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Recovery Solutions for a Stroke Victim Suffering from Dysphasia from a Technology
 Perspective
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Executive Summary

This analysis and recommendation of solutions addresses the needs of an affluent 81-year-old woman (Sandra) suffering with Dysphasia (an impairment of the ability to use or comprehend words) as a result of stroke. It is presented from a technology perspective and its contents are only intended as recommendations to be considered by the client, her husband Joe, and her Rehabilitation Team.

Sandra's primary needs include speech therapy, reinforcement for speech therapy, and assistance becoming comfortable and familiar with technology to allow her to use computer programs that may be recommended. She also needs to be monitored for depression, strengthen her support groups, and have increased social opportunities.

She has already made significant improvement and is fortunate to have a speech therapist who is supportive of technology use in her therapy. This therapist is willing to orient and assist Sandra in the use of selected technology programs. Sandra also currently has an established support system and a spouse who is willing and able to take her out to meet with friends.

This paper examines 5 available Dysphasia treatment computer programs. Tigtalk Words is an inexpensive basic tool that focuses on one type of development. Computerized Home Aphasia Therapy is reasonably priced and addresses more types of development, but is designed to be used during or after the conclusion of therapy. Aphasia Mate is a thorough program and is designed to be used along with therapy, but is very expensive. Aphasia Tutor is a motivating program which works on six types of development but offers limited lessons and exercises. Parrot Software offers an Internet treatment service with numerous lessons which are updated constantly. It is offered online for a monthly subscription fee, allows therapist involvement, and provides support for its users.

This paper recommends that the Rehabilitation Team be convened to consider the addition of technology programs to the therapy plan. It recommends the use of Tigtalk words to build Sandra's comfort level with technology therapy and to allow therapists to assess the benefits of its use. If the use of Tigtalk words is beneficial and shows that the client may continue to benefit from more advanced programs this paper recommends that Parrot Software Internet Treatment Service be used as a reinforcement tool by the clients outside of therapy sessions. The use of this program is only recommended if accompanied by regular monitoring of its usefulness and appropriateness.

This paper also recommends that Sandra be encouraged to re-establish telephone contact with her son and social contact with her social support system. It does not find chat room use to be an appropriate support at this time.

It is strongly recommended that Sandra's clinical psychologist be very active in monitoring and addressing her psychological needs and any depression issues.

This paper recommends that Joe explore technology options that may provide him with information on Dysphasia and support as a primary caregiver.

All of these recommendations are made with the intention of Sandra's speech therapist providing orientation and assistance. These are services the therapist has already offered and agreed to provide.

This paper concludes that technology offers many assistance options to Sandra and Joe, and that with proper support it may be used as an important component of a rehabilitation plan.

Good summary.

Recovery Solutions for a Stroke Victim Suffering from Dysphasia from a Technology Perspective

Introduction

Sandra is a self sufficient, intellectual woman who is recovering from a stroke. The presenting problem is Dysphasia (also called Aphasia) which, according to The National Institute of Neurological Disorders and Stroke (2000) is an impairment of the ability to use or comprehend words.

The purpose of this paper is to analyze Sandra's rehabilitative needs concerning her dysphasia, to explore the rehabilitative programs she is currently involved in, to analyze where progress is lacking most, and to discover Sandra's needs to prepare her to work [I thought she was 81, isn't she retired?](#) from a technology perspective. This paper will also discuss Joe's needs as her caregiver. After careful analysis of these capacities and needs, I will introduce available options to meet Sandra's needs and the needs of her husband as her caregiver with an emphasis on technological opportunities. After considering these options I will make a recommendation of the therapies, activities, or programs that I believe will be best.

This paper will address accompanying needs, such as depression, but will not thoroughly analyze those needs or make major recommendations for their treatment, as the focus is dysphasia. The paper will not analyze Sandra's physical rehabilitative needs as her Rehabilitation Team is already addressing them. All recommendations are made with the intent that no treatment will be changed or added without the evaluation and order from the Rehabilitation Team and attending physicians.

The information addressed in my analysis and used to make recommendations was gathered from visits with Sandra, Joe, and their close friends Kathleen and Jim. Questions and points of discussion were based around information gathered from The National Stroke Foundation (2000), The National Women's Health Information Center (1999), and The National Institute of Neurological Disorders and Stroke (2000).

Important information used in reaching a recommendation was gathered from Sandra's head Speech therapist, Karen Schick at Health South Rehabilitation Hospital in Wichita Falls, Texas. Additional information was gathered from Sandra and Joe as well as from many web sites. [Good introduction](#)

Definition of the Situation

Sandra is an 81 year-old female who recently suffered a stroke. The stroke initially left her right side paralyzed; however after six weeks of therapy in a rehabilitation hospital she is able to walk with a cane for short distances. The most pressing current problem is Dysphasia. The National Stroke Foundation (2000, p.14) defines Dysphasia as the "impairment of understanding or expressing language due to injury or disease of (the) brain". Sandra's Dysphasia is not severe as she is able to understand and process language but has difficulty using language to communicate back.

Currently Sandra is extremely frustrated and shows some symptoms of mild depression. She is a very affluent, retired Captain and registered nurse and is used to speaking freely, regularly attending social events, and frequently eating out at private clubs with her husband and friends. Her inability to express her thoughts and opinions is very troubling to Sandra, and as a result of it, she does not want to go out of her house. It also prevents her from keeping in contact with her friends by phone. Because of the dysphasia, Sandra isolates herself, preventing opportunities to use speech which, according to The National Stroke Foundation (2000) is necessary for her recovery.

Sandra lives with her husband, Joe, who is 79 years old. He is a retired military Colonel and engineer. He also maintains a very active lifestyle. In addition to his activities with Sandra, he meets a group of friends each morning for breakfast. His mobility is limited due to his severe osteoporosis, which basically prevents him from climbing, lifting, or walking long distances. He has slowed down slightly due to Sandra's stroke. He is a very devoted caregiver, but shows some signs of frustration, especially when Sandra refuses to do or try something.

Sandra and Joe have one grown son, Pat, who lives in Arizona with his wife and young children. Pat only visits once or twice a year and has kept up with Sandra's progress by talking with Joe daily. Due to Sandra's Dysphasia and unreadiness to communicate by phone, he has not spoken with her directly.

Sandra and Joe have various community involvements that have affected their situation. Joe is an active member of a Rotary Club and a volunteer organization called The Mavericks. His clubs have not provided organized assistance but the support they offer Joe has been very helpful. In addition, his friends from these clubs have visited Sandra at home occasionally and have periodically prepared meals to bring to Joe and Sandra. Sandra and Joe also have a small remaining assortment of friends they have made through their years in Wichita Falls. Most of their closest friends have passed away, moved to live with their children, or entered retirement communities. Sandra and Joe's friends Kathleen and Jim have visited them frequently and have offered assistance as Sandra and Joe have needed it. Like many of Sandra and Joe's younger friends, Kathleen and Jim both work full time and are primarily only available on weekends limiting the time they spend with her and their involvement in her recovery. None of these friends have been stakeholders in Sandra's situation. Sandra has not been active in any organizations and she and Joe have not recently been active in church so they have not had any significant support or assistance from other organizations or their church.

Currently Sandra and Joe have help with daily tasks. They have a regular yardman, a housekeeper who comes in once a week, and home health aides who come in twice a day Monday through Friday. The home health aides help Sandra bathe and dress, prepare her morning and evening meals, and assist with her laundry. Joe prepares noon meals, handles daily tasks around the house, and is Sandra's sole caregiver on weekends.

Sandra's Rehabilitation Team makes all decisions regarding her care. The team is made up of many medical professionals including Sandra's Physician, Physiatrist (physical medicine specialist), nurses, and dietitian who monitor her physical well-being. Her Clinical Psychologist monitors her competency and psychological needs including the need for support, reinforcement of her self-confidence, and treatment of depression. Her Insurance Case Manager addresses what treatments will be covered by insurance. Physical and Occupational Therapists direct treatment to meet Sandra's physical recovery. Finally, Speech Therapists target Sandra's rehabilitation from Dysphasia.

Analysis

This analysis addresses three major decisions faced by Sandra and Joe as they work towards Sandra's recovery and regaining their normal lives including as many of their previous activities as possible. Assistive technology, [you need to define this term and say why you limit the considerations to assistive technology. For example, there are programs to help with depression such as Overcoming Depression, a link from the Software Connection home page.](#) the focus of this paper, can potentially be involved in these therapies. When considering options for technology aided therapy the most important information to address before getting started is Sandra's somewhat low comfort level with technology, limited knowledge of it, and hesitation to learn to use it. In addition, hardware needs and costs must be considered as well as software

needs, costs, and options. The primary decision that will have to be made is the selection of therapies to help Sandra recover with an emphasis on treating her dysphasia.

When considering therapies, Sandra's current activities will be taken into account. She meets twice weekly with her speech therapist, is visited at home by her occupational therapist, meets weekly with her physical therapist, and meets by appointment with her physician, psychiatrist, dietitian, and psychologist.

Another consideration would be **alternative therapies** again, need to define terms. Again the use of an alternative therapy will have to be a team decision, which will also involve any therapists who could be treating Sandra while she is using them. To make the decision about what therapy to select, Sandra, Joe, and her doctor will need much more information.

To recommend the best option I will need more information about Sandra and her situation. I will need to know more about her personality type and her willingness to work with therapists, technology trainers, and technology itself. Also, while Sandra's financial situation appears to be excellent, I will need to know if this is the case, as well as what insurance she has and what she and her husband are prepared and able to spend on therapy. I am not sure why you do not have this information.

_____ Sandra and Joe must make the final decisions concerning therapy together. She will have to be comfortable with the therapist available in order to work well with that person and benefit fully from the sessions. Joe will have to be able to get her to sessions if they are not at home. If technology is involved he will have to understand the program well enough to help and encourage Sandra throughout the process. The decision will affect him in terms of physical stress as well as affecting his routine. The progress she is making and challenges she is dealing with will affect him emotionally.

In reaching and carrying out the decision that is made, Sandra's doctor will be important in suggesting, approving, and assisting with information needs about the chosen therapy.

_____ The second decision I don't see where you define the first decision!! that will have to be made will be how to involve Sandra in regaining her communication with her family and friends. If Sandra is capable of typing she and Joe will have to purchase and become familiar with a computer. Again, they will also most likely need to hire someone to help Sandra to learn to use the programs and to support her through becoming comfortable with this new form of communication. If technology solutions are not compatible with Sandra's needs and comfort level, other options will be pursued.

Third, Sandra and Joe will have to seek help for Sandra in dealing with depression. Again, they must involve Sandra's doctor in deciding if she needs to take medication, receive counseling, or just give her support by improving her communication with friends and family members who she previously kept up with. Joe will play a key role in this decision, because Sandra will likely be more unwilling to admit to her depression (National Institute of Neurological Disorders and Stroke, 2000). Joe will have to strongly encourage her to accept help and communicate to her in a way that she will accept how this will improve her situation.

Alleviating Sandra's depression will not only help her, but will also ease some of the frustration felt by Joe. It will improve Sandra's unwillingness to see people, which will reinvolve her in activities that she participated in before her stroke. This will help her recovery by giving her opportunities to use her speech, by increasing her being in motion and walking, and by returning some of her self confidence as she feels more capable and sees that she is making progress.

This analysis also addresses one decision that is faced by Joe and which could affect Sandra and her recovery. Joe must first decide if he needs support as Sandra's primary caregiver.

Sandra's doctors and Sandra and Joe's friends will play a part in supporting Joe and in encouraging him to seek information and help as a caregiver. Joe will have to look at what support systems and information sources are available and decide which is most easily available to him. Information Basis of the Decision I am not sure what decision you refer to as THE DECISION. This section does not seem to flow well with the previous. It would be nice to have an introductory sentence to allow the reader to know what this section will cover. Primarily, Sandra needs to recover her faculties as much as possible given her physical disability. However, Sandra's prior inexperience with computers could pose a major barrier. Locating an excellent person to help Sandra and Joe become comfortable using technology could be key in helping Sandra to use and benefit from the appropriate programs. Bottom line, the feasibility for change using technology is good because it gets the **most out of on** Sandra's need for privacy and gives her an opportunity to keep it, which will encourage her to accept it confusing sentence. The Stroke Association shares research and provides information on available Programs through their Dysphasia Support in Sefton Web Page (The Stroke Association, 2001), which can be a source of information for the subsequent solutions analysis. Other web pages that are available and need to be researched to find solutions are assistivetech.net (Georgia Tech Center for Rehabilitation Technology, 2000) and The National Institute of Neurological Disorders and Stroke Information Page (National Institute of Neurological Disorders and Stroke, 2000). Sandra needs to be as communicative as possible given her disability. She will need a way to regain communication with her son to help her maintain as normal a relationship with him as she possibly can. Everyday technology like e-mail needs to be considered as a way to allow Sandra to communicate with her son and her friends. To decide if this is likely to work, Joe will have to find out if Pat and other friends of Sandra's are available to use technology in communicating with her.

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Assistive technology could also potentially help Sandra communicate with her computer and with those around her. Given her hesitation, anything that could be seen by those around her might be unlikely to be used by Sandra. However, technology provides many options that need to be explored and that could provide appropriate help for Sandra. The ERIC Clearinghouse on disabilities and Gifted Education (Council for Exceptional Children, 2001) website needs to be explored to locate research connections that could be of help to Sandra.

Finally, Sandra will need to be linked to a network that can support her through this ordeal and help her through her struggles with depression. According to C. Harrington, & S. Salloway (2001) symptoms of stroke can mimic depression, so a Doctor will have to decide if treatment for clinical depression is needed. The National Stroke Foundation (2000) recommends that the range of emotions and grieving reaction of any stroke victim should be addressed and allowances to help with it be a part of their rehabilitation.

Joe will also need to be linked to a support network that can ease his frustration and give him information about what to expect and what is available. Technology should be explored as an excellent option that would allow him to receive this support and information from his home so he does not have to leave Sandra. The NINDS Stroke Information Page (National Institute of Neurological Disorders and Stroke, 2000) provides links to many organizations, which need to be explored to find appropriate support for Joe.

In summary, primary needs include speech therapy, the location of a person to assist Sandra with using and becoming comfortable and familiar with technology, the strengthening of her support groups, and increased social opportunities. Another vital need is ongoing depression monitoring and treatment if found to be appropriate.

Preliminary research has shown that technology offers much potential to address these

needs. To plan for Sandra's rehabilitative needs, more information is needed including information on Sandra's willingness and ability to use technology in her recovery, the specific goals of recovery her technological rehabilitation plan should address, and specific information on her depression and psychological needs. After gathering information on Sandra's specific situation, information is needed on specific programs to help with Dysphasia, to possibly help her with speech, and to provide her with a support system. After planning for Sandra, information is needed on Joe's willingness and ability to use technology as a caregiver and on specific locations for locating information and available support groups to fill his needs.

Websites are available to provide information on therapies, available research, and support groups to help Sandra and Joe. These websites need to be researched to find how what they offer will meet Sandra's abilities and willingness to use their therapies, groups, and solutions.

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Primary strengths at this point are Sandra's significant improvement since her stroke, the supportiveness of her speech therapist in considering technology incorporation in therapy, and an established support system. Another strength is that Sandra and Joe own a computer and Sandra, while limited in her use of it, has previously been able to type. Joe is also able to use the computer and is able to type.

Available Options

To summarize the needs, Sandra, an 81-year-old stroke victim, needs to strengthen her support system, increase her rehabilitative activities, and become involved in activities with a support system to decrease her depression and anger in response to suffering a stroke. While online support groups and technology therapies are available, Sandra's limited experience with technology has prevented her from seeking any of these opportunities as of yet.

Joe, Sandra's husband needs to strengthen his support system as well. He also needs to learn more about the stroke Sandra suffered, what processes she will go through during her rehabilitation, what she will need from him, and what he will need as a caregiver. Based on these needs I would consider the following options. It seems that is you summarize needs, you should also summarize capacities here? I think these first two paragraphs belong in the previous section.

Option 1

Tigtalk Words is a basic therapeutic tool for word recognition, a problem often associated with stroke? It is easy to use and the therapist directing its use can set options for it to focus on specific areas. When a patient is unable to complete an exercise Tigtalk alternates audio and visual prompting to encourage the user and to stimulate both areas of understanding. It is very affordable at a price of \$19.99. The biggest setback to Tigtalk Words is that it is limited to only one type of development (word recognition) while dysphasia affects many areas of speech and comprehension for example. It is appropriate for Sandra because the lessons it provides are short, simple, can be operated using either a keyboard or mouse to accommodate physical needs, and can be easily stopped at any time. They would not be overwhelming and would provide an easy introduction to using technology. However, Tigtalk may not be the best solution because it only addresses one type of development.

Option 2

Computerized Home Aphasia Therapy (CHAT) is a program that is designed to make its user feel "in charge" of their therapy. It must do more than this!! Feeling in charge in not an identified need for Sandra if I remember correctly. It comes with a printed users manual and includes 220 exercises for 7 speech modalities and allows the user to gradually progress to more difficult levels. It is offered at a price \$149.50. The biggest disadvantage to this package is that it is designed for use as therapy is concluding and currently Sandra is not ready, or near ready to

conclude therapy. One other disadvantage for Sandra is that CHAT is designed to minimize the role of family or helpers (while it confirms that professional assistance may be helpful). Another program that encourages users to ask for help may be more appropriate for Sandra because it would encourage her to use speaking skills with another person instead of only with a program. This program definitely could be used by Sandra, but may not be the best one available.

Option 3

Aphasia Mate is an easy to use program for treating Dysphasia and is aimed at everyday communication skills. Its tasks are highly relevant to everyday communication skills including comprehension of written and auditory material, spelling, solving problems of time and money, and recognizing related items. It contains 146 therapy tasks and 1700 exercises. It presents tasks ranging from basic to highly difficult so it may be used from early to late stages of treatment. The program offers instructions in written or audio form. It allows the attending therapist to select exercises for the user and it provides the therapist with accuracy feedback. Priced at \$1049.00 the program is very expensive. This program would be very useful for Sandra and her therapist. It could start at her level and theoretically see her through to a full recovery. The up-front expense of the program makes me hesitant to recommend it as a top solution because it is hard to be sure that a technology program will be best for Sandra until she has at least beginning experience using them. [Is a demo or trial version available?](#)

Option 4

Aphasia Tutor is a rehabilitation program that provides motivating feedback on correct answers. It focuses on building the patients self-esteem by providing motivating feedback correct answers and providing hints to help the user find the correct answer. It works on 6 types of development [seems like it would be very important to list these to see if these are what Sandra needs](#) but only provides 7 types of lessons, making it a limited software package. It is available for \$397.00. This program could be a good option because it exercises 6 areas of development. It may not be the best option because it only offers 7 types of lessons and considering that it only offers 700 questions, Sandra could run out of new questions (or become bored with answering the same ones) before reaching the end of her recovery.

Option 5

Parrot Software is an Internet Treatment Service which when downloaded, provides access to 60 programs and 70 types of lessons. It is offered online and is updated constantly. A subscription to Parrot Software includes access to a toll-free support line for people who have never used a computer. [You should refer to your attachments here.](#) While the charge is only \$24.95 per month this program requires Internet access, adding an average of \$20.00 per month to its cost. Over the course of one year, the combined expense of Parrot Software and Internet access totals \$539.40. This option offers many advantages. The one thing it allows that no other option does is for the therapist to customize its use from their office. Because it is web based, its contents and are exercises may be accessed from more than one computer. It provides an “un-ending supply of lessons”. The fact that Parrot Software is designed to be easy to use for individuals who have never used a computer before makes it ideal for Sandra who has used a computer, but only for simple word processing. The toll-free support number would not be helpful to Sandra at first due to her refusal to use a telephone, but could involve Joe in helping Sandra resolve difficulties. Because Parrot Software is offered through a monthly subscription, it would not require a large financial investment upfront. This is ideal for Sandra’s situation because it would not result in a large, nonrefundable beginning investment before finding out how Sandra will do using it. The main complicating factor in selecting Parrot Software is its requirement of Internet access. This requirement adds to the complexity of the program for

someone who is not used to using a computer and adds to the monthly expense of using it.
Internet access could help Sandra communicate with her son, e.g., view and send pictures etc.

Recommendations

After considering available technology programs to aide in Sandra's recovery from dysphasia, I would recommend that technology be included in her rehabilitative program. Before recommending any added activities I decided that based on the numerous appointments Joe must transport Sandra to each week, it would be inappropriate to increase the out of home appointments Sandra must attend as a result of his limited mobility. I believe that technology therapy will be an excellent addition to her rehabilitation program without requiring extra trips to appointments. Because Sandra and Joe already own a desktop computer with Windows 95 (for his business) additional equipment will not be to be purchased to operate any of the programs listed as options. This capacity is important because it means no major purchases will be required and no change will have to happen in Sandra's home environment. Using one of these programs could, speed her recovery by providing reinforcement of therapy and allowing her to practice therapeutic exercises more frequently.

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To begin serious consideration of any addition to Sandra's rehabilitation program her Rehabilitation Team must meet to address the addition of technology to her therapy. I would recommend that with their approval and assistance, Sandra start by using Tigtalk Words to build her comfort level with using technology and computerized Dysphasia exercises. After a preliminary period of one to three months I would recommend that Sandra's speech therapist assess the resulting benefits of Sandra's use of Tigtalk Words as well as her comfort level with using technology therapy. The therapist and rehabilitation team must then decide if Sandra is ready to use a more extensive therapeutic program. When they feel that Sandra is ready to move on, I recommend the use of Parrot Software as a reinforcement tool outside of therapy sessions.

Rather than only prescribing the use of Parrot Software I would recommend that Sandra's therapist also introduce the program to both Sandra and Joe and train them on how to use it. If possible, I would recommend that she assist them in signing up for Internet service and ordering and installing Parrot Software. This will eliminate concerns about Sandra's comfort level and willingness to work with new therapists. In addition, I would recommend that the therapist meet with Joe alone to discuss with him what to do if Sandra becomes confused by or frustrated with the program. She should reinforce his working knowledge of the program so that he will be prepared to offer assistance to Sandra as she may need it. Because Sandra's speech therapist is familiar with these types of programs and has already stated that she is willing to work with and teach Sandra and Joe in using them, this is a plausible recommendation.

Sandra's speech therapists and the Rehabilitation Team will need to regularly monitor Sandra's progress and reevaluate the usefulness and appropriateness of Parrot Internet Treatment Service as a part of Sandra's rehabilitation plan throughout the time she uses it. I would recommend that her speech therapist check the progress reports Parrot Software will generate on Sandra and guide her through the progressively difficult exercises, as she is ready.

Regarding Sandra's Support System

In reference to Sandra's support system, I would recommend that her psychologist and speech therapist update one another on her activities and progress. I would recommend that Sandra be encouraged to speak to her son by phone, even if difficult, by both of them. Pat will be supportive and patient and will be an excellent first phone contact. Speaking with him will increase her self confidence in her ability to communicate by phone and will increase her use of speech communication. I think you should recommend that the psychologist contact Pat and explain the role he can play in her therapy. I would also recommend to Sandra's husband that he

take her out to eat and to other relaxed social events as he can, to encourage rekindling of her friendships and returning to her post-stroke lifestyle. Due to the complexity of typing and learning to navigate the internet I would not recommend that Sandra seek support in chat rooms at this time.

Regarding Depression

I would recommend that Sandra's Clinical Psychologist monitor her and prescribe medication and therapy for depression as it may be needed. Again, I do not feel that chat room support will be appropriate at this time because it will add to Sandra's anxiety as she becomes comfortable with using technology. I think you should recommend a reexamination of support group once technology comfort increases.

Regarding Joe

As Joe has felt frustrated with Sandra's situation, progress, and attitudes, he will have to decide how to improve his understanding of Sandra's situation and how to strengthen his support system. Because Joe is somewhat familiar with using a computer I would recommend that he log on to websites such as Dysphasia Support in Sefton and the National Institute of Neurological Disorders and Stroke, Stroke Information Page. After he becomes comfortable with using the Internet I would recommend that he consider logging into a support chat group like the one available in a link on the as Dysphasia Support in Sefton page. I would not recommend that Joe be pressured to use these pages, but that he is made aware of their existence and shown how to navigate them. Sandra's speech therapist has stated that she will assist Joe in using technology and show him these sites at the time when she assists Sandra with using speech therapy programs. It would be nice to include an appendix that shows what a support group chat looks like.

Next Steps

In order to bring up technology as a reinforcement for therapy, Sandra and Joe **must request** are you sure? Can they not suggest and get agreement from Sandra and Joe? for her speech therapists and Rehabilitation Team to consider, approve, and plan for her use of technology. Her therapist must introduce the program to her and assess her physical capacity to use it. Her occupational therapist must be willing to help Sandra improve any typing skills that are difficult for her, although she is currently capable of typing in small amounts and with adequate time.

Technology Issues

The primary technology issue is Sandra and Joe's limited experience with technology. While the assistance offered by Sandra's speech therapist has been quite remarkable, it must be considered that she may not be able to provide the quantity of assistance that could be needed. To receive additional assistance with using technology Sandra and Joe could consult with a speech therapist outside of the regularly scheduled sessions. This could be expensive and would require extensive communication between the therapists. Another option would be for them to hire Burke Communication Services or The Computer Tutor in Wichita Falls as consultants. This would be a difficult solution because of the consultant's inexperience with Dysphasia and Sandra's hesitancy to deal with someone she does not know. Joe however is accustomed to working with consultants and would be financially able to afford one. He could ask for assistance and then pass his knowledge on to Sandra. I would not recommend that these possibilities deter Sandra from using technology as she has a standing offer for help from her therapist and she would only need the additional help in case of difficulty. Because of the very simple nature of Dysphasia therapy programs this assistance is very unlikely to be needed, but should be considered as a possible need. What about their friends. Friends love to show their friends how

to use the Internet, etc.

Another issue that must be addressed before Joe gathers information from websites is his trust of technology and the information obtained through it. As an engineer, Joe has used technology, but never in an emotional situation or a medically supportive capacity Good point. As showing him how to use the websites Sandra's therapist should ask Joe if he is comfortable using information obtained this way. She should show him the telephone numbers given on the websites and encourage him to use them if he needs affirmation.

Conclusion

In planning for Sandra's recovery she and Joe must make three major decisions in collaboration with her doctors. They must select therapies to help Sandra recover from her Dysphasia. They must consider the therapeutic programs recommended here and decide if they are willing, able and ready to use them. They will also have to decide whether Sandra needs to begin using new methods of communication to keep her in touch with friends she communed with before her stroke. Following the recommendations provided, such as beginning phone contact between Pat and Sandra may be uncomfortable and will only be accomplished if everyone involved is committed to being patient and to seeing the improvement through. Finally, they will have to address Sandra's struggles with depression and decide whether Sandra needs treatment for her depression or if increasing her contact and communication with her support system will remedy her despair. While suggestions for the increased contact and communication are included, the most important recommendation is that Sandra's Clinical Psychologist stay on top of identifying and treating symptoms of depression. I am not sure why you did not use technology for this problem. One of the applications listed on the Software Connection and that many of the class reviewed was the NMHA's depression screening site. It seems that Joe might benefit a lot from interacting with this site.

Joe will also have to make two decisions primarily by himself. As he has felt frustrated with Sandra's situation, progress, and attitudes, Joe will have to decide how to improve his understanding of Sandra's situation and how to strengthen his support system. He will have to decide if he is comfortable gathering information through his computer and become oriented in locating this information. Any modifications or additions to treatment will have to be made through a meeting of Sandra's Rehabilitation Team and will have to be monitored by her physician or therapists. Because her speech therapist is highly supportive of Sandra's use of technology-aided therapy and is able to orient and assist her in its use, this type of supplement to therapy is a plausible solution. After serious consideration of 5 Dysphasia therapy programs, two were identified and recommended for use. Tigtalk Words could be purchased for a minimal fee and could be used as an introductory program for using technology. If it is found to be helpful and Sandra feels comfortable using technology Parrot Internet Treatment Service could be used through a monthly subscription. It offers numerous exercises, is updated regularly, is designed to be easy to use for individuals who have never used a computer before, and could be used by Sandra throughout the duration of her recovery. Because Parrot Software is offered through a subscription Sandra could cancel her subscription if it were not a good solution for her.

Sandra's Support System will be strengthened through establishing the ability to talk to Pat by phone and by increasing social activities to gradually approach a level close to her pre-stroke activity level.

Sandra's Clinical Psychologist will monitor her for depression and ensure that it is addressed and treated appropriately.

Joe will be introduced to websites that offer information about stroke and caregiver issues. In addition he will learn to access support chats through links in the websites. He will be

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encouraged to explore these options but not pushed beyond his comfort level.

In conclusion, technology provides many excellent opportunities for Sandra as a stroke victim and a Dysphasia patient. Not all of these options are currently accessible but computerized Dysphasia therapy programs could provide significant assistance.

References

Aphasia Hope Foundation (2001). Aphasia Hope Foundation. Retrieved April 19, 2001 from the World Wide Web:

<http://www.healthlinkusa.com/getpage.asp?http://www.aphasiahope.org/>

Aphasia Therapy Products (2000). Computerized Home Aphasia Therapy. Retrieved April 19, 2001 from the World Wide Web: [http://www.aphasia-](http://www.aphasia-therapy.com/noframes/index.html)

[therapy.com/noframes/index.html](http://www.aphasia-therapy.com/noframes/index.html)

Avaaz Innovations (2001). Aphasia Mate. Retrieved April 10, 2001 from the World Wide Web: <http://www.avaaz.com/clinicaltools/aphasiamate.htm>

Bungalow Software (2000, August). The AphasiaTutor (AT) series. Retrieved April 10, 2001 from the World Wide Web: http://www.bungalowsoftware.com/products_list.htm

Council for Exceptional Children (2001). ERIC Clearinghouse on Disabilities and Gifted Education. Retrieved March 23, 2001 from the World Wide Web: <http://ericec.org/>

Encyclopedia Britannica (2001). Encyclopedia Britannica. Retrieved April 20, 2001 from the World Wide Web:

<http://www.britannica.com/bcom/eb/article/1/0.5716.8101+1+7993.00.html>

Georgia Tech Center for Rehabilitation Technology (2000). Assistivetech.net. Retrieved March 23, 2001 from the World Wide Web: <http://www.assistivetech.net/>

Harrington, C., & Salloway, S. (2001). The Diagnosis and Treatment of Post-Stroke Depression. Retrieved March 14, 2001 from the World Wide Web:

http://www.brown.edu/Departments/Clinical_Neurosciences/articles/ch18197.html

National Aphasia Association (May 1997). Sources of Information About Aphasia Rehabilitation Research. Retrieved April 20, 2001 from the World Wide Web:

<http://www.aphasia.org/NAAsources.html>

National Institute of Neurological Disorders and Stroke (2000, October 16). NINDS Stroke Information Page. Retrieved March 22, 2001 from the World Wide Web:

http://www.ninds.nih.gov/health_and_medical/disordersstroke/htm

National Institute of Neurological Disorders and Stroke (2000, October 12). Post-Stroke Rehabilitation Fact Sheet. Retrieved March 22, 2001 from the World Wide Web:

http://www.ninds.nih.gov/health_and_medical/disordersstroke/htm

National Stroke Foundation (2000). About Stroke - Brain Attack: Guide to Your Rehabilitation. Retrieved March 22, 2001 from the World Wide Web:

<http://www.strokefoundation.com.au/rehab.PDF>

The National Women's Health Information Center (1999). Stroke - Easy to Read. Retrieved March 19, 2001 from the World Wide Web:

<http://www.4women.gov/faq/Easyread/stroke-etr.htm>

Parrot Software (2001). Parrot Software for communication Disorders. Retrieved April 10, 2001 from the World Wide Web: http://www.parrotsoftware.com/prg/iss_info.shtml

Pitkanen, K. (2000). Stroke Rehabilitation in the Elderly: A Controlled Study of the Effectiveness and Costs of a Multidimensional Intervention. Retrieved March 14, 2001 from the World Wide Web: <http://www.uku.fi/neuro/52the.htm>

Schick, K. (2001). Unpublished Raw Data.

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The Stroke Association (2001). Dysphasia Support in Sefton. Retrieved March 12, 2001 from the World Wide Web: <http://members.netscapeonline.co.uk/dysphasiasupport/>
Tigress Communications (2000). Tigtalk Words. Retrieved March 23, 2001 from the World Wide Web: <http://www.fayle.freerve.co.uk/products3.htm>

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Several appendices deleted

Definitions

Stroke *n.* A sudden impairment of brain function resulting either from a substantial reduction in blood flow to some part of the brain or from intracranial bleeding.

Dysphasia (*also called Aphasia*) *n.* An impairment of the ability to use or comprehend words, usually acquired as a result of a stroke or other brain injury.

“brain-generated defect in sounding words. Symptoms are associated with the location and extent of the brain tissues involved. An afflicted person, for example, although able to move his mouthparts and utter sounds and able to understand spoken words, may be totally unable to form words himself. Another aphasic person may be able to say the word *hopper* but be unable to say the word *hop*.” (Encyclopedia Britannica, 2001)

Recommendations

At First:

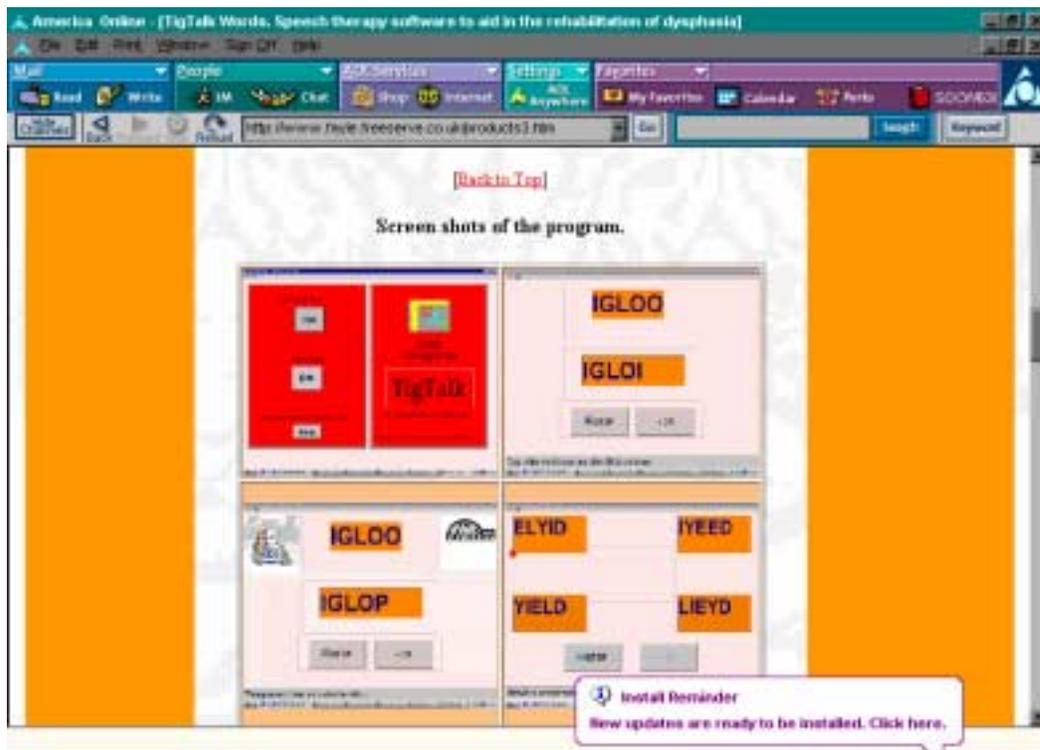
1. Convene Rehabilitation Team to address therapy including technology
2. Use TigTalk Words to build comfort level
3. Assess benefits of technology therapy

If introduction of technology therapy is successful:

4. Reconvene Rehabilitation Team to address when to begin use of technology to address wide range of tasks
5. Use Parrot Software as a reinforcement tool outside of therapy sessions
6. Regularly monitor progress and usefulness/appropriateness of Parrot Internet Treatment Service

Regarding Sandra's support system:

7. Sandra's Clinical Psychologist will monitor her and prescribe medication/therapy for depression
8. Due to the complexity of typing, chat room support is not appropriate at this time
9. Sandra will be encouraged to speak to her son by phone even if difficult
10. Sandra's husband will take her out to eat and to other relaxed social events



America Online

File Edit Print Address Sign Off Help

Mail Google AOL Services Settings Favorites

Read Write IM Chat Shop Internet AOL anywhere My Favorites Calendar Ports SCORED

http://www.parrotsoftware.com/prg/vis_info.shtml

Parrot Software - Internet Treatment Service

Simple Word Finding Program title: *Visual Confrontation Naming*



Visual Confrontation Naming Program

Letter

Description

Sentence

Choice

football player

Type the name of this picture and press ENTER

Time: 15 sec. 00:15

Click here to continue

This program provides clues when you click a picture. You can click the Letter button to see a description of the picture, click the Sentence button to see the word used in a sentence, click the Choice button to see the picture name in a multiple choice list. Then, just type the correct answer to the question and press the Enter key. You can even tell the program to accept partially correct spellings of the picture name.

Sample Word Finding Program title: *Visual Confrontation Naming*

Done

America Online

File Edit Print Address Sign Out Help

Mail Google AOL Services Settings Favorites

Read Write IM Chat Shop Internet AOL Anywhere My Favorites Calendar Ports SCORE3

http://www.parrotsoftware.com/prginfo_info.shtml

Parrot Software - Internet Treatment Service

... please name it a meropic, choose the word from your topic and correct answer to the question and press the Enter key. You can even tell the program to accept partially correct spellings of the picture name.

Sample Cognitive Reasoning Program Title: *Cause and Effect*

What happens to mayonaisse if it is not refrigerated?

It goes out

It spoils

It melts

It turns black

Score: 1 Time: 00:00

Sample Cognitive Reasoning Program title: Cause and Effect

This program is simple and straight-forward. Just find the correct answer to the question, click on it and then click the large button at the bottom of the screen.

Sample Reading Program Title: *Inferential Reading Comprehension for*

Done

The screenshot shows a web browser window with the address bar displaying http://www.parrotsoftware.com/prglos_info.shtml. The page title is "Parrot Software - Internet Treatment Service".

Text on the page:

Many words in English have multiple meanings. In one example, the word bark can refer to a tree's covering or a sound a dog makes. Users must type in the correct word and then click the button at the bottom of the screen.

Simple Functional Skills Program Title: *Making Change for Money*



Making Change for Money was designed to provide practice for people with higher level cognitive impairments to help smooth their transition back to normal life activities. The program asks the user to 1) determine how much

Done