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Community Support Post-Hospitalization: A Practitioner Resource

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Background and Significance

In the United States, roughly one-quarter of individuals who experience a stroke, are not experiencing it for the first time (Uemura et al., 2018). In 2020, the southeastern United States had one of the highest stroke rates in the world (American Heart Association, 2020). Earning its place in the "stroke belt", the state of South Carolina has ranked the in top six for stroke death rate since 2015 – rate of death being 46.7% (CDC, 2018). These statistics are indicative of a gap in the provision of healthcare support when individuals discharge from the acute care setting.

While in the hospital, individuals recovering from stroke have the support of medical staff including: doctors, nurses, case managers, dieticians, patient care technicians, and therapists. Due to the nature and expense of the acute care setting, length of stay and provision of therapy services at this level of care are minimal. According to a source published by AOTA, "The primary goal of acute care is to stabilize the patient's medical status and address life-threatening issues" (Bondoc et al., 2017). The limited amount of time spent in the acute care setting and sometimes inpatient rehabilitation setting is not enough to provide the knowledge required for long term lifestyle changes and carryover of the education. This lack of long-term carryover and support leads to a decrease in occupational opportunity.

It is well known that "recovery from stroke is affected by not only initial stroke severity but also access to and utilization of rehabilitation services…"(Dawson et al., 2017). Rural communities have a more challenging time

accessing healthcare services; nearly 40% of Florence County is considered rural (Smalley & Warren, 2014; Fitzpatrick, 201438; U.S. Census Bureau, 2010). While some communities have support groups and some individuals receive outpatient therapy, the presence of medical and peer support shifts post-hospitalization. It is imperative for local practitioners to not only have an awareness of resources within the community, but to begin providing patients this information early on in the recovery process. Knowing what is available within the community and possibly beyond allows practitioners to provide more holistic and comprehensive care to the stroke population.

When creating a plan of care for stroke recovery, there are a variety of factors that practitioners must take into account. While physical recovery is important, a clinician must also take the following into account when working with a stroke survivor: mental health, social/peer support, caregiver support, disability services/funding, transportation coordination, home accessibility, and much more. Depression impacts roughly one-third of stroke survivors (Towfighi et al., 2017), anxiety one-quarter (Knap et al., 2020), and sleep disturbance roughly one-half (Cai et al., 2021). Knowing that mental health is such a huge component of stroke recovery, practitioners should have access to referral resources for local mental health clinics.

A recent needs assessment revealed that stroke survivors do not feel adequately prepared to engage in daily living post-hospitalization. That same survey revealed that only 20% of stroke survivors and caregivers feel supported post-hospitalization. These statistics support the need for education on access to support

group programming. Even in the absence of in-person support groups, virtual support programming is an option that can be explored. Practitioners need to resources to educate their client base on what support group resources are available to them.

After sustaining an injury via stroke, two-thirds of individuals are disabled. Additionally, 25% of individuals who sustain a stroke have a recurrent event within 5 years (The Stroke Awareness Foundation, 2021). Knowing that such a large majority of stroke survivors struggle with disability, clinicians should have the resources to not only provide individuals about the disability application process, but local financial aid resources such as food pantries, equipment closets, bill assistance, and home modification services.

Access to and knowledge of community resources is part of a practitioner's responsibility to meet best practice methods. In the needs assessment previously mentioned, it was reported that service providers feel more could be done to support the stroke population in Florence, South Carolina. The lack of knowledge related to community supports and resources, makes it more likely for stroke survivors to experience occupational injustice. "Occupational justice refers to the right of all individuals to participate and have equity in occupational choice to increase their well-being" (AJOT, 2020). Increasing practitioner awareness of community resource availability will help prevent the occurrence of occupational injustice amongst stroke survivors and caregivers.

In order to better support the stroke survivors and family members, therapists need to keep in mind all possible contexts and resources available.

"Occupational therapy practitioners understand and focus intervention to include the issues and concerns surrounding the complex dynamics among the client, caregiver, family, and community" (AJOT, 2020). According to the OTPF, "environmental factors include…services, systems, and policies: benefits, structured programs, and regulations for operations provided by institutions in various sectors of society designed to meet the needs of persons, groups, and populations" (AJOT, 2020). Increasing the education provided for stroke survivors and caregivers will allow occupational therapy to better address the occupational justice aspect of stroke care.

"Occupational therapy practitioners recognize that health is supported and maintained when clients are able to engage in home, school, workplace, and community life (AJOT, 2020). The more opportunity for engagement in meaningful activities, the more likely an individual is to advance in their stroke recovery process (Arya et al., 2012). The more knowledge a therapist has of community resources, the better they can help individuals engage in meaningful activities. According to the Occupational Therapy Practice Framework (OTPF), one of the cornerstones of occupational therapy practice is knowledge of both micro and macro systems. Increasing therapists' awareness of the systems in place and how they can support stroke survivors will help increase the utilization of current community resource.

Stroke survivors and caregivers need more education on post-hospitalization resources to continue learning skills for health management, self-care, independent activities of daily living, leisure engagement, and return to work. While community

resources are available to support stroke survivors in their recovery, the role of who connects individuals with these resources is not clearly defined. The consideration of discharge needs and plans, including recommendations and referrals to other professionals, is listed in the Occupational Therapy Practice Framework (AJOT, 2020). It is well within the scope of practice for occupational therapists to take on the role of connecting stroke survivors with community supports as part of the intervention process.

I propse the creation of a virtual resource, which therapists will have access to for distribution of community resources to the stroke community. The issue is practitioners' knowledge of what resources are available. Having a place where those resources are easily accessible will allow therapists to provide more effective intervention and long-term impact to clients via increased opportunity for social inclusion as well as the increased opportunity to satisfy personal and societal needs.

Making community resources known and accessible through virtual means will encourage and allow practitioners to better support stroke survivors upon discharge from the hospital. Expanding and changing the expectation of what resources practitioners should make available to stroke survivors post-hospitalization will elevate the practice, enhancing the stroke recovery process. Making community resource provision more uniform, accessible, and diverse is a goal that is within reach of MUSC Health Florence.

The goal of this project was to increase practitioner awareness of community resources available to stroke survivors. Resources were gathered, organized and made available through an online forum. Practitioners were then guided through

the virtual resource created to make them comfortable with independent navigation and increase the awareness of what is available within the Florence community. Educating practitioners on community resources will allow them to better support stroke survivors. The ultimate goal is to provide the support needed to stroke survivors increase community participation, home engagement, and return to work success.

Problem Statement

Upon discharge from acute care or inpatient rehabilitation, support for stroke survivors and caregivers dramatically decreases. While community supports are available, educating patients and caregivers on these resources is not regularly incorporated into the intervention process. This lack of community resource knowledge leads to a decreased quality of life and an individual's ability to engage in desired occupations. Increasing healthcare practitioner knowledge of community supports and resources will allow them to assist patients in a more successful transition to continue their recovery post-hospitalization.

Purpose Statement

There is a need to establish a comprehensive community resource tool for healthcare practitioners to better support stroke survivors post-hospitalization in Florence, South Carolina. This type of resource would help healthcare practitioners better assist their clients in continued recovery post-hospitalization. This capstone project had 3 objectives: 1) determine the need for stroke survivor and practitioner education on community for stroke survivors via needs assessment involving stakeholders 2) create a community resource database for practitioner use with

stroke survivors in Florence, South Carolina, 3) educate practitioners on what community resources are available and how to navigate the database.

Conceptual Framework

The foundation for this project is rooted in the Occupational Therapy Practice Framework (OTPF). The framework states the need for micro and macro systems comprehension (AJOT, 2020), which includes knowledge of community resources. Having knowledge of community support options will allow practitioners to create a more effective and holistic discharge plan. While the OTPF provides a foundation to support this project, the project itself is looking at addressing a systems issue.

Utilizing the Determinants of Health Theory will help guide the search for community resources, providing a framework for identifying possible support systems(Cole & Tufano, 2008). When looking at determinants of health, addressing the following determinants will help keep a holistic mindset when in search of community resources: biology, behaviors, social environment, physical environment, policies and interventions, and access to quality healthcare (Cole & Tufano, 2008). The community resource collection is the first part of this project. The second part, educating practitioners on these resources, requires utilization of an educational model to increase education effectiveness and meaningfulness.

When structuring my educational talks with adult learners (current clinicians), my approach will be guided by the Humanist Theory of Adult Learning (Bélanger, 2011). The individuals participating in these groups will be current healthcare practitioners, which means they are independently functioning clinicians

who are participating in this process to better their practice. With the humanistic approach,

> "A learning experience is significant when…the individual can relate this learning event to their former experience and to their present contextual needs. It is progressive when the individual can see that they are getting something out of it, enhancing their knowledge or their capacity for action, thus continuing to construct themselves. The learning experience is stimulant when the knowledge imparted and received addresses a personal question or answers some personal curiosity. It is inner-directed when the individual has the feeling they have achieved something all by themselves, that they have increased their inner capacity for action and expression, thus reinforcing their autonomy" (Bélanger, 2011).

Enhancing practitioner knowledge of community resources to support the stroke population fulfills all aspects of this approach to learning. Within the humanistic learning approach, the facilitator's job is to set the mood, make clear objectives, keep information organized and easily available, be flexible, remain open to feedback, and maintain the mindset of a learner (Bélanger, 2011). Keeping the concepts of the humanistic approach in mind will help make both my virtual resource and educational session more effective and appealing to the adult learners/clinicians.

Objective 1: Conduct a Needs Assessment

Methods for Objective 1: Procedures and Data Collection

Stakeholders. The stakeholders in this project included the following: MUSC Health administration, stroke survivors in the Pee Dee area, caregivers of stroke survivors in the Pee Dee area, and healthcare professionals. Information was gathered via Redcap survey distribution to individuals of each population. At this time, I was unable to conduct interviews with administration, but would still consider them a stakeholder.

Design. This needs assessment was conducted through personal interviews and surveys asking about post-hospitalization support for stroke survivors and caregivers. Surveys were distributed to employees of MUSC Health to gather information related to employee perceptions and interest in stroke programming. Data collected from survivors and caregivers included subjective information related to feelings of support post hospitalization, confidence in skills (communication and activity engagement), and willingness to engage in stroke programming. Qualitative data was gathered via personal interview and through the inclusion of open-ended questions throughout the survey for participants to leave comments.

Participants. Surveys accrued responses from 6 caregivers, 5 stroke survivors, and 19 MUSC Health employees (Appendix A). Participants were recruited via convenience sample and snowball sampling through survey distribution methods including email and the use of social media platforms with a hyperlink and QR code to community Facebook groups. Participation in the surveys was voluntary, with no compensation offered. Emails sent and posts made for survey distribution clarified the anonymity of survey responses. Due to nature of

public survey and no identifying data being collected, no IRB approval required at this time.

Measures and Instruments. Surveys for stroke survivors included 9 questions. The first several questions collecting demographic information and questions related to stroke history. Participants were then asked to answer questions primarily in yes/no format on topics such as: skills necessary to engage in desired activities, confidence in social skills, support from other stroke survivors, desire for more support, interest in community engagement, driving capabilities, support group interest, and virtual participation. Additional information was collected based on certain responses including if able to drive, how far. Finally, information related to activities of interest was collected via checked box option with an open-ended option to provide additional information or include activities not listed (See Survey in Appendix B).

Caregiver surveys followed a format similar to that of the stroke survivor survey. The caregiver survey included 12 questions, again starting with demographics and starting with the same question as provided to stroke survivors: did or do you have support from other stroke survivors or caregivers of stroke survivors post-hospitalization? Follow-up information collected requests the source of support if any and if no support was provided, would it have been helpful? Further information requested included interest in stroke programming participation, programming interests, means of transportation, distance willing to travel, and willingness to participate virtually. An opportunity at the end of this

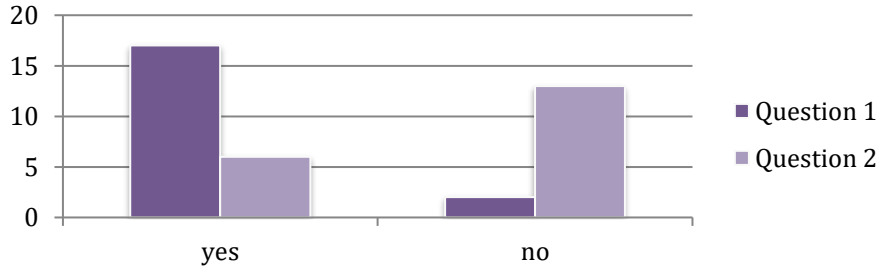
survey was also provided for qualitative feedback in the form of an open-ended comment section (See Survey in Appendix C).

The MUSC Health employee survey included 9 questions, all provided in a yes/no format. Questions requested confirmation of employment, location, role in organization, view of MUSC as leader in stroke rehabilitation, support provided by MUSC to stroke community status-post discharge, desire for service expansion, interest in participation, and openness to learning about stroke programming (See Survey in Appendix D).

Results. From the MUSC Health employee surveys, it was shown that while almost 89.5% of employees see the organization as a leader in stroke rehabilitation, only 31.6% feel the organization does enough to support the stoke population upon discharge from the hospital (See Table 1).

Table 1:
Question 1: Do you see MUSC Health as a leader in the provision of stroke rehabilitation? (n=19)

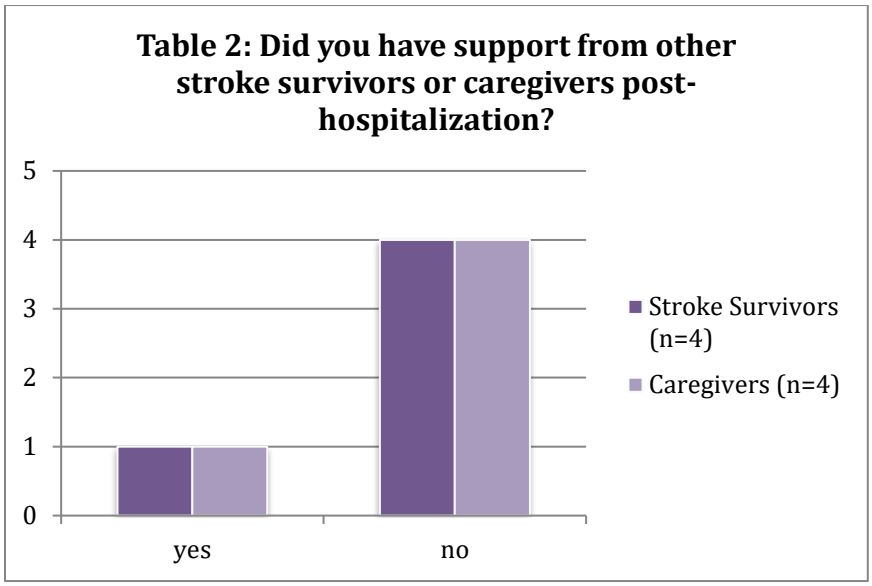
Question 2: Does MUSC Health provide enough support to the stroke population post-hospitalization? (n=19)



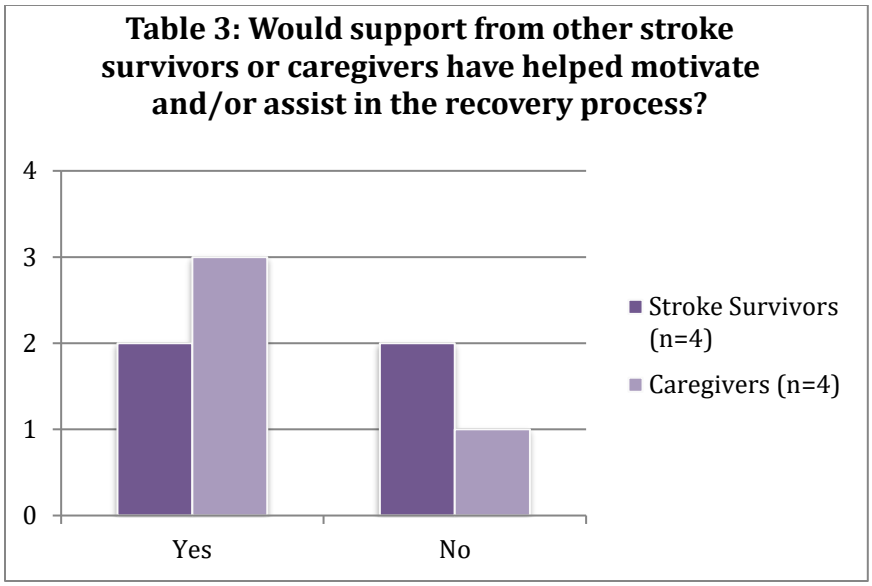
iaries of this program. Surv

Stroke survivors and caregivers will be one of the primary beneficiaries of this resource collection. Surveys conducted for this needs assessment support the idea of more education and intervention related to community supports post-

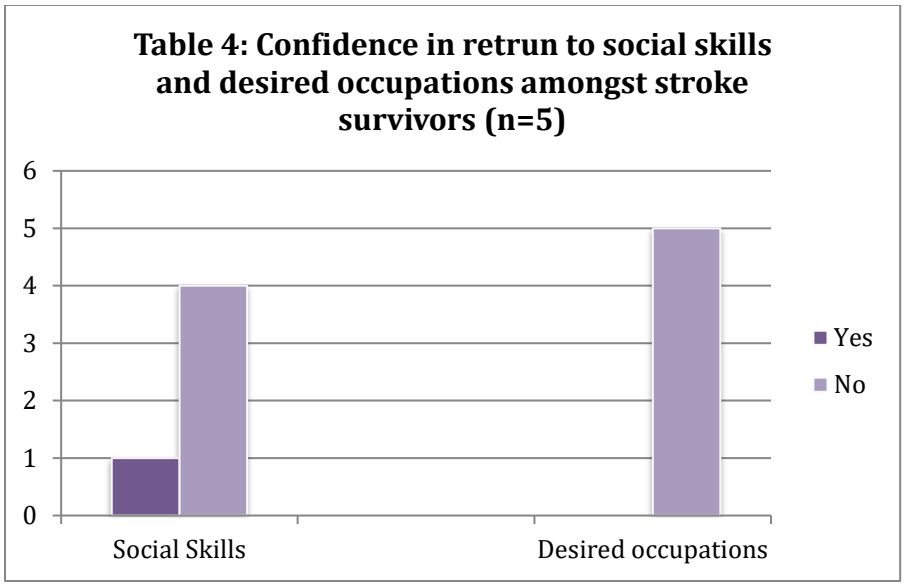
hospitalization. Only 20% of stroke survivors and caregivers felt supported upon discharge from the hospital (See Table 2).



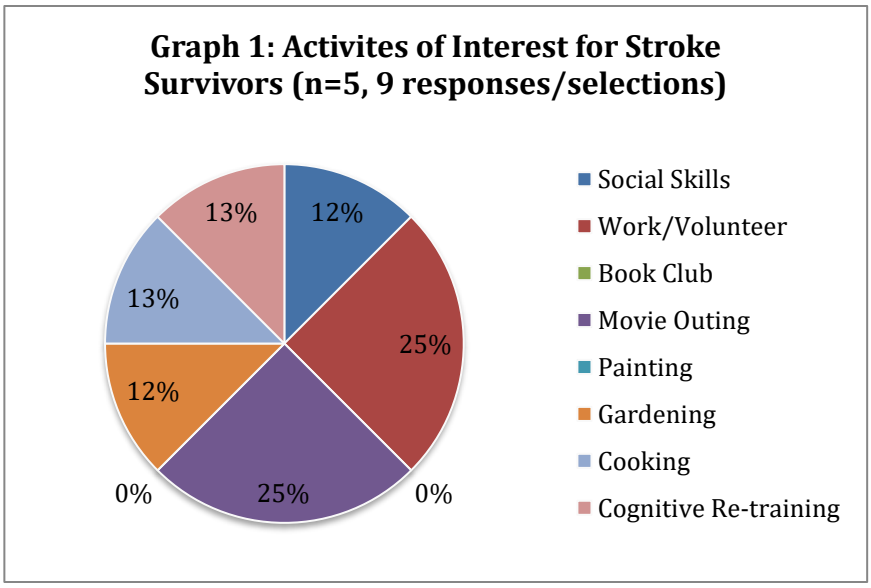
During qualitative interviews with therapists, it was revealed that the majority of practitioners at MUSC Health are unaware of the support groups available in Florence. Both stroke survivors and caregivers felt that having support from others in a similar situation would have helped in the recovery process (See Table 3). Based on this feedback, ensuring a variety of support group resources are included in this database is important.



Survey respondents provided qualitative responses to both open ended and multiple-choice questions about post-hospitalization support, confidence and return to occupational activities. Results identified that only 1 in 4 stroke survivors felt confident in their social skills, and no survivor felt confident in their ability to return to desired occupations (See Table 4). Between the lack of confidence in these areas and the lack of support felt post-hospitalization, it is clear that there is a gap in knowledge/provision of services as relates to connecting stroke survivors with community supports.



Open-ended questions were included in the needs assessment to help guide the search for a variety of community supports. Graph 1 exhibits the wide range of activities in which stroke survivors have thus far shown interest. Members were allowed to select multiple responses for this section; a total of nine responses from 5 stroke survivors were provided (See Graph 1).



Objective 2: Create Community Resource Database

Based on the results of the Needs Assessment, there is a clear need for increased awareness of community supports for stroke survivors post-hospitalization. Moreover, the Needs Assessment allowed input from stroke survivors themselves to identify several activities of interest. This helped guide the search for areas of current and future potential support for stroke survivors.

Methods for Objective 2: Procedures and Data Collection

Design. Due to the need for project modifications, the first part of January was spent confirming new timelines and planning for the gathering community resources. Throughout the process of community resource collection, healthcare professionals were consulted to enhance the integrity of this project. Individuals consulted included the Stroke Program Coordinator at MUSC Charleston, Outreach Coordinator for STEMI/Stroke/Trauma and South Carolina Department of Health and Environmental Control (DHEC), Case Manager at MUSC Health Outpatient Rehabilitation, and Chief of Community Health for CareSouth Carolina. These individuals were consulted at different points throughout the project for resource management and feedback. Included below is a table outlining the role each individual played in resource identification.

Expert Contacted:	**Information Collected:**
Stroke Program Coordinator – MUSC Charleston	• Information/work being done by MUSC • Online resources provided to stroke survivors • Documents in the process of being made available (dietary education, impact of diabetes, blood pressure, cholesterol, smoking cessation, alcohol, exercise, sex and intimacy, driving) • Charleston Support Groups and Resources

Outreach Coordinator for STEMI/Stroke/Trauma – South Carolina Department of Health and Environmental Control (DHEC)	• Perspective of stroke survivor and healthcare worker • Importance of disability resources and grant funding • Documents in the process of being created and provided by DHEC (local Skilled Nursing Facilities, Hospitals, Inpatient Rehabilitation Facilities, and Outpatient Clinics) • Contact for Penumbra – helped with virtual support group identification, grant opportunities, Brain Injury Alliance, American Heart Association • Consulted at multiple points to get feedback on resource management, organization and utilization
Case Manager – MUSC Health Outpatient Clinic	• Resource expert – over 30 years working in healthcare in the PeeDee region • Provided access to resources currently available in the clinic • Ministries in Florence to contact • Reliability of current transportation options
Chief of Community Health for CareSouth Carolina	• Resource expert – over 30 years working in healthcare and developing programming in the PeeDee region • Alternative modes of transportation and free transportation options in Florence • Contacts for Pee Dee Mental Health Center • Contact for Lighthouse Ministries
Michelle Woodbury, PhD, OTR/L – Associate Professor at MUSC Charleston	• Content expert • Stroke Rehabilitation is area of expertise • Feedback on near weekly basis for project structure and resource outlook

Connecting with a variety of individuals that serve the needs of the Florence community helped ensure a holistic view of the community was kept in mind during resource and data collection. Once resources were identified, I began initiating contact with all identified resources.

Contact was made via phone with in-person stroke support group leaders to clarify support group dates, times and any parameters for inclusion. Support groups

open to the community were included in the online resource database. Due to the limited number of stroke-specific support groups in Florence, additional support groups were also included from Hartsville, SC, a neighboring community to Florence. Support groups from this region included diabetes support groups and general caregiver support groups. Support group occurrence confirmed via phone with community facilitator.

Virtual support group options were also explored and included for individuals who may have difficulty accessing in-person meetings. Contact was made via both phone and email with a volunteer for Speech Recovery Pathways. Pamphlets/handouts for this aphasia recovery group were provided along with recommendations for additional aphasia support groups. Digital applications for Smartphone use were investigated and included based on recommendations from this individual. Fliers were created and included for the online database.

This same process of in-person, phone, and email contact was utilized to identify home modification, mental health, alternative food, health and fitness, transportation, and adult day services. Due to the volume of individuals seen in the greater Pee Dee area, food pantries in Florence, Darlington, Timmonsville, and Effingham were all contacted via phone to confirm/update service provision. Messages were left for those unavailable, the document will continue to be updated as services respond. While the handout includes a comprehensive list of resources, services in bold have been personally confirmed and updated. Based on information collected, handouts were created and included in the online database.

Online investigation was primarily relied upon for identification on grant funding, bill assistance and specialty service provision. Data for the nearest driving and vision specialty clinics were made into handouts and placed in the online database along with grant and bill assistance services.

The online database referred to throughout this section is a resource folder on the Dropbox website. Access to the folder allows anyone provided with a link to view and print content as desired. At this time, I am the only individual with content editing privileges.

Participants/Measures and Instruments. No participants or measures will be required to complete objective 2.

Results. After collaborating with the above mentioned individuals and completing the outreach processes, handouts were created and uploaded to the Dropbox for the following resources:

Resources Category	**Content**
Disability Services	• Application Resources • Application checklist • Application
Funding	• Bill assistance program • Co-pay relief • Rehab bill assistance (application and informational packet)

Support Groups	• Virtual
	  • Aphasia Recovery
	  • Facebook Groups (5 groups)
	  • Patients, Caregivers, Young Adults, Parents, "Honoring the Taken"
	  • Recovery Pathways
	  • Brain Injury Alliance (Youth Support Group)
	• In-Person
	  • Caregiver Support Group

	• Diabetes Support Group (Family) • Diabetes Support Group (Peer) • Stroke Support Group
Transportation Services	• Modivcare • **Includes handouts for both Spanish and English • PeeDee Regional Transportation Authority • Maps/Routes • ADA Complimentary Transit Application • General information handoue
Adult Day Services	• Active Day Handout
Aphasia Application	• Handout with education on applications one can use to build language skills
Driving Rehabilitation	• Handout with all driving specialists in the state of South Carolina
Food Provision Services	• Document with food pantry and food kitchen information (address, hours of operation, services provided, requirements for service access)
Lighthouse Ministries	• Free services/resources for: housing, education, clothing, medical needs, work, dental care, legal support, benefits information, veteran support, ID cards via DMV, spiritual connection, mental health • Ramp and Bill assistance programs
Mental Health	• PeeDee Mental Health Center • Counseling offices (6 facilities provided with specialty service listing and contact information)
Senior Centers	• Florence and Lake City Locations with membership information and programming
Wellness/Fitness	• McLeod Health and Fitness Medical Membership

Objective 3: Educate Practitioners on Community Resources

The final objective for this project was to educate local practitioners on the need for community resource education within the stroke population, and then provide them with the aforementioned online resource. The goal of providing this online resource is to increase the awareness of and ease of access to community and virtual support program information.

Methods for Objective 3: Procedures and Data Collection

Design. Contact was made with managers at each MUSC Health facility in Florence to confirm interest and openness to presentation of this material. Meeting times were set for 45 minutes in length. Presentations were held at MUSC Health Inpatient on March 6th, 11:45-12:30, MUSC Health Outpatient on March 8th, 8am-8:45, and MUSC Health Acute Care on March 9th, 11:45-12:30. Presentations were held in a common meeting space where practitioners had computer access for exploration of the online database.

All presentations were consistent in their content inclusion. Practitioners were provided with the project's background, which included statistics for why education on community and virtual resources are an integral part of stroke recovery. Then, participants were educated on community resources in the Florence area as well as virtual options. Finally, at the end of the presentation, a brief tutorial on how to navigate the Dropbox database was provided. Participants were then allowed time to explore the Dropbox resource and ask questions. The plan for meeting time allotment can be seen in the table below:

MUSC Health Team Meeting	
Timeline	Content
10 minutes	Pre-test survey completion

20 minutes	Presentation of materials
10-15 minutes	Q&A + Post-test surveys completed

Participants. Participants included a convenience sample of voluntary members from the therapy teams at MUSC Health Florence Outpatient Clinic, Inpatient Rehabilitation, and Acute Care facilities. While all healthcare team members are welcome, therapists are the targets of this presentation.

Measures and Instruments. Data was collected prior to and following the educational session through pre and post-test survey completion. Surveys were completed via RedCap. Assessments administered included questions which allowed for a show of difference in knowledge gain pre and post presentation. Data from pre and post-test assessments were exported from Redcap to Microsoft Excel. Results were then converted from the Likert scale response to a numeric value, allowing for the statistical analysis via SPSS.

Paired t-tests were utilized for data analysis due to participant volume meeting the criteria for this type of test (N=31). T-test are commonly utilized in order to measure one group's response patterns at two different points in time (Salkind and Frey, 2020). T-tests can be utilized for before and after comparisons to measure effectiveness of education. Hedges G was utilized to demonstrate the effect size between pre and post-test responses.

A t-test was run for each item to measure knowledge change in each area of education provided. In addition, a comprehensive analysis including the sum of pre-

test and post-test scores was completed. This served as a measure for overall knowledge change before and after the presentation.

Post-test survey asked questions were analyzed for themes related to likelihood of future tool use. Qualitative data collection was collected through open-ended question inclusion on each survey as well as via notes taken during post-presentation Q&A time. Qualitative responses were synthesized and analyzed for common themes. Survey responses were kept anonymous, eliminating the need for IRB approval. A template of the Pre-Test is located in Appendix E and Post-Test in Appendix F.

Results and Data Analysis. Seven questions were included in both the pre and post-tests. Items measured general confidence in resource knowledge, confidence in ability to locate resources, support groups, psychiatric supports, specialty services, food provision services, and transportation options.

The results of the paired samples t-test showed that for each individual item, there was a significant increase in knowledge. Pre-test means ranged from M=2.48-2.90 with a standard deviation range SD=0.93-1.19. Post-test, results included a mean range of M=4.09-4.54 and a standard deviation range of SD=0.62-0.95. Results for all t-tests were significant with $p<.001$. As noted in the tables below, there is a significant improvement in not only the mean, but also in the standard deviation from pre to post-test for each item.

Table 1:

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Knowledge Pre-Test	2.48	31	1.15	.20

	Knowledge Post-Test	4.45	31	.80	.14
Pair 2	Confidence Pre-Test	2.90	31	1.19	.21
	Confidence Post-Test	4.35	31	.95	.17
Pair 3	Support Group Pre-Test	2.62	31	.95	.17
	Support Group Post-Test	4.45	31	.85	.15
Pair 4	Psychiatric Pre-Test	2.58	31	1.05	.18
	Psychiatric Post-Test	4.09	31	.94	.16
Pair 5	Specialty Services Pre-Test	2.51	31	.92	.16
	Specialty Services Post-Test	4.35	31	.95	.17
Pair 6	Food Services Pre-Test	2.51	31	1.06	.19
	Food Services Post-Test	4.41	31	.71	.12
Pair 7	Transportation Pre-Test	2.64	31	.95	.17
	Transportation Post-Test	4.54	31	.62	.11

Table 2:

Paired Samples Test

		Paired Differences							Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
Pair 1	Knowledge Pre to Post Test	-1.96	1.22	.21	-2.41	-1.51	-8.94	30	<.001	<.001
Pair 2	Confidence Pre to Post Test	-1.45	1.58	.28	-2.03	-.86	-5.08	30	<.001	<.001
Pair 3	Support Group Pre to Post Test	-1.83	1.12	.20	-2.25	-1.42	-9.07	30	<.001	<.001
Pair 4	Psychiatric Pre to Post Test	-1.51	1.28	.23	-1.98	-1.04	-6.55	30	<.001	<.001
Pair 5	Specialty Services Pre to Post Test	-1.83	1.29	.23	-2.31	-1.36	-7.91	30	<.001	<.001
Pair 6	Food Access Pre to Post Test	-1.90	1.22	.21	-2.35	-1.45	-8.68	30	<.001	<.001
Pair 7	Transportation Pre to Post Test	-1.90	1.1	.19	-2.30	-1.49	-9.57	30	<.001	<.001

Table 3:

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Lower	95% Confidence Upper
Pair 1	KnowPRE-KnowPOST	Cohen's d	1.22	-1.60	-2.13	-1.06
		Hedges' correction	1.25	-1.56	-2.08	-1.03
Pair 2	ConfPRE-ConfPOST	Cohen's d	1.58	-.91	-1.32	-.48
		Hedges' correction	1.62	-.89	-1.29	-.47
Pair 3	SupGrPRE-SupGrpPOST	Cohen's d	1.12	-1.63	-2.16	-1.08
		Hedges' correction	1.15	-1.58	-2.11	-1.05
Pair 4	PsychPRE-PsychPOST	Cohen's d	1.28	-1.17	-1.63	-.71
		Hedges' correction	1.32	-1.14	-1.59	-.69
Pair 5	SpecPRE-SpecPOST	Cohen's d	1.29	-1.42	-1.91	-.91
		Hedges' correction	1.32	-1.38	-1.86	-.89
Pair 6	FoodPRE-FoodPOST	Cohen's d	1.22	-1.55	-2.08	-1.02
		Hedges' correction	1.25	-1.52	-2.02	-1.00
Pair 7	TransPRE-TransPOST	Cohen's d	1.10	-1.72	-2.27	-1.15
		Hedges' correction	1.13	-1.67	-2.21	-1.12

When looking at the total knowledge gain, pre-test results included M=18.26, SD= 5.52 and post-test results included M=30.68, SD=4.34, p<.001. Tables 4-6 provide the statical data which is summarized in Graph 2. This graph depicts results of the pre and post-test means along with the effect size. Results of the t-test reported a significant increase in overall knowledge gain from pre to post presentation, with a large effect size.

Table 4:

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error
Pair 1	Total Score Pre-Test	18.25	31	5.52	.99
	Total Score Post-Test	31.67	31	4.34	.78

Table 5:

Paired Samples Test

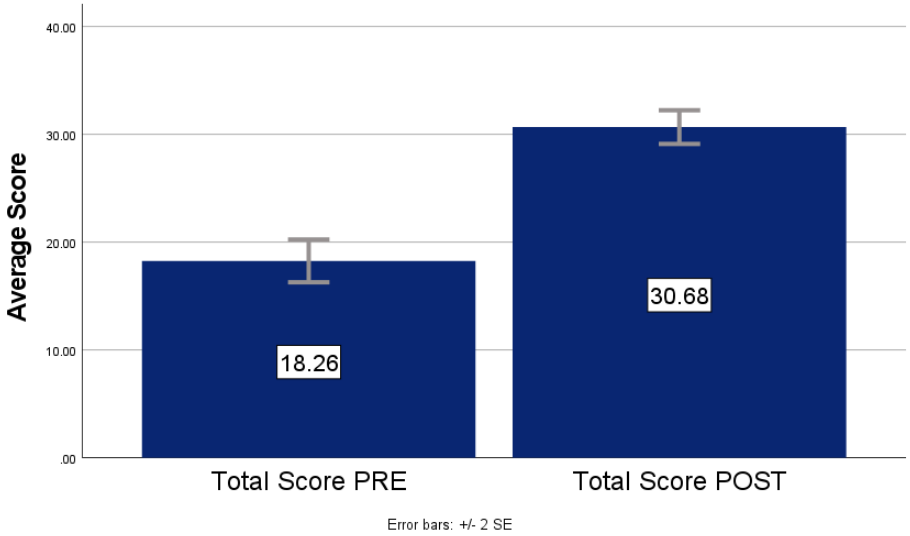
		Paired Differences							Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
Pair 1	Total Pre-Test to Total Post-Test	-12.41	6.58	1.18	-14.83	-10.00	-10.50	30	<.001	<.001

Table 6:

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Lower	95% Confidence Upper
Pair 1	TotalPRE-TotalPOST	Cohen's d	6.58	-1.88	-2.47	-1.29
		Hedges' correction	6.75	-1.83	-2.41	-1.25

Graph 2:



Qualitative feedback from participants included supportive comments and impact of workshop on future practice intentions. Participants reported seeing this resources as a tool that could be utilized in their daily practice. Additionally, participants reported having a better understanding of the impact community resource education has on stroke survivor recovery. In addition to the positive feedback, there were suggestions made for future resource inclusion and expansion.

Discussion

Based on the results of the fall needs assessment, there is a clear gap in community support education for stroke survivors post-hospitalization. In addition, it has been expressed by stroke survivors that there is a lack of confidence in social skills and their belief in the ability to return to desired occupations. Post-hospitalization, a significant majority of both stroke survivors and caregivers felt community support was inadequate.

Knowledge Change. After analyzing the data collected from pre and post-presentation surveys, results demonstrate a significant change in healthcare worker knowledge related to community resources. Before the survey, over 87% of healthcare workers agreed that both practitioner and patient knowledge of community resources was an important aspect of stroke recovery. However, when asked about confidence in knowledge of community resources, only 19% reported “agree” or “strongly agree”. Post presentation, 97% of practitioners reported “agree” or “strongly agree” when asked the same question. In every item reported, a significant change of $p>.001$ was detected. The consistency of results between

general feeling of knowledge and specific areas of knowledge increases the credibility of these results.

Due to the set-up of the survey, 1 set of responses was not included in the final results. Participants who took the survey on their phone reported some difficulty with the alignment of responses; one post-test indicated all "Strongly Disagree" responses, implying a decline in knowledge from pre to post presentation. Due to this being the only survey with seemingly skewed results, responses from this participant were excluded from the study.

Future Resource Utilization. Included in the post-test, were questions intent for future resource utilization. When asked if materials would be utilized and if the resource was easy to navigate, 87% of participants reported "agree" or "strongly agree". Through the creation of this online community resource toolkit, I expect to enhance the ability of practitioners to provide education related to community supports for stroke survivors. It is of significant note that both seasoned and new practitioners were part of this project, making the findings generalizable to a broad population. Based on survey feedback, there seems to be a consistent increase in knowledge no matter how experienced the practitioner.

Qualitative Data Analysis. When analyzing qualitative data for general themes, there were many comments verbalizing an appreciation for this resource tool. Comments indicated that prior to participating in this project, individuals did not have a strong awareness of not only resources available, but how many community resources could benefit stroke survivors. After participating in the workshop, there was a clear shift in practitioner understanding of both why and

how to educate stroke survivors on community resources. In addition, practitioners reported the intent for future resource utilization in their practice with stroke survivors. At this time, most participants were therapists, however, it was suggested that this material also be shared with case managers.

The goal of this resource is to be a comprehensive community resource tool for the area of Florence, SC. During the presentation, there were some suggestions made for additional resource inclusion: lymphedema, neuropsychologists, "equipment closets". Though some of these categories had been already considered, engagement from individuals to help identify these gaps was a great discussion. It opened the floor for conversation related to gaps in care within the community. In addition, it prompted investigation on the relevance of lymphedema and stroke recovery. At this time, due to lack of available evidence, lymphedema does not seem to be appropriate for inclusion in the database. However, this brought up the importance of the need for a general community resource database, not just one directly targeting stroke survivors. While stroke survivors are the primary target of this resource, there was discussion on resource that may be applicable to a variety of diagnoses.

Potential Impact

This project will have both direct and indirect impacts. The direct impact of this project will be an increase in the holistic practice of healthcare practitioners. Having this online database/resource will make it more convenient for practitioners to provide information related to a variety of community resources to stroke

survivors. The increased provision of community resources will help address the lack of support reported by stroke survivors.

With an increase in resource provision, there will likely follow an increase in community resource utilization. This project has the potential to increase resource access and utilization for stroke survivors in Florence, South Carolina. Knowing what resources are in the community also allows for identification of opportunities for growth related to stroke support in the community of Florence. In the future, this resource could be expanded to include more general stroke education via collaboration with the Charleston Stroke Program Coordinator.

Opportunities are also being explored for inclusion of these resources on other online forums. Current options being explored are the inclusion of this information on a Florence division of MUSC's network. It was also suggested that these resources may be appropriate for incorporation to the online documentation system known as Epic; this would be an even easier means by which documents could be both accessed and directly included in individual's medical charts. The other recommendation for virtual access was to include this information in the "MyChart" application for stroke survivors and/or caregiver to have direct access to at their own convenience. These are options which I intend to pursue in the future.

Additionally, it was requested that this project be presented to the State Stroke Council, allowing opportunity for local collaborations. The presentation was given on Thursday, April 13, 2023. The goal of this presentation was to provide a broader scope of individuals ideas for how they can support stroke survivors within their own communities.

Some limitations of this project include the use of convenience sampling for the initial needs assessment. Another limitation of the project includes the time available to collect community resources. At this time, it is possible that not all resources will be identified, however due to the flexible nature of this online toolkit, resources can be added and modified as needed. Due to the project timeline, it will not be possible to gather data related to actual resource utilization, only anticipated resource use from practitioner via post-test assessment.

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- Sabrina Faircloth CRT, CVT, serves as the Outreach Coordinator for STEMI/Stroke/Trauma at South Carolina Department of Health and Environmental Control. She has assisted in reaching out to and identifying community resources in Florence and resource review.
- Marrissa Cobiella is the Stroke Program Coordinator at MUSC Charleston. Her expertise in stroke resource collection and dissemination will help facilitate the collaboration with MUSC to make these resources more widely accessible. While assisting in data collection for the Charleston branch, she has helped answer questions and guide the online resource organization.
- Beckie Potterfield, is the Case Manager at MUSC Health Outpatient in Florence, SC. Beckie has worked in healthcare for over 30 years in Florence

and assists in providing contacts, resources, and feedback throughout the data collection phase of this project.

- Joe Bittle currently serves at Chief of Community Health for CareSouth Carolina. Joe has worked in healthcare management in the Pee Dee area for over 30 years. He helped spearhead the start of PDRTA, one of the current public transportation systems in the Florence area that provides free services to those over the age of 60 or are disabled

Ethics: This project falls under Quality Improvement. Its efforts focused on increasing awareness and resource provision of community support for stroke victims post-hospitalization. As data was gathered from participants, each individual's response was entered under an anonymous name (example: Participant 1). IRB approval was not necessary for this project.

Dissemination Plan

- MUSC Health practitioners – as part of the project, this resource database was be presented to practitioners
- MUSC Health Management/Administration via presentation
- MUSC Faculty via presentation
- South Carolina Stroke Advisory Council – Presentation scheduled to share results of project on Thursday, April 13, 2023

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Appendix A

Table 1: Stroke Survivor and Caregiver Demographics

	Stroke survivors (n=5)	Caregivers (n = 6)
Characteristic		
Age (years, mean)	56	60.4
Gender		
Male	4	3
Female	1	2
Most Recent stroke		
Less than1 year	2	2
1-5 years ago	2	1
More than 5 years ago	1	2
County of residence		
Florence County	1	1
Horry County	0	0
Marlboro County	3	2
Darlington County	0	1
Marion County	0	0
Charleston County	0	1
Berkeley County	0	0
Georgetown County	0	0
Colleton County	0	0
Beaufort County	0	0
Other	1	0

Appendix B

Stroke Survivor Survey

1. Are you a stroke survivor?
   Yes No

When was your most recent stroke?
   Less than 1 year ago
   1-5 years ago
   More than 5 years ago

Age:
_____

Gender:
   Male
   Female
   Prefer not to answer

In what County do you reside?
   Florence County
   Horry County
   Marlboro County
   Darlington County
   Marion County
   Charleston County
   Berkeley County
   Georgetown County
   Colleton County
   Beaufort County
   Other

2. When discharged home, did you feel you had the skills necessary to return to desired activities (work, cooking, cleaning, walking, playing ball, etc.)?
   Yes No

If no, in which areas did you have trouble?
_____

3. Upon discharge from the hospital, did you feel confident in your social skills?
   Yes No

4. Did or do you have support from other stroke survivors?
   Yes No

If yes, who helped you find the support?

Family
Friend
Hospital Staff
Other
If other, who?

_____

If no, do you think support from other stroke survivors would have helped motivate you and/or assisted in your recovery process?

Yes No

5. Do you have a desire to be actively involved in the community through work or volunteering?

Yes No

6. Do you drive or have a reliable means of transportation?

Yes No

If yes, who? (Check all that apply)

Myself
Family member
Friend
Medical transportation
Other

7. How far would you be willing to travel to participate in a stroke group meeting?

0-10 miles
10-30 miles
30-45 miles

8. If unable or unwilling to attend an in-person meeting, would you be interested in a virtual group meeting?

Yes No

9. Many individuals struggle with life post stroke due to challenges with return to work, cooking, playing games, home care, knowledge of disease process, etc. What are some activities in which you'd enjoy engaging in with your peers? (Check as many as applicable) Planting/Gardening

Return to work
Cooking
Painting
Book club
Movie outing
Other

If other, please provide example(s):

Appendix C

Caregiver Survivor Survey

1. Are you the caregiver for a stroke survivor?
    Yes No

When was your most recent stroke?
    Less than 1 year ago
    1-5 years ago
    More than 5 years ago

Age:
_____

Gender:
    Male
    Female
    Prefer not to answer

In what County do you reside?
    Florence County
    Horry County
    Marlboro County
    Darlington County
    Marion County
    Charleston County
    Berkeley County
    Georgetown County
    Colleton County
    Beaufort County
    Other

2. Did or do you have support from other stroke survivors?
    Yes No

If yes, who helped you find the support?
    Family
    Friend
    Hospital Staff
    Other
    If other, who?
    _____

If no, do you think support from other stroke survivors would have helped motivate you and/or assisted in your recovery process?

Yes No

3. Would you be interested in a community-based stroke support program for stroke survivors and caregivers?

Yes No

4. What kind of education or programming would you like to see?

Return to work
Leisure engagement (games, book club/reading, etc.)
Development of new hobbies
Caregiver burnout
Modified exercise programming
Community resources
Other

If other, please provide example(s):

5. Do you drive or have a reliable means of transportation?

Yes No

If yes, who? (Check all that apply)

Myself
Family member
Friend
Medical transportation
Other

6. How far would you be willing to travel to participate in a stroke group meeting?

0-10 miles
10-30 miles
30-45 miles

7. If the stroke survivor under your care wished to participate virtually in a support meeting, would you be able/willing to assist them?

Yes No

Appendix D

MUSC Healthcare Worker Survey

1. Are you a healthcare professional and employed by MUSC Health?
   Yes No
For which branch do you work? Florence
   Charleston
   Lancaster
   Marion
   Other
   What is your title/role in the organization? Occupational therapist
   Physical therapist
   Speech therapist
   Nurse
   Doctor
   Other
   Job title if "other"
   _____

2. Do you see MUSC Health as a leader in the provision of stroke rehabilitation services in South Carolina?
   Yes No

3. Do you feel MUSC Health does enough to support the stroke population once discharged back into the community?
   Yes No

4. Do you feel MUSC Health could do more to support the stroke community?
   Yes No

5. Would you like to see MUSC Health expand services related to post-hospitalization stroke rehabilitation/community support?
   Yes No

6. Would you be interested in getting involved in a community-based stroke support program?
   Yes No

7. Would you be interested in learning about a new initiative to support the stroke population?
   Yes No

Appendix E

Pre-Test Questions

1. What is you job title/role (ie. Occupational therapist, nurse, doctor)?

2. What is your primary area of practice (i.e. outpatient, home health, acute, inpatient rehab, etc.)?

3. I treat stroke survivors on a regular basis.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

4. I regularly provide stroke survivors with resources for community support services.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

5. Practitioner knowledge of community resources is an important aspect of stroke recovery.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

6. Patient knowledge of community resources is an important aspect of the stroke recovery process.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

7. I feel knowledgeable of resources available to stoke survivors in my community.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

8. I feel confident in my ability to locate or identify community resources for stroke survivors.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

9. I can readily identify resources for both in-person and virtual support groups for stroke survivors.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

10. I can identify psychiatric supports for stroke survivors in my community.
    Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

11. I have resources to provide stroke survivors with specific references for specialty services (i.e. driving, vision clinic, etc).
    Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

12. I can identify and provide information for alternative food resources for stroke survivors.
    Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

13. I can identify and provide information related to transportation options for stroke survivors.
    Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

14. I would provide more information to stroke survivors related to the above-mentioned services if it were readily available.
    Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

Appendix F

Post-Test Questions

1. I feel knowledgeable of resources available to stoke survivors in my community.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

2. I feel confident in my ability to locate or identify community resources for stroke survivors.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

3. I have resources for both in-person and virtual support groups for stroke survivors.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

4. I can identify psychiatric supports for stroke survivors/caregivers in my community.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

5. I can provide stroke survivors with specific references for specialty services (i.e. driving, vision clinic, etc).
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

6. I can identify and provide information for alternative food resources for stroke survivors.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

7. I can identify and provide information related transportation options for stroke survivors.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

8. I would use this tool in the future to provide education to stroke survivors on community resources.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

9. I feel confident in my ability to navigate this online resource.
   Strongly Agree Strongly Disagree Neutral Agree Strongly Agree

10. How could this tool be improved upon?

11. Additional comments: