors with Aphasia

BSAP ICAP Telehealth Screening & Interviews

Once families with aphasia have confirmed their enrollment in the ICAP, we schedule a 1-hour video-conference call (using Zoom) with the stroke survivor with aphasia and their family care partner(s) to discuss the ICAP details/logistics and answer any questions they may have before meeting us in-person. We also administer a short language assessment (*Quick Aphasia Battery,* Wilson et al., 2018) and begin to discuss treatment goals.

BSAP ICAP Pre- & Post-Treatment Assessment

Pre-ICAP Assessment

All participants with aphasia (and their family care partners) are scheduled for a pre-treatment diagnostic evaluation that takes place within one month of the start of the ICAP. The pre-treatment diagnostic evaluation is completed in either a single three-hour period, with breaks taken as needed, or in two two-hour periods, with a long 1-hour break in between. Any components of the evaluation that are not completed during this assessment window are subsequently completed during the first day of the treatment period.

The pre-treatment diagnostic evaluation session consists of (1) intake & demographic paperwork, (2) research consent procedures (if applicable), (3) a battery of cognitive-linguistic measures, and (4) a battery of measures that assess psychosocial well-being and aphasia-related quality of life.

We begin the diagnostic session with clinical intake paperwork specific to the DeWit RiteCare Speech, Language, & Hearing Clinic at the University of Montana and research consent procedures (if applicable). During intake we also interview participants for any demographic or health history information that was not included on their ICAP application. We draw from a number of screening tools and outcome measures including the following:

1. DeWit RiteCare Speech, Language, and Hearing Clinic paperwork (e.g., HIPAA)
2. Research consent discussion/signature (PI of research protocol as needed)
3. BSAP ICAP Demographic & Health History Form
4. Language Experience and Proficiency Questionnaire (LEAP-Q)
5. Hearing Screening & Visual Scanning Screening
6. Motor speech exam (modified Duffy Protocol)
7. Geriatric Depression Scale (GDS) or General Health Questionnaire-12 (GHQ-12)
8. Communicative Participation Item Bank (CPIB)
9. Communicative Confidence Rating Scale for Aphasia (CCRSA)
10. Modified Perceived Stress Scale (mPSS)
11. Stroke and Aphasia Quality of Life Scale (SAQOL-39)
12. Western Aphasia Battery – Revised (WAB-R), Part 1, Part 2 (as needed)
13. Raven's Coloured Progressive Matrices (RCPM)
14. Boston Naming Test-Second Edition (BNT-2), standard/long form
15. The Scenario Test

16. AphasiaBank Discourse Protocol & Puppy Love Video
17. Assessment of Living with Aphasia (ALA)

The following self-report proxy measures are given to the family care partner(s) to complete while the person with aphasia is undergoing testing:

1. Stroke Aphasic Depression Questionnaire – community 10-item version (SADQ-10)
2. Communicative Effectiveness Index (CETI)

Post-ICAP Assessment

All participants with aphasia (and their family care partners) are scheduled for a post-treatment evaluation to take place within the week following the last day of treatment. Typically, the last day of treatment is on a Friday and the post-treatment assessment sessions take place the following Monday or Tuesday. The post-treatment diagnostic evaluation is completed in a three-hour period, with breaks taken as needed or two two-hour periods with an hour-long break in between.

The post-treatment diagnostic evaluation session consists of (1) a battery of cognitive-linguistic measures, and (2) a battery of measures that assess psychosocial well-being and aphasia-related quality of life. We work with the graduate student clinicians ahead of the evaluation to determine the administration order of the various outcome measures.

1. Phoneme inventory and/or motor speech exam (if applicable per goals)
2. Western Aphasia Battery – Revised, Part 1 (WAB-R)
3. Raven's Coloured Progressive Matrices (RCPM)
4. Boston Naming Test-Second Edition (BNT-2), standard/long form
5. The Scenario Test
6. AphasiaBank Discourse Protocol
7. Geriatric Depression Scale (GDS) or General Health Questionnaire-12 (GHQ-12)
8. Communicative Participation Item Bank (CPIB)
9. Modified Perceived Stress Scale (mPSS)
10. Stroke and Aphasia Quality of Life Scale (SAQOL-39)

The following self-report proxy measures are given to the family caregiver to complete while the person with aphasia is undergoing testing:

1. Stroke Aphasic Depression Questionnaire – community 10-item version (SADQ-10)
2. Communicative Effectiveness Index (CETI)

BSAP ICAP Treatment for the Stroke Survivor with Aphasia

Session Types

BSAP ICAP treatment sessions are developed collaboratively with the person with aphasia and family care partner(s), apply evidence-based practice methods, infuse the WHO-ICF model, infuse principles of neuroplasticity, and infuse the Life Participation Approach to Aphasia (LPAA). Evidence-based practice includes three components: (1) the best current evidence for treating the specific impairment(s), (2) the values and goals of the person with aphasia and their care system, and (3) clinician/supervisor judgement.

All treatment approaches and lesson plans are developed in collaboration with the ICAP Directors/Clinical Supervisors to ensure high quality and high intensity care.

The BSAP ICAP includes individual treatment sessions, small group treatment sessions, technology-based treatment sessions (infused in both individual and group sessions), and large group treatment sessions. Over the course of the development of the BSAP ICAP, the time dedicated to each type of treatment session has changed to meet the needs and requests of our participants. As seen in Figure 1, as the BSAP ICAP evolved over time, more time was dedicated to group sessions, reflecting a targeted approach to improving psychosocial and socioemotional well-being. Currently, during our ICAP, we provide 24 hours of individual sessions, 24 hours of small group sessions, and ~24 hours of large group sessions.

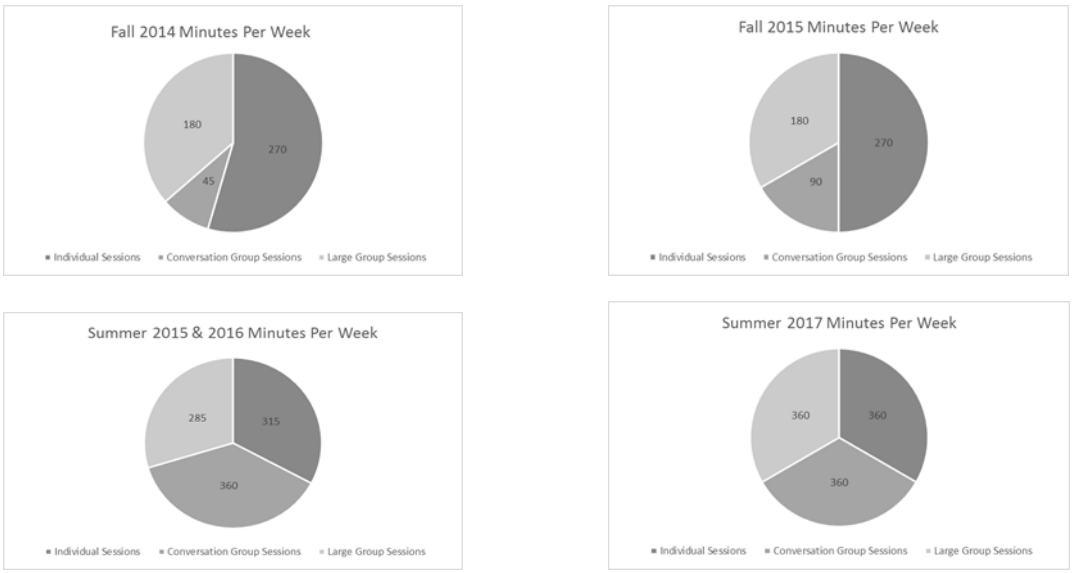

Figure 1. Time Dedicated to ICAP Treatment Session Types (2014-2017)

Individual Treatment Sessions

Individual sessions include the person with aphasia and the clinician. Each individual session is tailored to the person with aphasia and focuses on improving specific linguistic impairments (e.g., auditory comprehension, word finding, generating increasingly more complex sentences), using communication strategies, and decreasing participation restrictions (e.g., using communication skills to increase participation in life's roles) through the use of evidence-based treatment approaches. Each stroke survivor with aphasia participates in two individual treatment sessions per day, three days per week. Each session lasts ~60 minutes depending on the weekly schedule. These dynamic individual treatment sessions necessarily vary across the course of the week, adapting to the needs and the response curve of the participant's skills in real time. Principles of neuroplasticity (e.g., high dose of targets, salient targets, repeated practice of targets, complexity of targets), are infused into these individual sessions to optimize response to intervention (Kiran & Thompson, 2019; Kleim & Jones, 2008). We re-evaluate our use of specific treatment approaches before each ICAP session, ensuring up-to-date application of the evidence base. Examples of evidence-based treatment approaches that we have used in the past include Semantic Feature Analysis (SFA; Boyle, 2010), Verb Network Strengthening Treatment (VNeST; Edmonds, Nadeau, & Kiran, 2009), Phonologic Components Analysis (PCA; Leonard, Rochon, & Laird, 2008), intensive auditory

comprehension treatment for severe aphasia (Knollman-Porter, Dietz, & Dahlem, 2018), phonomotor treatment (Kendall, Oelke, Brookshire, & Nadeau, 2015).

Small Groups

Conversation & Narrative Groups

Conversation and/or narrative development groups include 2-4 stroke survivors with aphasia and their respective clinicians. The purpose of these groups is to provide a social communication context for each person with aphasia to practice their communication skills. Clinicians facilitate these conversations using multimodality cues (e.g., writing key words, drawing pictures, gesturing, etc.) and support strategies to help with auditory comprehension and verbal or non-verbal communication. The purpose of these structured conversations is to increase the person with aphasia's ability to communicate successfully in social situations – regardless of the severity of their aphasia.

PWA-Communication Partner Conversation Groups

These conversation groups include the person with aphasia (PWA) and their care partner, friend, or family member. The purpose of these conversation groups is to provide a social communication context for the person with aphasia and their conversation partner to practice communication skills, strategies, and techniques consistent with the evidence base supporting communication partner training (CPT). The clinician facilitates these conversations to do the following:

- help the care partner/friend/family member use multimodality cues (e.g., simplifying spoken language, writing key words, drawing pictures, gesturing, etc.) and support strategies; and
- help the person with aphasia to use new communication skills, requests for more information, requests for additional aphasia-friendly communication strategies, and to help the person with aphasia to advocate for their communication needs during social conversation.

Aphasia Clubs

The purpose of the "Aphasia Club" model is to target social communication while engaging in tasks/activities of daily living that include areas of interest specific to our participants. Persons with aphasia can stick with the same club each week or try out a different club each week. These groups reflect the interests of the participants and are developed weekly based on participant interest. Past clubs have included: book club, cooking club, music club, gardening club, movement club (i.e., outdoor activities such as basketball), technology club, photography club, and game club. Ultimately, these clubs are responsive to the requests, needs, and creative ideas of the participants.

Large Group Sessions

Daily Opening Sessions

Each day of the ICAP treatment period, the entire cohort meets together from 10:00-10:30 am. This coming together allows for natural social communication between PWAs, care partners, graduate student clinicians, and ICAP Directors/Clinical Supervisors. Each day, a different graduate student clinician facilitates the opening session to introduce the theme of the week, the subtheme of the day, and some conversational prompts to get warmed up for the day. Prompts often include a guided reflection about a communication goal that each PWA would like to focus on for the day. The daily schedule is also reviewed during this session.

Aphasia Community Group

The Aphasia Community Group meets Wednesdays from 11-12 and includes all of the individuals with aphasia, six graduate student clinicians, and one ICAP Director/Clinical Supervisor. This ongoing aphasia group is also open to members of the Missoula community who have aphasia. The clinicians lead this group to increase awareness of community events, current events, increase self-advocacy and wellness, and facilitate large group discussions. The purpose of this group is to improve living well with aphasia, increase generalization of strategies learned in individual session, and provide education and psychosocial support/well-being for the person with aphasia. The Aphasia Community Group occasionally hosts guest speakers or therapists from other disciplines. This group occurs at the same time as the Family Care Partner Psychoeducation & Communication Training Group so that both the persons with aphasia and their care partners have time to engage autonomously.

Community-Engagement & Recreational Outings

We arrange one weekly community outing to increase psychosocial well-being and to provide opportunities for the persons with aphasia to practice their communication skills in real-world settings with support from caregivers, clinicians, ICAP Directors/Clinical Supervisors, and members of the Missoula Community. Outings typically take place on Wednesdays from 2:45-3:30/4:00 pm. Clinicians prepare the PWAs for the outings each week and may have a communication task for them to complete during the outing. For the safety of all and to reduce liability, we ask participants to provide their own transportation to these outings. Often, families carpool to these outings, providing additional opportunities for social connection and friendship building. Directions are provided each week.

Daily Closing Sessions

Each day of the ICAP treatment period, the entire cohort meets together at the end of the day for the last 30 minutes. This coming together allows time for natural social communication between PWAs, care partners, graduate student clinicians, and ICAP Directors/Clinical Supervisors. Each day a different graduate student clinician facilitates the closing session to review the day's activities, discuss notable events of the day, and to facilitate guided reflection about the experience of participating in the ICAP. All participants have the chance to ask questions during this session.

Session Schedules

The ICAP currently takes place on Tuesdays through Fridays from 10:00 am through 4:00 pm for four weeks. Tuesday, Thursdays, and Fridays follow the same schedule, while Wednesdays have a unique schedule to accommodate the community-engagement/recreational outing and larger group sessions. We also host a group lunch on Wednesdays to bring all participants of the ICAP together. The BSAP ICAP evolves with the expanding evidence base, our experience, ongoing participant feedback, and our own ongoing data collection and analysis. Each year, we update the structure of our various treatment sessions to provide a comprehensive, novel experience to help families live successfully with aphasia. See table 5 for a summary of a sample ICAP weekly schedule.

Table 5. Sample Weekly BSAP ICAP Schedule

Tuesdays, Thursdays, & Fridays	**Wednesdays**
10:00-10:30 Opening Session	10:00-11:00 Opening Group Session & Aphasia Clubs
10:30-11:30 Individual Session or Small Group Session	

11:30-12:30 Individual Session or Small Group Session	11:00-1:30 Aphasia Community Group + Lunch 11:00-1:30 Family Care Partner Group + Lunch
12:30-1:30 Lunch Break	
1:30-2:30 Individual Session or Small Group Session	
2:30-3:30 Individual Session or Small Group Session	1:30-2:00 Prep for Community Outing
3:30-4:00 Closing Session	2:15-4:00 Community or Recreational Outing

Chapter 4: BSAP ICAP Implementation – Family Care Partners

While family care partners are not required to participate in the BSAP ICAP, we have found that the majority of our stroke survivors with aphasia have family or friends accompany them to portions of the ICAP. This section details the engagement of those family care partners who decide to participate.

Family Care Partner Pre- & Post-Treatment Assessment

BSAP ICAP Telehealth Screening & Interviews

Once families with aphasia have confirmed their enrollment in the ICAP, we schedule a 1-hour video-conference call (using Zoom) with the stroke survivor with aphasia and their family care partner(s) to discuss the ICAP details/logistics and answer any questions they may have before meeting us in-person.

Pre-ICAP & Post-ICAP Assessment

All participants with aphasia (and their family care partners) are scheduled for a pre & post-treatment diagnostic evaluation that takes place immediately before and after the ICAP. While the stroke survivor with aphasia is administered their pre/post-treatment assessment battery, we ask the family care partners to complete screening tools/outcome measures that are designed to assess their own well-being and quality of life as follows:

1. Perceived Stress Scale
2. The Family Aphasia Measure of Life Impact (FAMLI)
3. Geriatric Depression Scale or General Health Questionnaire-12 (GHQ-12)

Family Care Partner Psychoeducation & Communication Skill & Strategy Training Group

The Family Care Partner Psychoeducation Group meets once weekly for two and a half hours (Wednesdays from 11-1:30) for a total of four sessions during the ICAP. During these sessions, we provide lunch. Two graduate student clinicians and one ICAP Director/Clinical Supervisor lead all Family Care Partner Education Group sessions. Occasionally a licensed family counselor and her graduate student counselor-in-training also attend the education group sessions to build rapport and learn more details about each cohort's experience of living with aphasia.

The purpose of the Family Caregiver Education Group is to provide psychoeducation, communication training and communication skills and strategy use, and psychosocial support for our dedicated family care partners. All family care partners are invited and strongly encouraged to attend, but the caregiving experiences are not required for ICAP enrollment. For details about our rationale for not requiring caregiver participation, please read Off et al., (2019). Although attendance is not mandatory, most of our family care partners attend these group sessions regularly.

The didactic content of this group varies depending on the needs of each cohort of caregivers, but in general, topics include: aphasia, apraxia of speech, stroke, recovery processes, neuroplasticity, communication strategies, and caregiver resources. We provide group education through lecturing and experiential learning including demonstration, hands-on activities, and group discussions (Kolb, 2014).

The Caregiver Education Group conducted in a group setting to support peer learning and joint problem-solving opportunities consistent with recommendations made by Purdy and Hinderlang (2005).

Education Sessions

Introductions & Goal Planning

Group facilitators address the goals of the ICAP program and the goals that the family care partners have for the duration of the ICAP. A substantial portion of the first session is given to introductions, sharing stroke stories, and answering questions about the nature of the ICAP experience.

Stroke & Aphasia Education

Group facilitators provide information regarding stroke, stroke recovery and rehabilitation, neuroanatomy and neuroplasticity in relation to speech and language function, aphasia, and apraxia of speech. Care partners are provided a variety of written, video-based, and graphical materials to supplement their learning. Time is dedicated to answering questions that caregivers may have about the specific nature of their loved one's aphasia and/or apraxia of speech and the nature of recovery and rehabilitation.

Communication Strategy Training

Group facilitators address various compensatory strategies, and multimodal supportive communicative techniques used to help care partners acknowledge the inherent competence of the person with aphasia and used to help reveal that competence (Kagan, 1995; Kagan, Black, Duchan, Simmon-Mackie, & Square, 2001). During this session, specific and individualized communication skills needed to improve daily communicative exchanges with individuals with aphasia are discussed and practiced. Techniques for facilitating communication are demonstrated by the lead graduate student clinician, exemplified by videos, and embedded in didactic training.

Psychosocial Well-Being

Group facilitators target psychosocial aspects of caregiver well-being including a discussion of the Caregiver Bill of Rights (Horne, 1985) and extended family education and involvement. Care partners are encouraged to share experiences and strategies and to reflect upon their current knowledge, skills, and access to resources. Questions and/or concerns are fielded by graduate student clinicians and team leaders. Individualized continuing education and resources that participants may need once the ICAP ends are also provided. Clinicians present a broad overview of resources that are available to participants once they leave the ICAP (e.g., published materials, national organizations, online resources, and telehealth options).

Family Caregiver Counseling Group (as described in Off et al., 2019)

The Family Caregiver Counseling Group is provided intermittently. When offered, the group meets twice weekly for an hour and a half each session for a total of eight sessions and twelve hours of treatment. The group is designed to serve 8-12 members. The group is led by a licensed family counselor and a graduate student counselors-in-training. The group takes place in a building separate from the ongoing ICAP intervention provided to the individuals with aphasia, creating beneficial boundaries for space, privacy, and confidentiality. This separation of space provides an exclusive focus on the care partners themselves. Speech-language pathology team members are deliberately not present to further promote privacy and confidentiality. Participation in the counseling group is voluntary and continuous attendance is encouraged. Please read Off et al (2019) for details.

Additional ICAP-Provided Family Care Partner Opportunities (as described in Off et al., 2019)

A number of other caregiver-centered opportunities are made available by the cohort-based nature of the ICAP including: (1) daily opening/closing group meetings; (2) lunch breaks; (3) weekly hosted lunches; (4) weekly community and/or recreational outings; and (5) an end of ICAP social event. Collectively, these ICAP-provided care partner experiences provide numerous opportunities for building relationships, increasing group cohesion, and encouraging social communication between all participants of the ICAP. See Off et al., (2019) for a complete description of these experiences.

Family Care Partner-Initiated Activities (as described in Off et al., 2019)

While the ICAP provides numerous structured opportunities for family caregiver interactions, education, counseling, and socialization, family care partners also report that they arrange a number of experiences on their own while they are in Missoula for the ICAP. These experiences have included walks to the counseling group, coffee outings, breakfasts, lunches and dinners, lodging in proximity to one another, and shared recreational activities. Collectively, these experiences create and sustain cohesiveness, foster a sense of unity and care, and allow family care partners the opportunity to build on meaningful relationships that frequently persist once the ICAP concludes.

Chapter 5: BSAP ICAP Implementation - Program Debriefing

Once ICAP treatment and post-ICAP treatment assessment has been completed, a final family meeting is scheduled. These final debriefing sessions include the stroke survivor with aphasia and their family care partner(s), the graduate student clinician, and the ICAP Director or Clinical Supervisor. Debriefing sessions are typically scheduled for one hour; however, in some cases, these sessions may last up to 90 minutes. The entire debriefing session is directed towards the stroke survivor with aphasia. All materials are created to be aphasia-friendly. The graduate student clinician leads the session, with the supervisor present to ensure all information is presented accurately in an aphasia-friendly manner, and to answer any questions that the graduate student clinician is not comfortable answering.

Program debriefing sessions include:

1. A summary of progress including pre- and post-ICAP assessment performance, a review of goals and progress made towards those goals, and a discussion about the family's perspective of progress. A formal written Summary of Progress report is accompanied by an aphasia-friendly Report Card, summarizing the progress made with aphasia-friendly graphs and charts.
2. A discussion of an individualized home program created for the family along with strategies/resources for preparing for life after the ICAP.
3. A discussion of any recommendations for future therapy and/or referrals.
4. Open ended discussion to answer any remaining questions that the family may have.

Chapter 6: BSAP ICAP Administrative Logistics

Developing the PWA ICAP Cohort

We enroll a cohort of eight families living with aphasia for each ICAP session. We have found that eight families is the optimal number for running a cohesive program. This number of participants works for a number of reasons: (1) conversation groups of 2-4 participants are easy to arrange; (2) two groups of four work well for larger group sessions; (3) two clinical supervisors can adequately and appropriately supervise eight student clinicians according to American Speech-Language-Hearing Association (ASHA) standards (i.e., one supervisor is responsible for supervising four graduate student clinicians); and (4) a large group of eight patients is manageable and cohesive. We have also found that this size of a cohort allows for friendships to develop naturally and provides flexible social interactions over the four weeks of treatment.

An even number of participants allows for strong matching strategies for each cohort. That is, we strive to ensure that no person with aphasia feels like the "odd man out". Our application and enrollment process has been developed to create a cohesive and meaningful experience for each family. We strive to balance our cohorts based on a number of variables including: (1) current access to ongoing aphasia therapy and/or resources at home; (2) previous intensive aphasia therapy experiences; (3) current rehabilitation needs; and (4) fit of persons with aphasia and their care partners within the specific cohort (i.e., age, aphasia severity/type, educational/vocational background, and/or hobbies and interests).

ICAP participants may apply for repeated BSAP ICAP experiences. While we do not officially restrict the number of times a family may participate in the ICAP, our primary mission is to serve as many families in need as possible.

The ICAP Application & Enrollment Process for Families Living with Aphasia

Our mission is to provide high-quality, evidence-based, financially accessible services to as many families living with aphasia as possible. Our application process opens during late summer or early fall each year (approximately 10-12 months before the next scheduled ICAP session).

We begin the application process with public announcements of the upcoming ICAP session information. We post announcements on social media, send emails to previous participants, physicians, community-based speech-language pathologists and other healthcare professionals, and national and international colleagues, and update our website. We are an affiliate of the National Aphasia Association, which also provides information about our program.

Once we announce the upcoming ICAP, we activate a link to an online application through a web-based system called Submittable (www.submittable.com). The application can be completed by the person with aphasia, a care partner, or a healthcare professional. We leave the application link open until the first week of March each year. The application link becomes inactive at that time, thus closing the application period.

Once the application system is inactive, we download the applications as individual PDFs that can be scanned and uploaded into our electronic medical record (EMR) system. We also export aggregate application data from the Submittable system into an Excel document. Our university clinic currently pays

a yearly subscription for Submittable to support a variety of clinical applications. This application system is HIPAA-compliant and allows for easy access to the applications for the clinical team.

The ICAP Directors review each application that has been submitted according to the processes discussed above in "Developing the PWA ICAP Cohort". Eight families are selected to be invited to the ICAP. An invitation email is sent to the "invited" participants. The remaining applicants are placed on a waiting list and sent an email that describes the process for the waiting list.

Once a family receives an invitation to the ICAP, the steps are as follows: (1) reply to the email to confirm enrollment; and (2) complete a second Submittable-based document that confirms enrollment, collects information about additional services needed during the ICAP (i.e., physical therapy, occupational therapy, campus-based gym membership, lodging, etc.). Once this information is obtained, families are directed to the Clinic Director for scholarship information and procures for paying the non-refundable program fee of $350. We have found that a program fee is required to ensure commitment to the ICAP. Because we must be able to ensure a clinical experience for our graduate student clinicians, it is necessary for us to fill all eight ICAP slots. After a few years of modifying the non-refundable program fee amount, we have found that $350 is enough of a financial commitment to ensure that the family attends the program. We have also found that having a wait list is essential to the viability and success of the ICAP program. It is not uncommon for a family to drop out of the ICAP shortly before the ICAP session begins.

ICAP Tuition

Staffing & Associated Human Resources Costs

Speech-Language Pathologists (licensed, certified)

A minimum of two nationally-certified, state-licensed speech-language pathologists are needed to provide training, supervision, and mentorship to eight graduate student clinicians during the ICAP. Currently, the ICAP Directors and/or Clinical Supervisors fill these supervisory positions. The ICAP Directors are paid a stipend based on their university salary base during the ICAP. Clinical Supervisors are hired as clinical adjunct faculty and are paid based on their experience level. Student tuition dollars (i.e., dollars associated with graduate student clinicians being enrolled in the clinical practicum) support the funding of these two summer salaries.

Incidental/Material Costs

Space & Scheduling Logistics with DeWit RiteCare Speech, Language, & Hearing Clinic

ICAP Space Logistics

During graduate student clinician orientation for the ICAP we use one large classroom for training the eight graduate student clinicians. Graduate student clinicians also have access to their own workspace (i.e., two graduate student workrooms, a small classroom, the BRAIN Lab) and various clinical spaces in which to work independently or in groups.

During the pre- and post-treatment assessment period, 2-3 clinical rooms are needed. Two to three assessment sessions take place at one time (each one supervised by one ICAP Director or one Clinical Supervisor). These rooms must be large enough to accommodate individuals who use a wheelchair. Typically, we have the stroke survivor with aphasia and their care partner(s), one ICAP Director or Clinical Supervisor, and two student clinicians in the assessment room. We ask the care partner(s) to step out

once the interview/initial intake portion of the assessment is over and the formal assessment procedures begin. Our treatment rooms have video recording and remote observation capabilities and/or an observation window. Care partners are encouraged to observe.

During the ICAP treatment period, a minimum of six clinical rooms (four small and two large) are needed to deliver four individual treatment sessions and two small group sessions simultaneously. For appropriate supervision, each of these rooms has a video observation system to allow the supervisor remote supervision (from an office computer). A large classroom is also used for opening and closing sessions to accommodate a minimum of 25 people (i.e., eight PWAs, eight care partners, eight graduate student clinicians, and two ICAP Directors/Clinical Supervisors). This classroom is equipped with teaching capabilities (i.e., computer, projector, whiteboard, etc.) and modifiable desks and chairs. This classroom is also used for some of the Aphasia Clubs, the Aphasia Community Group, and for hosted lunches. We have found that our families like to use this classroom for their "on their own" lunches as well.

We currently have a fully operational kitchen in our department. During the ICAP, this kitchen is used for some of the Aphasia Clubs (e.g., gardening, cooking), for hosted lunch food set up, and for individual and/or conversation groups that have a cooking/eating focus.

BSAP ICAP Publications

Griffin-Musick, J. R., Jakober, D., Sallay, A., Milman, L., & Off, C. A. (2021). Cognitive-linguistic outcomes from an intensive comprehensive aphasia program implemented by graduate student clinicians. *Aphasiology*. https://doi.org/10.1080/02687038.2021.1937920

Griffin-Musick, J. R., Off, C. A., Milman, L., Kincheloe, H., & Kozlowski, A. (2020). The impact of a university-based intensive comprehensive aphasia program (ICAP) on psychosocial well-being in stroke survivors with aphasia. *Aphasiology*. https://doi.org/10.1080/02687038.2020.1814949

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Off, C.A., Leyhe, A.A., Baylor, C.R., Griffin-Musick, J.R., & Murray, K. (2022). Patient perspectives of a university-based Intensive Comprehensive Aphasia Program (ICAP) for stroke survivors with aphasia, Aphasiology, ahead of print (EPub 12/16/22), DOI: 10.1080/02687038.2022.2153327

Off, C.A., Griffin, J.R., Murray, K.W., and Milman, L. (2019). Interprofessional caregiver education, training, and wellness in the context of a cohort model for aphasia rehabilitation. *Topics in Language Disorders, 39*(1). DOI: 10.1097/TLD.0000000000000171

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