PH4800: Final Program Evaluation Plan

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Executive Summary

The Persons with Aphasia Training Dogs Program (PATD) is a program designed to enhance the well-being of people with aphasia (PWA) through teaching participants to train dogs with hand gestures. Along with enhancing well-being, the program aims to improve skill acquisition, self-confidence, and social engagement. Program activities include weekly training sessions with participants and dogs over 5 weeks, focusing on one obedience skill per week. Training involves reviewing skills, demonstrations, and participants performing the procedure with feedback from program staff. The program utilizes positive reinforcement for dog training. The program is currently in the planning stage and has not yet been implemented. It had a proven track record of feasibility based on previous testing, and it is grounded in evidence.

The purpose of this evaluation is to assess how effectively the PATD program reaches its goals of improving quality of life, confidence, and executive functioning. The evaluation also aims to evaluate program adherence, participant engagement, and the usefulness of program resources to inform future implementation.

The evaluation has two parts: process evaluation, which evaluates program implementation, and outcome evaluation, which evaluates the program's impact on participant well-being. The focus areas and evaluation questions were designed to guide the evaluation of the program in an organized and understandable way. They are listed below.

Process Evaluation:

- Program adherence
    - How many sessions did the participants attend during the program's implementation period?

    - What are the procedures for recruiting participants, and are they being implemented effectively?
- Program engagement
    - How well are the training sessions understood by participants?
    - To what extent are the participants interacting with the dogs and the program staff?
- Effectiveness of program resources
    - How useful are the provided lesson plans and instructional videos for supporting participants during their skills practice?

Outcome Evaluation:

- Overall quality of life increases
    - Do participants see a significant change in quality of life at the completion of the program?
    - Do participants see a significant change in confidence after stroke at the completion of the program?
    - Do participants see a significant change in executive functioning ability at the completion of the program?
    - Do participants see a significant change in psychosocial well-being at the completion of the program?

The evaluation uses a mixed-methods approach combining the process and outcome evaluation. The process evaluation uses both quantitative and qualitative observational data to understand how well the program is implemented. The outcome evaluation uses quasi-experimental pretest-posttest design with a comparison group to understand changes in participants' quality of life, confidence, executive function, and psychosocial well-being. Data

collection includes quantitative tools and qualitative surveys and interviews. Analyses involve descriptive statistics, t-tests, ANOVA tests, and thematic coding.

Program Selection

The PATD program is a program for adults with aphasia to train dogs using hand gestures, with goals to increase participant self-confidence and evaluate efficacy of the program's operations for further implementation. Program activities were developed by a speech language pathologist with experience with both dogs and populations with aphasia. Participants had the option of using verbal commands when training dogs, but all were required to use hand gestures. The goals of the PATD program are to enhance the well-being of individuals with aphasia by using canine-assisted therapy to improve skill acquisition, self-confidence, and social engagement. Key objectives include evaluating the feasibility and impact of dog training as a therapeutic activity, developing standardized aphasia treatments for clinical settings, improving quality of life through new skills and dog interactions, and gathering preliminary data to support future large-scale clinical trials.

Evaluability Assessment

We used an evaluability assessment to evaluate the basis and plan for this program by examining the program intent, logic model, program plausibility, and data accessibility. The strategies we used to obtain this information were reviewing programmatic materials, reviewing goals and outcomes to determine if they are realistic and measurable, identifying available data, collection tools, and monitoring systems, and assessing if program goals and objectives are realistic or need to be adjusted. The questions we asked were:

- Is the program logical, clear and rational?

- Are the program expectations realistic?
- What kind of data is accessible for us to conduct our evaluation?
- Who is involved in the program implementation?
- What other resources will we need to conduct our evaluation?

Evaluability Component	Evaluability Statement	Not at all true	Somewhat true	True	Not applicable
Program Intent and Logic Model	The program logic is clear, rational, and understandable.			They clearly define the aim of the program and the target population. There are clear feasibility and outcome measurement strategies outlined in the study plan.There is not a logic model but our team will be able to easily make one using the information we have.	
Program Intent and Logic Model	There are no apparent gaps.		The program relies on self-reported measures such as the Assessment of Living with Aphasia (ALA) and a satisfaction survey. Self reported measures can be biased.		
Program Intent and Logic Model	There is shared understanding among program leadership and staff about core elements of the program and the context in which the program operates.			This program was developed by program leadership in collaboration with a certified professional dog trainer and a speech pathologist. Program leadership will have a strong understanding of dog training techniques and aphasia. Program leadership also shares examples of themselves doing program components to make it easier for participants to understand. Overall, PI and program leadership are very knowledgeable and involved in the development and execution of this program.	
Program Plausibility	Program expectations are realistic.			The program expectations seem to be realistic because they account for human error in training the dogs. The program expects high retention and compliance rates above 80%. The program expects to have the dogs be able to cue 4 out of 5 trained obedience skills. There are several measurable outcomes described in the program.	
Data	Existing data		The hypotheses for this		

Accessibility	are valid, reliable, and readily available.		study were formulated based on the PI's experience implementing this program in other settings. There is not comprehensive data regarding the effectiveness of these initial programs, so this program aims to generate that data.		
Data Accessibility	New data can be feasibly collected.			Data on recruitment, retention, and compliance rates will be collected. Dog training competency will be assessed using the PI-adapted version of the Pet Partners© Animal-Handler Evaluation. Psychosocial well-being will be assessed using the ALA. Program satisfaction will be measured by ALA-modeled qualitative spoken interview. Additional assessments include Confidence after Stroke Measure and the Behavioural Assessment of Dysexecutive Syndrome. These evidence-based assessments will lead to reliable data collection.	
Data Accessibility	There are systems in place to track performance measures			Systems tracking performance measures are built into the program, such as the ALA.	

Table 1a: Evaluability Assessment

The evaluability assessment of the program shows that its logic is clear, rational, and understandable, with a good aim and target population. We came to this conclusion by thoroughly researching the program, completing Table 1a, and using strategies we previously mentioned. While a logic model is not currently in place, the available information will allow for the team to develop one. The program demonstrates consistency. The only identified gap is that it relies on self-reported measures such as the Assessment of Living with Aphasia (ALA) and a satisfaction survey, which could introduce bias. It is clear that program leadership shares a strong understanding of the program's core elements, which were developed by the PI in collaboration with a certified professional dog trainer and a speech pathologist. Program leadership is knowledgeable and actively engaged, providing personal demonstrations of dog

training activities to enhance participant comprehension. The program's expectations are realistic, accounting for human error in dog training and aiming for reasonably high retention and compliance rates, with dogs expected to successfully perform four out of five trained obedience skills. Prior data on the effectiveness of this program is limited but this study is designed to provide comprehensive data. Data collection is feasible, with measures in place to track recruitment, retention, compliance, dog training competency, and psychosocial well-being through validated assessments such as the Confidence after Stroke Measure and the Behavioural Assessment of Dysexecutive Syndrome. Performance tracking systems, including the ALA, are integrated into the program, ensuring reliable and evidence-based data collection.

Overall, the evaluability assessment shows that this program is able to be evaluated and has all necessary components.

Identifying Interest Holders

There are many potential interest holders in this program. People/groups who are served or affected by this program include people with aphasia and families that live with individuals that are affected by Aphasia. People/groups who plan and implement the program include a principal investigator, speech pathologist, certified dog trainer, and the Pennsylvania SPCA. People/groups who might use evaluation findings are the Albert Einstein Healthcare Network, Eunice Kennedy Shriver National Institute of Child Health and Human Development, and the Pennsylvania SPCA. The group funding this is the sponsor: Albert Einstein Healthcare Network. People/groups who may be skeptical of the program and/or evaluation include animal rights groups and people with aphasia. We plan to involve interest holders in every step of the evaluation process, specifically catering to their individual wants and needs.

People with aphasia value the program for its potential to increase overall life satisfaction, self-confidence, and social connection. They want to know if they will be able to train dogs, if the program is accessible, and if it will positively impact their quality of life. They prefer qualitative data that reflects direct improvements in their daily lives. Success for this group is defined by increased quality of life and a meaningful bond with their assigned dog, with some hoping for continued contact. They anticipate that the program will teach them valuable skills, though some may doubt its effectiveness in improving their well-being. Respect for those who do not or cannot participate is also important.

Family members of people with aphasia prioritize the program's ability to improve their loved one's quality of life, particularly by increasing self-confidence and reducing social isolation. They want to know how successful the program is in achieving these outcomes, as measured by improvements in ALA scores. They prefer qualitative, observed data, such as narrative presentations from participant interviews, as this allows them to see the direct impact on their family members. Success for this group is defined by positive life changes for the person with aphasia, including increased confidence, social engagement, and potentially adopting a dog. They would likely use the evaluation results to understand the program's benefits and would prefer findings to be presented narratively through interviews or other qualitative methods.

The **Principal Investigator (PI)** aims to determine the feasibility and impact of the PATD program by assessing whether PWA can learn and implement positive reinforcement techniques to train dogs. Key outcomes include participant abilities, retention rates, program satisfaction, and overall well-being. The PI seeks to answer critical evaluation questions, such as identifying participant characteristics associated with recruitment, retention, compliance, and program acceptability, as well as understanding the program's impact on psychosocial well-being. To

measure success, the PI utilizes both quantitative and qualitative data. Primary assessment tools include the ALA to evaluate program effects on participant quality of life, the adapted Pet Partners Animal-Handler Evaluation to measure competence in dog training, and the Confidence after Stroke Measure to assess qualitative improvements. Additional data is gathered through the Behavioral Assessment of Dysexecutive Syndrome (BADS), retention and compliance rates, and participant satisfaction surveys (both spoken and written). Success for the PI is defined through measurable outcomes, including participant competency in dog training, retention and compliance rates of at least 80%, and high program acceptability and satisfaction as indicated by ALA scores and qualitative feedback. Significant improvements in psychosocial well-being further contribute to the program's success. The PI intends to use the evaluation results to determine whether the program is both effective and scalable. Findings will guide the PI's future program design by identifying factors that influence recruitment, retention, and compliance, ensuring optimal effectiveness. The results will also support hypotheses about the program's benefits, providing preliminary evidence to justify a larger-scale clinical trial with refined feasibility metrics and outcome measures. Ultimately, the PI's goal is to standardize aphasia treatments by developing protocols for implementing canine-assisted therapy in clinical settings.

A **speech pathologist** is concerned with the implementation and feasibility of the program that is designed for PWA. They want to ensure participant learning, in which PWA can effectively learn and apply the techniques in the training sessions. They are concerned with improving participants' psychosocial well-being and quality of life. They want to guide the program by identifying the right candidates for the program, engaging with the participants, and establishing measurable outcomes. They have a high aim for recruitment, retention, and compliance rates. To evaluate the program, they will use quantitative data, including the ALA, and qualitative data gathered from the interviews of participants to understand their perceptions

of the program. Success can be defined in a couple of ways, such as when a PWA can successfully cue a dog to perform the skills they have been practicing and when there is an improvement in a participant's psychosocial well-being and quality of life. The evaluation results will help determine how effective the program is and what could be modified to make the program more tailored to PWA. Adjusting the program to meet the needs of PWA and providing support where the participants need it is essential to the speech pathologist. They understand that if successful, the program can be implemented for future clinical trials. A speech pathologist will obtain a comprehensive data report, which will be discussed with other stakeholders regarding the evaluation findings.

A **certified dog trainer** is interested in the training methods that the PWA will use to teach obedience skills to dogs. The trainer cares about the well-being of the dogs and wants to ensure that the practices in the program foster a safe and humane environment for them while having an effective training session. Quantitative and qualitative data can be analyzed to measure the program's success. Quantitative measures include analyzing the participant's Pet Partners Animal Handlers evaluation scores and the retention and compliance rates to measure how well the training techniques were applied and if sustained over time. Qualitative measures are observing the training sessions to assess the interactions between the participant and the dog. The evaluation results could refine the program in areas that do not produce outcomes, such as the dog's behavior. They can also help the certified dog trainer learn more about which techniques are used and which are effective in producing positive behavior outcomes. The researchers will share their findings through a detailed report of the dogs' behavioral outcomes and a presentation that covers the effectiveness of the training techniques used.

The **Pennsylvania SPCA** cares about ensuring the dogs in the program are treated well, and that hand-gesture training is practical. They want to see if the training helps improve the

dogs' behavior and increases their chances of adoption. They'll look at quantitative data like adoption rates and behavior changes and qualitative observations of how the dogs and participants interact. Success for the Pennsylvania SPCA means the dogs are well-trained, show positive behavior changes, and the program strengthens connections between animal welfare and therapy. The results will help improve training methods and possibly expand the program. They prefer to see the findings in a visual presentation with photos, videos, and a short report.

The **Albert Einstein Healthcare Network**, as a sponsor, is focused on how this program helps people with aphasia gain confidence and improve their communication skills. They want to know if working with the dogs benefits participants emotionally, socially, and cognitively. To evaluate this, they'll use quantitative data, like before-and-after confidence surveys, and qualitative data, like patient stories and therapist feedback. Success for the Albert Einstein Healthcare Network means participants feel more confident and show real progress, and the program is something that could be expanded. The results will help them decide whether to continue or grow the program. They prefer the information to be shared in formal reports, presentations, or short summaries for hospital leaders.

The **Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)** is interested in how this program affects brain function and recovery for people with aphasia. They want to know if training dogs with hand gestures helps with communication, motor skills, and overall well-being. They will focus on quantitative data, like cognitive tests and quality-of-life scores, and qualitative data, like participant experiences and therapist observations. Success for this interest holder means there's clear evidence that this method works and could be used in other therapy programs. The results could lead to more

research and funding. They prefer to share their findings through research papers, conferences, and official reports.

Animal rights groups are mostly concerned with the well-being of dogs in the study, ensuring that all dogs are treated fairly and kindly, with no harm done. They want to evaluate whether all dogs are being treated ethically, whether any unusual practices regarding animal safety are being done, and if the dog trainers involved are certified. These groups prefer qualitative data regarding study's methodology, specifically the adherence to ethical guidelines. They also would like quantitative data regarding the number of dogs in the program and number of certified dog trainers to ensure dog safety is being prioritized. These groups would define the program as successful if it is planned with dog safety as a priority, and if the program sees 100% of dogs completing the program without any harm done. They require clear communication in the form of a comprehensive report at the beginning of the program, detailing how the dogs will be treated and the certifications of the trainers involved as well as data on the number of dogs completing the program unharmed.

Overall, engagement of interest holders is very important in this evaluation and the stakeholders involved in this program have clear wants, needs, and interests.

Assessing Team Evaluation Capacity.

Assessing evaluation capacity is important because it provides essential context regarding the experiences, knowledge, and skills of individuals on the evaluation team. This understanding helps to determine how effectively the team can conduct evaluations, interpret results, and make decisions based on those findings. By assessing evaluation capacity, we can identify potential gaps that may be addressed through targeted research or support. We focused

our evaluation on the capacity of our evaluation group members. The questions we answered in our evaluation of our own capacity were:

- How knowledgeable is the evaluation team about the different evaluation approaches and methods?
- How much experience does the evaluation team have with developing evaluation tools and templates for use by the organizations?
- How much experience does the evaluation team have with analytical and facilitation skills?
- How might the cultural identities present in the team influence the evaluation?

We also used two tables to reflect and measure our collective evaluation capacity. These tables provided additional insights into our strengths and challenges as a team, while also encouraging us to consider our own thoughts and feelings as well as cultural differences. These tables, 1b and 1c, are found below.

Team Evaluation Capacity	**Beginner** Has basic knowledge and limited experience	**Intermediate** Has practical and applied experience	**Expert** Recognized as an authority
How knowledgeable is the evaluator, or evaluation team, about the different evaluation approaches and methods?	-Background from CDC guidelines and Frameworks. -Classroom-setting practice in and learning about evaluations.		
How much experience does the evaluator, or evaluation team, have with developing evaluation tools and templates for use by the organizations?	-Team's framework in based on CDC's Program Evaluation Framework Action Guide, 2024, rather than being self-developed. -Some experience with non-professional data presentation.		
How much experience does the evaluator, or evaluation team, have with analytical and facilitation skills?		-Experience with secondary data analysis and presenting findings. -Experience organizing research efforts and team management.	

Table 1b: Evaluation Capacity Assessment

Reflection Question	Relevant Step, Standard, or Cross-Cutting Action	Reflection Note
How might my cultural identity influence the evaluation?	Engage collaboratively - work together to address gaps in knowledge. Learn from and use insights - utilize knowledge about aphasia to further inform the evaluation. Advance equity - encourage diverse perspectives and uncover health inequities.	No team members have communication disabilities, so we plan to compensate for this in relation to the program by researching the experience of those with aphasia.
What am I seeing, noticing, or feeling?	Independence and objectivity - evaluation team must remain impartial observers. Rigor - ensure that evaluation is rigorous and does not introduce bias from the evaluation team.	After working through the program, we feel that it will be successful.

Table 1c: Evaluation Capacity Reflection

From these questions and tables, we discovered that as a team, our knowledge of evaluation is primarily based on the CDC guidelines and frameworks. We also have some knowledge from classroom based learning. The team has limited experience with developing evaluation tools and templates, and we will be referencing the CDC's Program Evaluation Framework Action Guide to learn how to make these. We also learned that our team has some experience with secondary data analysis and presenting relevant findings to the intended audiences. In reference to cultural identities, we found that no team members have experience with communication disabilities. We plan to compensate for this and address this gap by researching the experiences of those with aphasia in relation to the program and learning about their experiences in order to be better informed. We will utilize the cross-cutting action of engaging collaboratively by learning from the insights we gain from this research to make us more prepared for evaluation. We also plan to limit bias towards success in the program by remaining objective and ensuring rigor in the evaluation process. Overall, we feel capable of successfully evaluating this program.

Statement of Need

The health issues addressed by the PATD program are the negative psychosocial consequences of Aphasia, an acquired language impairment that is often the result of a stroke.

The population that this intervention is targeting is adults over 21 years old with aphasia who live in Pennsylvania. Aphasia is a language disorder that affects an individual's ability to communicate. This condition is often caused by strokes, and it impacts the ability to communicate and remember words. Individuals who have aphasia remain mentally alert and their intelligence isn't affected (American Stroke Association, 2025). According to the National Aphasia Association, there are at least 2,000,000 people in the USA with aphasia. This represents a significant portion of the population, approximately 0.6 percent (National Aphasia Association, 2024). There are approximately 180,000 new cases of aphasia each year, affecting 1 in every 272 Americans (Le et. al., 2024). Although this health issue has significant effects on a large portion of the population, according to a survey on aphasia awareness, 84.5% of respondents had never heard of the disorder. This population is significantly affected by the disorder and there are many consequences that they face because of it, ranging from physical to psychological effects.

Aphasia can significantly impact communication, making it difficult for individuals to speak, read, or write. Common challenges include using the wrong words, forgetting words, and struggling to express wants and needs. These difficulties can lead to losing connection with others, as individuals may struggle to understand what others say, follow directions, or process conversations involving multiple people (Davies et. al., 2024). Additionally, they may have trouble picking up on jokes or puns, which can further hinder social interactions. Beyond communication barriers, aphasia can also create obstacles in accessing healthcare, as individuals may find it challenging to express symptoms, understand medical instructions, or

navigate healthcare systems effectively, potentially leading to delayed treatment and poorer health outcomes. The emotional and psychological toll of aphasia is profound, often resulting in feelings of lost control, isolation, depression, and difficulties with daily activities (American Stroke Association, 2025). Furthermore, the financial burden can be overwhelming, as people with aphasia, even within the group of stroke survivors, often experience lower incomes due to the high costs of care and the disability that comes with the condition. This financial strain can exacerbate the challenges they face in accessing both healthcare and necessary services (Jacobs & Ellis, 2024).

While the main risk factor for aphasia is experiencing a stroke, other causes that increase a person's risk for developing aphasia include brain injuries and tumors, head injuries, and degenerative neurological diseases. Aphasia is more prevalent in older individuals because as you age, the risk of a stroke increases. According to Le et al., “Individuals aged 65 or younger have a 15% chance of being affected, whereas those aged 85 or older have a 43% chance of developing the condition” (2024).

Reducing the consequences of aphasia involves both stroke prevention and supportive interventions. While there is no guaranteed way to prevent a stroke, specific lifestyle changes can lower the risk. Exercising according to a doctor’s recommendations, maintaining a healthy diet with reduced sodium intake, quitting smoking, and keeping a healthy weight are essential preventive measures. Additionally, monitoring cholesterol, blood sugar, and blood pressure levels and consulting a doctor on managing them can further reduce stroke risk. Beyond prevention, therapies and support systems play a crucial role in improving the quality of life for individuals with aphasia (The Aphasia Library, 2024). For example, the Aphasia Training Dogs (PATD) Program uses positive reinforcement dog training to help participants develop new skills, build confidence, and enhance social engagement through interactions with family or shelter dogs. Furthermore, social support and community programs provide individuals with aphasia

opportunities for inclusive communication, reducing isolation and improving overall well-being (The Aphasia Library, 2024).

Comprehensive Program Description

The PATD program is a program for adults with aphasia to train dogs using hand gestures, with goals to increase participant self-confidence and evaluate the efficacy of the program's operations for further implementation. Benefits to stroke survivors, as found by Carlsson et. al, from horseback riding included a bond with the horse due to the necessity of non-verbal communication and an increase in self-efficacy and thus emotional wellness from the program (2018). PATD targets both aspects of these results usings dogs with PWA. Program activities were developed by a speech language pathologist with experience with both dogs and populations with aphasia. Participants had the option of using verbal commands when training dogs, but all were required to use hand gestures. The goals of the PATD program are to enhance the well-being of individuals with aphasia by using canine-assisted therapy to improve skill acquisition, self-confidence, and social engagement.

The PATD program relies on several key inputs to support its implementation. Family and shelter dogs serve as the primary participants alongside PWA. A certified dog trainer provides expertise in training techniques, while a speech pathologist contributes to communication support. Speech pathologists excel in their ability to serve as communication partners for PWA, in large part due to their specific training to approach and bridge communication barriers (Detsaridou et. al, 2023), and their array of skills serve well to develop a relationship with and growth within PWA (Lawton et. al, 2018). The program is guided by a principal investigator overseeing its execution. Essential resources include the creation of training materials, lesson plans, and instructional videos to facilitate structured learning. Financial support comes from the Eunice Kennedy Shriver National Institute of Child Health and

Human Development (NICHD), ensuring sustainability. Finally, hospital space is provided to host weekly training sessions, creating a dedicated environment for program activities.

The program's activities include recruiting participants, weekly training sessions, skills practice training, and program evaluation. The program wants to ensure candidates qualify for the program, so they must meet specific criteria. The PI, the speech pathologist, and the certified dog trainer are looking for eligible candidates. Candidates must be clinically diagnosed with Aphasia and not another neurological impairment or disease. They must have some linguistic and cognitive capacities to understand the program's purpose and want to participate on their own free will. Anyone 21 years and up is eligible. The participants and the dog meet with the PI and speech pathologist weekly for 75 minutes for 5 weeks for the training sessions. Each week, the participant and the dog work on one specific obedient skill. The training sessions begin with reviewing what was learned from the previous session to reinforce the behavior. The PI is there to demonstrate the behavior and then have the participant model the same procedure while receiving feedback or reinforcement from the trainer.

There are multiple steps for one skill, and to move on to the next step, the participant must successfully have five trials at the current step. For each behavior, a hand gesture is used. The skills practice training encourages the participant and the dog to practice the skill independently during the week. The participant is provided with the lesson plan and a copy of a video of the PI and a dog doing the behavior if they need a refresher or assistance during this time. They are encouraged to do three sessions with the dog weekly to reinforce the skills they have been working on. Evaluating the program is essential to see how effective it is and what impact it has on our target population.

The short-term outcomes of this program are that participants will gain hands-on experience using positive reinforcement techniques to train dogs in basic obedience. In the

early stages, they will focus on skills retention and successfully teaching dogs essential skills, with most mastering four out of five key training techniques. We want to evaluate the retention and compliance rates of the program's activities, to see if the program is effective. (The Aphasia Library, 2024)

As participants continue and complete the program, the impact on their lives will extend beyond their ability to train dogs. By teaching PWA skills using hand gestures rather than speech or verbal commands, this program is accessible and creates opportunities for PWA to adapt to life with differing communication abilities. They will begin to see positive changes in their daily routines, feeling more engaged in activities and social interaction. Communicating with others in daily life may become easier, and they may feel more confident in expressing themselves in various ways. The program will also help strengthen cognitive skills, such as problem-solving, decision making, and adapting to new situations, reinforcing their ability to navigate challenges in everyday life. In a similar study done with participants with aphasia, skills training resulted in significant quality of life improvements in part due to increased self-confidence (van der Gaag et. al, 2005), supporting this expected outcome.

Over time, these experiences will contribute to a greater sense of independence and increase participants' overall well-being. By fostering the practical skills of dog training in an adapted, accessible environment, the program is aimed at empowering people with aphasia to lead more fulfilling and connected lives. As found in a scoping review by McSween et. al (2024), animal-assisted services facilitate PWA improvement across physical and emotional ranges. The principal investigator (PI) and all program staff collaborate closely to provide personalized care and guidance, ensuring that each participant receives the tools and encouragement necessary to thrive, during and beyond the program. Ultimately, the goal of this program is to help individuals with aphasia connect with themselves and their communities, promoting long-term positive psychosocial outcomes.

Context and Stage of Development

This program is currently in the planning stage. Program activities have not been implemented or tested yet, emphasizing the need for a thorough evaluation before implementation to ensure that it is accessible, informed, and effective.

The evaluation team used the CDC's Program Evaluation Framework Action Guide to determine the contextual factors that could impact the program (Centers for Disease Control and Prevention, 2024). The findings from this suggest that the participants in this program, people with aphasia, have a personal stake in its success as it has the potential to positively improve their lives. The participant group will be diverse, with participants of various ages, genders, and income levels, bringing different perspectives to the program. The Principal Investigator (PI) holds most of the decision-making authority, often consulting with other professionals and program staff to make sure well-rounded choices are made. While participants don't have a direct role in planning or implementing the program, their feedback is collected to help shape future decisions. The program has a proven track record, having been tested previously for feasibility, and is based on evidence. Some strengths of the program include its structured design, clear outcome measurements, and proven feasibility. However, there are potential challenges, such as the reliance on self-reported data, which could introduce bias into the results. Power within the program is mainly held by the PI, but participants are encouraged to provide input on their sessions and suggest adjustments if needed. One limitation of this program is that only people with aphasia are eligible, which may exclude individuals with other conditions who could also benefit from the program. The organization mission supports evaluation based on the several outcome measures they have in place to see the effectiveness of the program. They have many different things they want to accomplish with this program such as improving the psychosocial wellbeing of PWA, learning positive reinforcement techniques, having high retention and satisfaction rates, and disseminating the

program across multiple settings. Evaluation will help determine if the goals are being met and if they are not they will have to be adjusted. These contextual factors will influence how the program runs and its outcomes, and should be taken into account when planning for implementation.

Logic Model

The evaluation team created a logic model for the PATD program to provide a clear framework for understanding the relationships between program inputs, outputs, outcomes, and external factors. This model serves as a tool for mapping how the program will work when implemented and is shown below in Figure 2a.

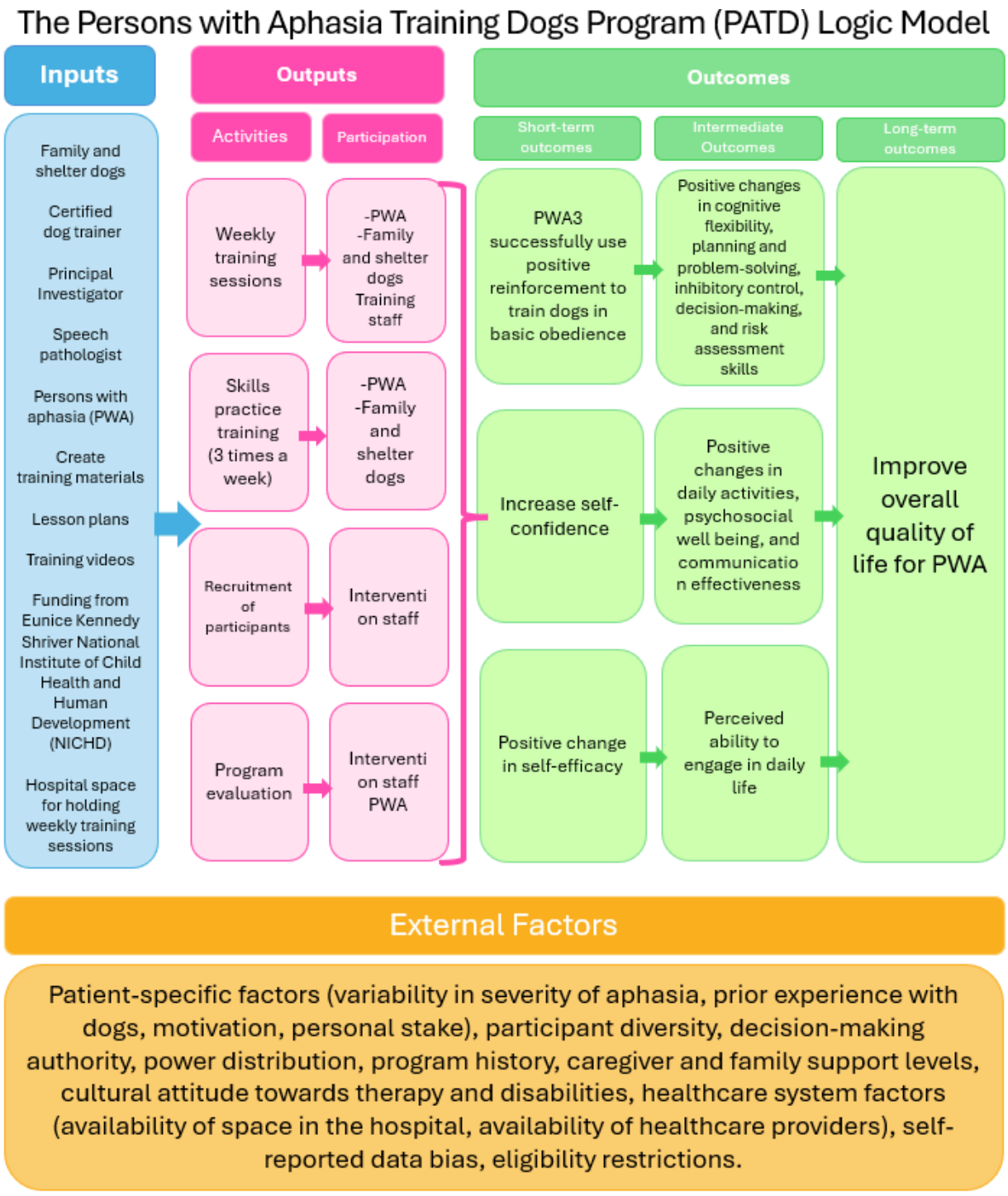

Figure 2A: Logic Model

Program Selection

The purpose of our overall evaluation is to evaluate how well this program achieves its goals of increasing PWA quality of life. As interest holders such as family members of PWA and the Albert Einstein Healthcare Network are primarily concerned with the effectiveness of this program as related to improvement in aphasia-affected areas of life, such as self-confidence and better building of relationships via improved communication, we will conduct an outcome evaluation. For those interested in fidelity, such as the Primary Investigator (PI), we will conduct a process evaluation. These evaluations will have focus areas in program adherence, program engagement, effectiveness of program resources, and overall quality of life increases, as seen in Table 2.

Process Evaluation

The focus areas of the process evaluation will be program adherence, program engagement, and effectiveness of program resources. We will use an observational study design. The evaluation questions we will be asking to understand these focus areas are:

- P1. How many sessions did the participants attend during the program's implementation period?
- P2. Are the procedures for recruiting participants being implemented effectively?
- P3. How well are the training sessions understood by participants?
- P4. To what extent are the participants interacting with the dogs and program staff?
- P5. How useful are the provided lesson plans and instructional videos for supporting participants during skills practice outside sessions?

Outcome Evaluation

The focus area of the outcome evaluation is overall quality of life increases. We will use a quasi-experimental pretest-posttest with a comparison group to evaluate this. The evaluation questions we will be asking to understand this focus area is listed below:

- O1. Do participants see a significant change in quality of life at the completion of the program?
- O2. Do participants see a significant change in confidence after stroke at the completion of the program?
- O3.Do participants see a significant change in executive functioning ability at the completion of the program?
- O4. Do participants see a significant change in psychosocial well-being at the completion of the program?

Evaluation focus	**Evaluation questions**	**Process**	**Outcome**
Program adherence	How many sessions did the participants attend during the program's implementation period?	X	
	What are the procedures for recruiting participants, and are they being implemented effectively?	X	
Program engagement	How well are the training sessions understood by participants?	X	
	To what extent are the participants interacting with the dogs and the program staff?	X	
Effectiveness of program resources	How useful are the provided lesson plans and instructional videos for supporting participants during their skills practice?	X	
Overall quality of life increases	Do participants see a significant change in quality of life at the completion of the program?		X
	Do participants see a significant change in confidence after stroke at the completion of the program?		X
	Do participants see a significant change in executive functioning ability at the completion of the program?		X
	Do participants see a significant change in psychosocial well-being at the completion of the program?		X

Table 2: Evaluation Focus, Evaluation Questions and Type of Evaluation Question

Evaluation Plan Matrix with Analysis

Evaluation Focus Area	Evaluation Question	Evaluation Type	Indicator	Measure	Data Collection Method	Data Source	Data Analysis
Program adherence	**How many sessions did the participants attend during the program's implementation period?**	Process	Attendance data	Number of participants who attended a session, number who attended four out of five training sessions	A member of program staff will log what participants were present at each training session in a Google Sheet	The data will be collected based on the number of people attending each session.	Descriptive statistics (frequencies, percentages)
	What are the procedures for recruiting participants, and are they being implemented effectively?	Process	List of all recruitment measures with detailed description. Data about how many participants are recruited through each measure.	Descriptions of recruitment measures and number of people recruited per recruitment method	In a Google Sheet, there will be a list of all recruitment procedures, in which the number of participants the procedure garnered are noted.	A one-question survey will be administered at the first training session. This survey will consist of a multiple choice question listing all recruitment procedures and asking participants which recruitment measure they heard of the program through.	Qualitative (list of recruitment procedures) Descriptive statistics (frequencies of which measures are recruiting how many people)
Program engagement	**How well are the training sessions understood by participants?**	Process	Participants level of understanding of training session content	Percentage of correct responses 3/3: complete understanding 2/3: partial understanding 0/3, 1/3: poor understanding	Three question survey	A three question survey will be administered, asking participants to demonstrate cues and the timing of reward.	Descriptive statistics (modex percentage of participants scoring 3/3, 2/3, and 0–1/3 to assess understanding)

	To what extent are the participants interacting with the dogs and the program staff?	Process	Participant participation in the activity.	Percentage of participants who ranked their participation at a 5. Presence of positive comments about participation.	Participants will have the option to answer the question verbally, with a gesture of fingers, or with cue cards. There will also be a partially optional section after the survey for notes about the session. The PI will be required to complete this section, while the participant may choose to or not.	A single question survey, asking "How much do you feel you've participated today?" with 1 being not at all and 5 being completely. Qualitative data will also be analyzed after the conclusion of the program from notes.	Descriptive statistics (mode, number of participants per option in Likert scale, percentage of total participants who responded per category -1/5 to 5/5) Qualitative (thematic analysis of open-ended notes from participants and PI to identify patterns in engagement, communication preferences, and interaction with dogs and staff)
Effectiveness of program resources	**How useful are the provided lesson plans and instructional videos for supporting participants during their skills practice?**	Process	Qualitative data from participant's feedback on the lesson plans and instructional videos gathered through surveys, assessing their usefulness.	Surveys will be taken every week after the session, with open-ended questions about how participants felt about the usefulness of lesson plans and instructional videos.	The data will be collected through weekly open-ended surveys, administered after each session, to account for the varying videos and instructions introduced each week.	The data will be gathered from participants through weekly surveys administered in person at the lesson location or online after each session.	Qualitative (Thematic Analysis)

Overall quality of life increases	**Do participants see a significant change in quality of life at the completion of the program?**	Outcome	Self-reported data addressing participants' perceptions of their progress toward "living well with aphasia."	Based on the data collected from the ALA questions, we will measure the change in ALA scores on the questions addressing living well with aphasia.	The ALA (Simmons-Mackie N st. al., 2013)	We will get this data from participant's answers to the questions in the ALA that address participants' progress towards "living well with aphasia".	Descriptive statistics (mean) Quantitative (bivariate paired sample t-test comparing the baseline and post-treatment scores)
	Do participants see a significant change in confidence after stroke at the completion of the program?	Outcome	Participants answers from the self-reported survey	Participant's self confidence levels after stroke before, during and after the program intervention	Confidence after Stroke Measure (Horne et al., 2017)	Through the self-reported survey that will be given to the participants to complete	Descriptive statistics (mean) Quantitative data (Repeated Measures ANOVA comparing the baseline, midpoint, and post- treatment confidence scores)
	Do participants see a significant change in executive functioning ability at the completion of the program?	Outcome	Assessing the participants cognitive skills and how well they perform activities in these four functions •Planning •Organization •Problem-solving •Attention	Participant BADS scores before, during and after the program	Behavioural Assessment of Behavioral of Dysexecutive Syndrome (BADS)	The data will be gathered from the surveys that the participants will complete	Descriptive statistics (mean) Quantitative (paired sample t-test comparing the baseline and post-treatment BADS scores)
	Do participants see a significant change in psychosocial well-being at the	Outcome	Self-reported data addressing perceptions of aphasia, effect of aphasia on	Based on the data collected from the ALA questions, we will measure the	The ALA (Simmons-Mackie N st. al., 2013)	We will get this data from participant's answers to the ALA.	Descriptive statistics (mean) Quantitative (paired sample t-test comparing the

	completion of the program?		relationships, levels of community engagement, and experiences of self-confidence and respect.	change in ALA scores.			baseline and post-treatment scores)

Data Management Plan

The data management plan includes storing all project files on a shared, access-controlled Google Drive, available only to members of the evaluation team. Evaluation team members will use password-protected computers for data analysis, and all non-final documents saved to personal computers will be deleted upon the completion of the program evaluation. Informed consent forms, which are the only documents containing participant names, will be stored separately and securely. All surveys will be fully anonymous. For qualitative data, coding files and notes will also be stored on the shared drive, and coders will meet biweekly to ensure consistency and maintain organized, up-to-date documentation.

Analysis Plan

The evaluation team will be responsible for conducting all data analyses. All team members have completed PH 3330 (Biostatistics) at Appalachian State University and have experience with data analysis and interpretation, which provides a strong foundation for this work. The evaluation will involve both quantitative and qualitative data, and the team will apply a combination of descriptive statistics, statistical tests (paired sample t-tests, repeated measures ANOVA), and thematic analysis as appropriate to analyze data for each evaluation question. Data will be analyzed using SPSS, and all team members are equipped to input data, select appropriate statistical tests, and interpret the results. Strong organizational and communication skills will also be essential to ensure data is managed consistently and that findings are discussed collaboratively throughout the process. Below, qualitative and quantitative data analysis methods for both process and outcome evaluation questions are explained in further detail.

Process Evaluation Analysis

How many sessions did the participants attend during the program's implementation period?

- Descriptive statistics will report frequencies to determine the number of participants who attended at least four out of five training sessions during the program's implementation period.

What are the procedures for recruiting participants, and are they being implemented effectively?

- Data analysis includes a list of all recruitment methods (qualitative) and the number of participants each method brought in (quantitative). This helps identify which strategies were most effective.

How well are the training sessions understood by participants?

- Descriptive statistics will determine the percentage of participants scoring 3/3, 2/3, and 0–1/3 on a three-question survey assessing understanding of training session content.

To what extent are the participants interacting with the dogs and the program staff?

- Quantitative data analysis will involve calculating average Likert scale scores across sessions to assess changes in participants' self-reported engagement with the program. Qualitative data analysis will involve conducting thematic analysis of open-ended notes from participants and the PI to identify patterns, possibly those of communication preferences, interactions, and discrepancies between PI and participant responses.

How useful are the provided lesson plans and instructional videos for supporting participants during their skills practice?

- Qualitative data will be gathered from weekly open-ended survey responses about the usefulness of lesson plans and instructional videos. A thematic analysis will be used to identify common patterns, themes, and participant feedback across sessions.

Outcome Evaluation Analysis

Do participants see a significant change in quality of life at the completion of the program?

- Quantitative data analysis will involve running paired sample t-tests on ALA questions to compare baseline and post-treatment scores on questions addressing “living well with aphasia.”

Do participants see a significant change in confidence after stroke at the completion of the program?

Quantitative data will be analyzed by running a Repeated Measures of ANOVA from the participants' survey measuring their confidence levels after stroke comparing their baseline, mid-treatment, and post-treatment confidence scores.

Do participants see a significant change in executive functioning ability at the completion of the program?

- Quantitative data will be analyzed by running a paired sample t-test on participants BADS comparing the baseline and post-treatment scores.

Do participants see a significant change in psychosocial well-being at the completion of the program?

- Quantitative data analysis will involve running paired sample t-tests on ALA questions to compare baseline and post-treatment scores on questions addressing perceptions of aphasia, effect of aphasia on relationships, levels of community engagement, and experiences of self-confidence and respect.

Interpretation Plan

Evaluation findings will be shared with key stakeholder groups, each with tailored interpretations based on their interests and priorities.

For program participants and their families, we will share a summary of overall outcomes related to program satisfaction, understanding of the training sessions, and changes in quality of life, confidence, and psychosocial well-being. These results will draw from ALA scores, the Confidence After Stroke Measure, and descriptive survey results. This information will be shared in accessible, participant-friendly language possibly during a program follow-up meeting with an opportunity for participants to ask questions and reflect on the findings.

Program staff and speech-language pathologists will receive a more detailed summary of both process and outcome evaluation results. This includes participant attendance data, recruitment method effectiveness, understanding of training material, engagement scores, and the usefulness of program resources. Outcomes from standardized tools such as the ALA, BADS, and Confidence After Stroke Measure will be shared through descriptive statistics and statistical test results. These findings will be discussed during regularly scheduled team meetings and supported by visualizations like summary tables or simple charts to guide program improvements.

Stakeholders interested in animal welfare, including certified dog trainers, the Pennsylvania SPCA, and animal rights groups, will be provided with findings related to participant engagement with dogs, including Likert scale results and thematic summaries of participant and PI notes. These stakeholders will also receive information on participant attendance, training participation, and observations related to positive reinforcement, as related to dog handling and safety. Dissemination for this group will include a written report discussing this relevant information from the evaluation.

Institutional and research partners such as the Albert Einstein Healthcare Network and NICHD will receive a formal report summarizing key outcome evaluation results. This will include statistical analyses of quality of life, executive functioning, psychosocial well-being, and confidence outcomes, as measured by validated tools like the ALA, BADS, and Confidence After Stroke Measure. These findings will be shared through a formal written report and formal research presentations, emphasizing clinical relevance and potential for future research.

Dissemination Plan

To ensure that evaluation findings lead to meaningful reflection and program improvement, the evaluation team will prioritize early, ongoing interaction and evaluation into the PATD program planning and communication. Findings will be shared with key interest holders, including participants and families, program staff, animal welfare partners, and institutional collaborators, using formats that match their needs and preferences. These will include presentations, reports, and summary visuals, The evaluation team will work closely with program staff to promote a shared understanding of results, encourage dialogue, and support decision-making through trusted relationships. Dissemination will be designed not only to

inform, but to build evaluation capacity and cultivate a feedback-friendly culture that supports continued learning and the use of the evaluation for positive change.

Evaluation Standards and Cross-Cutting Themes

The team wants to collect data that the interest holders can utilize to make decisions. Before we conduct our evaluation, we can engage in conversations with them to understand their needs and how the data will be relevant and used by them. Throughout the evaluation process, the evaluation team will be transparent with the interest holders by sharing the findings throughout the duration of the program. We want to evaluate with a high ethical consideration standard for the participants and interest groups by having confidentiality and privacy measures in place. We will engage collaboratively throughout the program with participants by hearing their views and interest stakeholders by working together to understand their needs and expectations. We have advanced equity by providing a program that is accessible and inclusive to persons with aphasia. For example, using hand gestures for dog training throughout the program increases accessibility for participants who experience barriers to communication. This advances equity by reducing obstacles to daily life activities for disabled people.

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