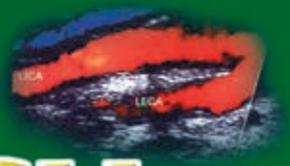




STROKE WATCH



OFFICIAL NEWSLETTER OF THE SINGAPORE NATIONAL STROKE ASSOCIATION • MICA (P) 043/08/2012 • May - Aug 2013

Virtual Reality Rehab@Home After Stroke

By Dr. Bala S. Rajaratnam
Manager/Project, School of Health Sciences, Nanyang Polytechnic

STROKE is a devastating medical condition. With advanced medical knowledge and professional care, many who experience a stroke can return back to society with some level of independence. Thus, the aim of rehabilitation is to achieve early and maximal motor recovery for independent living in society.

Early and active involvement in the first few months post-stroke can result in moderate improvement in walking speed & activities of daily living. Many researchers have found that facilitating independent and accurate practice of rehabilitation exercise may lead to earlier and maximal motor recovery. Virtual reality technology is a novel way for patients to exercise with minimal supervision as part of the rehabilitation process following stroke. Some of these systems have been tailored for specific functional activities as well as monitoring to allow for feedback and intervention.

The Nanyang Polytechnic recently introduced off-the-shelf virtual reality (VR) games through the Nintendo and Wii system to acute patients after stroke during their therapy time. This study found benefits equivalent to intensive therapy. A daily program of 40 minutes of therapist guided program enhanced with 20 minutes of VR games achieved the same improvement compared to the standard intensive 60 minute therapist guided program. More importantly, VR therapy within conventional rehabilitation is an innovative treatment adjunct that keeps patients involved and motivated in their recovery (Ng et al 2012).

A joint project between the School of Health Sciences, School of Engineering and School of Interactive Digital Media from Nanyang Polytechnic developed a simple wearable system connected to games which are functional such as preparing meals, toileting and doing laundry (figure 2) and in augmented reality situations (figure 3). Furthermore, we have developed a tracking system that allows patients to use the system at home while being monitored by their therapist through the internet.



Figure 2: Functional Games for rehabilitation

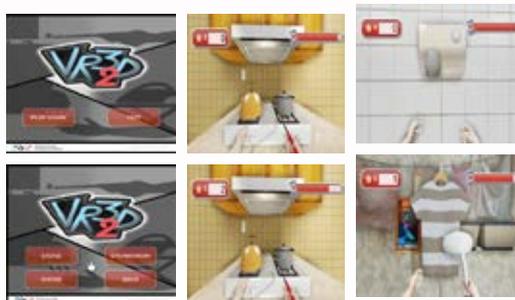


Figure 3: Augmented Reality Therapy task

For more details do visit the following link: <https://sites.google.com/site/arrehabhome/>

Reference:

Ng Z J-C, Rajaratnam B.S. (2012). Can Virtual Reality with convention rehabilitation enhance balance recovery after stroke? Proceeding of the 6th International Convention on Rehabilitation Engineering & Assistive Technology Singapore.



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Planning Ahead - Legal Issues for Stroke Patients, Family Members & Caregivers

By Ms Sumytra Menon

Barrister and Senior Associate in Research at the Lien Centre for Palliative Care

Most of us would never consider the possible legal implications that may result when a person suffers a stroke. It's not something that comes up in ordinary conversations with family and friends. However, some of those consequences are worth considering and planning for, even if you are healthy.

Advance Care Planning (ACP)

This is a new concept in Singapore and ACP is just starting in some healthcare institutions. ACP is an ongoing process of communication, where you reflect on, discuss and document your values and wishes regarding future medical care with your healthcare professionals and loved ones. The information recorded from the ACP process will help guide the medical team and your loved ones to make treatment and care decisions in your best interests, if you should lose capacity to make your own decisions in the future. The healthcare professionals would usually honour the wishes made in your plan, even though there is no specific legislation that requires them to do so. To find out more about ACP, please go to <http://www.aic.sg/ACP/>

Planning ahead for a time when you may not have the capacity to make your own decisions is worthwhile because your loved ones and healthcare team will know what your preferences are and will not have to guess what you would have wanted. Appointing surrogate decision-makers should make it easier to manage your care and finances. Making a will means that your property can be distributed according to your wishes instead of following the rules laid down by the law which determines how your property is distributed if you die without making one.



Here are some things you can do to prepare ahead:

Will

A will only comes into operation when the person who made the will dies. It is a legal document you make that states how you want your money and property to be distributed when you die. You can make a will on your own without the assistance of a lawyer, although there is a risk that it may be invalid if you have not complied with the legal formalities. To find out more information about making a will go to <http://www.lawsociety.org.sg/forPublic/YoutheLaw/MakingaWill.aspx>.

Lasting Power of Attorney (LPA)

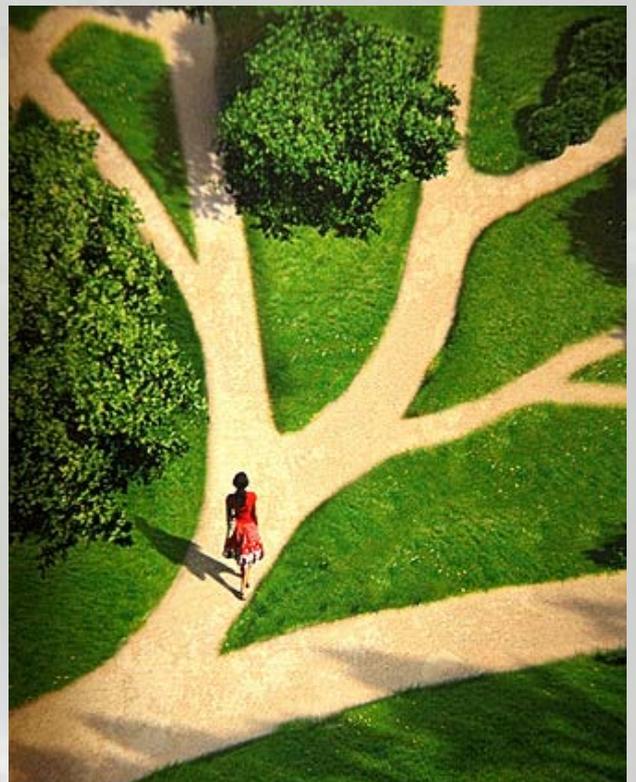
An LPA is a legal document you (donor) complete appointing one or more other persons (donees) to make decisions on your behalf when you have lost capacity to make those decisions. So, it only comes into effect when you lack capacity to make the specific decision at the time the decision needs to be made. You can make a Personal Welfare LPA and/or a Property and Affairs LPA. A Personal Welfare LPA allows the donees to make decisions relating to your everyday care such as where you live and your daily activities. You can specify that the donees have the power to make healthcare decisions on your behalf when you lack capacity to do so but under the law (Mental Capacity Act) that power does not include serious medical decisions, such as treatment decisions for stroke. Those decisions are ultimately made by the doctor, in the patient's best interests, usually after the doctor has consulted with the patient's relatives. A Property and Affairs LPA allows donees to make decisions relating to your property and finances, such as buying and selling property and managing bank accounts. The main advantages of making an LPA is that you can plan in advance and appoint donees you trust to be your substitute decision-makers. You can make an LPA on your own, or you can hire a lawyer to help you to make one. If your wishes and circumstances are fairly straightforward, then you can probably make one yourself. If you have more complicated wishes or financial arrangements, then it is probably advisable to consult a lawyer.

To find out more about Lasting Powers of Attorney, go to www.publicguardian.gov.sg. Guides on Lasting Powers of Attorney have been prepared in the four official languages at <http://www.publicguardian.gov.sg/Resources/Guides.aspx>.



Advance Medical Directive (AMD)

An AMD (made in accordance with the Advance Medical Directive Act) is a legal document that you complete stating you do not wish to receive extraordinary life-sustaining treatment to artificially prolong your life in the event you are terminally ill, and death is imminent. You need to complete the AMD form and take it to a doctor who will explain what an AMD is and certify that you have mental capacity to make one. The doctor and another person will witness your signature on the AMD form. That form is then submitted to the Ministry of Health where it will be registered in the AMD Registry. There is no fee to register an AMD. Your AMD is only acted upon if you lack mental capacity to make your own decisions about whether you wish to receive such treatment. Three doctors have to certify that you are terminally ill and at imminent death before the AMD is carried out. You can cancel an AMD if you change your mind, and you can do this verbally without needing to fill in any paperwork. If you decide to make an AMD, you should inform your healthcare professionals and relatives. To find out more about an Advance Medical Directive, go to http://www.moh.gov.sg/content/moh_web/home/policies-and-issues/advance_medical_directiveamd.html.



Best Wishes for Hazel & Don

Hazel Dixon & Donald Dixon, a lovely couple from the United States, were both active participants in SNSA activities, often encouraging other stroke survivors and family members. Their daughter, son-in-law and lovely grandchildren would also support the activities organised by the stroke association, such as the festive celebrations like Moon cake festival, Chinese New Year, outdoor trips to Singapore Flyover and our trip to Johor Bahru in Malaysia.

Donald shared that Hazel had her first stroke in November 1985, at the age of 48. Despite the early onset of stroke and impaired vision, Hazel demonstrated her good fighting spirit to recover from stroke and she continued to lead an active and normal life, travelling frequently and extensively with husband for work assignments.

Hazel experienced her second stroke in September 1992, this time with resultant left sided weakness. Hazel related her experience in the Rehabilitation Hospital in the United States, where she witnessed the other stroke patients' challenges in regaining their functional capabilities. Hazel then promised herself and proved to the treatment team that she was motivated and would learn to be independent. She said a prayer to God that should she regain her ability to walk again, and continues to praise God for the rest of life.

Hazel & Don came from Ohio to Singapore in July 2010 to join their daughter and son-in-law, adorable grandchildren

when they stationed here for work. The lovely couple expressed their wish to the daughter that they would like to find something in Singapore which they could relate to and would feel comfortable and encouraged to join the activities. Their daughter drove past No. 26, Dunearn Road and she was pleasantly surprised to discover the stroke association. The family then decided to pay a visit to the association and find out more about the activities. Don shared that for the past 2 years, they both really appreciated and enjoyed the programmes and the activities organised. They felt that the activities bind people together, and they were able to identify with one another, instilling strengths & hope.

Don shared that though there were cultural differences between Singapore & the United States, there are universal needs to reach out to the community of stroke survivors, family members and concerned public. Stroke survivors and family caregivers could help encourage one another through their mutual sharing and assistance, reminding one another to not give up, and to be resilient while coping with the challenges ahead and continuing a good quality of life.

As Hazel's & Don's daughter & family have returned to the States, they are planning their return to the US in June 13. We would like to take this opportunity to express our appreciation and gratitude for their active participation and support shown towards the stroke association as well as our best wishes to this lovely couple.



AGM – 30 March 2013

The annual general meeting was held on 30 March 2013 with 28 members in attendance. In addition to attending to business at hand, we enjoyed the interaction among the members and also had a delicious buffet lunch.

President Eugene Escanan shared the association's commitment to become a resource centre for stroke survivors and their caregivers to fight STROKE. The annual report was also presented including updates on;

- 1) Befriending services & support rendered to stroke survivors and families
- 2) Stroke Club activities
- 3) World Stroke Day Celebration and Malay Seminar in Yio Chu Kang Community Club on 20 Oct 2013
- 4) Publications of Stroke Watch
- 5) Fund Raising
- 6) Progress on the negotiation with MOH on reinstatement of Institute of Public Character (IPC)
- 7) Plan for future activities and development: strategizing members' recruitment, strengthening volunteers' involvement, organising regular stroke club activities to foster better social and community integration, increasing distribution for stroke watch publication, and website linkage with relevant social agencies (e.g. Agency for Integrated Care)

Ann Yin helped facilitate the discussion for the constitutional changes of the association as this is essential for the association to pursue the application for IPC status to be reinstated by the Ministry of Health. All members responded actively and positively to support the proposed changes of the constitution, and also the future activities of the association.

Wan Jiun reported on the 2012 financial report of the association.

The AGM then had its bi-yearly election for the new Executive Committee to be formed for year 2013 / 2014. We congratulate the following members who were elected into the Executive Committee

President: Dr Deidre Anne De Silva
Vice President: Mr Eugene Escanan Jayme
Secretary: Ms Nur Hafizah
Assistant secretary: Mr William Low
Treasurer: Ms Tan Wan Jiun
Assistant Treasurer: Mr Anthony Quek

Members:
1) Dr N V Ramani
2) Dr Phua Sin Yong
3) Ms Ann Yin
4) Ms Michelle Chin
5) Mrs Lee Lay Beng

Co-Opt Members:
1) Ms Susan Loh
2) Ms Huang Der Tuen

Internal Auditors:
1) Ms Diane Theng
2) Ms Soh Lay Bee

As the AGM ended at 3:00pm, there was a atmosphere of being energized with many members expressing their interest and enthusiasm to participate in the association's programmes and activities.



How to prevent falls in individuals with stroke

Stroke causes physical impairments such as muscular weakness, abnormal muscle tone and poor balance. Together with other common impairments such as incontinence, mood disturbance and visual problems, the risk of falls is higher in stroke survivors. In fact, falls are the number one medical complication after an acute stroke. Studies have found that the falls risk for individuals with stroke is more than doubled when compared with the general elderly population.

The consequences of falls can be severe in both physical and psychosocial aspects. Individuals with stroke have an increased risk for hips fractures and they very often do not regain independent mobility after such a fracture. Fall injuries to the head and spine can be life threatening or may cause one to be permanently bed bound. Stroke survivors are typically kept on medications to prevent a recurrent stroke which may include blood-thinning drugs which can pose a risk of massive bleeding following a fall. Individuals who fall frequently may develop a fear of falling which limits their physical activities and social participation. This can lead to further physical deconditioning, loss of independence and depression from social isolation. Falls may also result in increased caregiver stress due to associated high medical costs and increased need for physical assistance.

If you are a stroke survivor or caring for one, you can intervene with certain strategies to minimize the risk of falling. Firstly, you should identify the situation surrounding a fall as this can help to pinpoint its cause. With the possible causation factors identified, one can then implement suitable interventions to minimize falls risk. The following sections explore common fall situations and help to identify possible causation factors with relevant intervention strategies suggested.

Falling when getting up from a chair

Stroke often results in weakness of the hip and thigh muscles on one side of the body which can interfere with one's ability to stand from a chair. For individuals with imbalance after stroke, they may underestimate the force required to perform a sit-to-stand movement and may use excessive force causing instability. If your loved one has experienced a fall while getting up from a chair, here are some ways which you can help them:

- Raising the chair height – Increasing the height of the chair makes it easier for them to get to a standing position
- Use a chair with arm rests – By using their arms to push on arm rests, it will ease the burden on their weak leg to get into standing and aid balance
- Remind them to shift their bottom closer to the edge of the chair and to keep their ankles behind their knees – By doing so, the muscles and joints are positioned to work more efficiently
- Do not use chairs with soft cushion
- Bridging – This exercise trains the buttock muscles which help one perform a sit-to-stand action. The individual lies face up in bed, bends his knees and lifts up the buttock for 10 seconds. Perform the exercise till the buttocks feel fatigued.



Figure from <http://www.midwestmultisportlife.com/2012/06/are-you-ready-to-go-minimal.html>



Figure from <http://www.webmd.com/a-to-z-guides/heel-dig-bridging>

Tripping on objects/curbs with the weaker leg

Weakness or abnormal muscle tone in individuals with stroke can interfere with their ability to lift their weaker leg during walking. This can predispose them to tripping over their own leg or over obstacles such as curbs. Below are some possible ways to prevent your loved one from tripping:

- Ensure walkways at home are clear from clutter such as rugs and electrical wires – These objects can pose as a fall risk as individuals may trip on these items
- Practice lifting up your thigh and knee off the chair while seated – This exercise trains the hip muscle important for lifting and swinging the leg for walking
- Practice tapping the weaker feet in sitting – This exercise works the muscle that helps lift the forefoot to clear objects

Falling at night

Individuals with stroke may have decreased sensation in their limbs and this will increase their dependence on vision to cope with mobility tasks. Stroke can also cause incontinence in some individuals. If your loved one falls frequently at night, the possible culprits are usually poor vision and incontinence. Here are some ways which you can help to minimize falls for your loved one at night:

- Have a night light nearby so your loved one can turn it on should he need to get up at night
- Discourage consumption of fluids after 8pm
- Have a urinal or commode chair nearby your loved one's bed
- Have a caregiver sleep near your loved one
- Install motion sensors which can alert you when your loved one wakes up at night
- Individuals with advanced visual problems will require assistance when mobilizing

Falling due to giddiness due to a drop in blood pressure with posture (postural hypotension)

Individuals with stroke may be on multiple medications which may cause side effects such as a drop in blood pressure with postural changes (postural hypotension) with symptoms of giddiness. If your loved one complains of giddiness upon getting up from bed, it is advisable to:

- Check for postural hypotension – Check the blood pressure of your loved one while he is lying in bed. Assist your loved one to a standing position and re-check his blood pressure in standing (after 1-3 minutes). A drop of 20mmHg in the systolic blood pressure indicates postural hypotension is present.
- If postural hypotension is present – always assist your loved one to change positions slowly, especially when they are getting up. Wearing compression stockings can help manage postural hypotension. Performing ankle pump exercises while seated can help pump blood back to the central circulation to counter postural hypotension.
- Seek medical opinion to adjust medications – At times, dosage of medications needs to be adjusted to lessen or prevent side effects.

Falling due to poor safety awareness

Stroke can affect one's mental functions and decrease one's awareness of physical limitations. This can cause the individual to frequently put himself in high fall risk situations. For instance, attempting to climb onto a stool to reach to high objects when he no longer has the physical capability to do so. Here are some strategies that can help if your loved one is falling due to poor safety awareness:

- Paste visual cues and instructions to provide safety reminders
- Keep your home from clutter (Some tips on home modification can be found on <http://www.aic.sg/silverpages/chronicDiseases/Prevention-of-Falls/>

Or

<http://www.cdc.gov/HomeandRecreationalSafety/Falls/CheckListForSafety.html>

- Install motion detectors to alert you when your loved one gets up
- Use of hip protectors to minimize risk of hip fracture in the event of a fall

To re-iterate, the approach to minimize falls is multi-faceted. Research has shown that engaging in regular physical activity focusing on balance and strength training helps to reduce falls. Exercise can also reduce cardiovascular risk factors and hence decrease the incidence of future strokes. Medication reviews by doctors and home modifications have also been shown to be effective in preventing falls.

Disclaimer: The causes of falls are multifactorial. It is highly recommended that you approach a qualified Physiotherapist to help manage and prevent falls for your loved one should you have any doubts. Individuals with stroke can have different physical capabilities, so it is best that you visit a Physiotherapist to learn appropriate exercises which you can perform or help with your loved one.

Falling while walking/performing daily tasks

Individuals with stroke have a tendency to fall onto their weaker side due to muscle weakness and sometimes, an altered sense of balance. Studies have found that stroke patients only bear about 40% of their body weight on their weaker leg which means they constantly use their stronger leg to support themselves in standing. The decreased capability to bear weight on the weaker leg results in decreased stability on the weaker side. Muscle weakness in the thigh can sometimes result in knee buckling which result in falls. The following are some strategies which can help your loved one if he often falls on the weaker side:

- Encourage the use of a walking aid – The Physiotherapist may have prescribed a walking aid that is suitable for your current level of abilities. Usage of a walking aid provides additional sensory feedback and stability to cope with balance perturbations. Always use the walking aid as prescribed. Your therapist will monitor your progress and offer advice when your mobility improves.
- Practice home exercises prescribed by your Physiotherapist. The therapist may have taught you certain exercises to improve the strength and encourage weight shifting onto the weaker leg. Ensure you understand the safety precautions for each exercise.



Figure from http://visual.merriam-webster.com/society/health/walking-aids_2.php



Stroke Club Activities @ SNSA- 2013

Please contact SNSA for details and registration for upcoming stroke clubs

19 January 2013

Be kind to yourself series – Nutritional Needs for Stroke Patients - Eating Good & Eating Right

Speaker: Miss Vicky Chan Tin Ki, Dietician, Tan Tock Seng Hospital.

Dietitian from Tan Tock Seng Hospital, Department of Dietetic & Nutrition Vicki's sharing sessions with over 20 members was informative and interactive. Members were enthusiastic to have a guide to a balanced diet. They learnt tips on choosing the right types of hawker foods with appropriate nutritional values in Singapore context and how to make choices when one eats out. As Chinese New Year was approaching, the members were advised how to maintain balanced nutrition as they prepared to feast during the festive season.



16 March 2013

Be kind to yourself series – Physiotherapy: Exercise for Stroke Survivors

Speaker: Miss Zoe Beh Shin Yen, Physiotherapist, Tan Tock Seng Hospital

Physiotherapist from Tan Tock Seng Hospital, Department of Physiotherapy Zoe shared with 18 members who turned up for the stroke club meeting on the aspect of ambulation, assisted some members on functional capacity evaluation, and encouraged the stroke survivors to lead normal life. Zoe addressed some key questions like "Will I over-exert myself and cause a new stroke?", "What should I do if I feel pain during exercise?" or "How do I start my individualised exercise regime?" The session ended with the sharing from an active member, Mr William Low, who is an exercise therapist, who shared about the topics of physical exercise and massage with the group.



18 May 2013

Be kind to yourself series – Occupational Therapy: managing safety issues at home & in the community

Speaker: Mr Mohamed Damiri

The association has invited the Occupational Therapist from Tan Tock Seng Hospital, Occupational Therapy Department to help share the professional advice and tips on managing life after stroke, especially in the area of activities of daily living at home, venturing outdoors for activities in the community, and safety issues for stroke survivors.

20 July 2013

Be kind to yourself series – Speech Therapy: managing speech and swallowing difficulties

Speaker: Dr Phua Sin Yong

A Speech Pathologist in private practice, Speech Matters –Centre for Speech, Language, Learning & Swallowing Disorders, Dr Phua will share at this session the common speech and swallowing difficulties after the onset of stroke, and the needs for assessment and intervention.

21 Sep 2013

Be kind to yourself series – Music Therapy

Speaker: Miss Christal Chiang Hei Loi

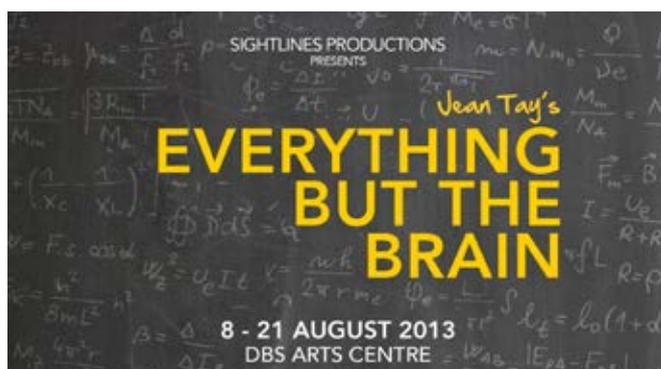
The association has invited the music therapist from Singapore General Hospital, the session would help provide information and advice for stroke patients and their caregivers on how one could use music to lighten & brighten their journey of recovery.

16 Nov 2013

Year End Event – Celebrating Life

(Details – to be confirmed)

As recognition for the motivation and triumphs of stroke survivors and family caregivers, the association will be organising a year end get together to explore various initiatives, such as social enterprise to explore vacation options for stroke patients and social integration through outdoor activities.



Everything but the Brain tells the story of Elaine, a Physics teacher who hatches a plan to turn back time and save her stroke-afflicted father from further deterioration. This comic, yet poignant play, brings together family relationships, fairytale bears and the theory of relativity in hilarious and unexpected ways.

8 – 21 August

DBS Arts Centre

Tickets on sale from July from SISTIC.

SNSA is proud to be a supporter of Everything but the Brain.