

A safer way to fall

A local study has shown that a tailored physical therapy programme can help reduce the severity of falls in the elderly



Madam Juriyah bte Komzari, 69, fell while walking down a flight of stairs three years ago. After her discharge from the CGH Emergency Department, she participated in the SAFE study to be part of a physical therapy programme in the community, tailored to her physical ability, to prevent further falls. Thanks to the programme, Mdm Juriyah is now more confident to walk independently and can balance herself better on buses and trains.

SLIPPING on the bathroom floor or missing a step while going down stairs may mean a scratch or a bruise for healthy adults. But for the elderly, there can be serious repercussions. For them, falls are a leading cause of death and disability. Studies have also shown that half of the elderly who experienced a fall will fall again the following year.

“ We followed up closely with them through phone calls and made all the arrangements for them to continue with the tailored physical therapy programme, including providing free transport to the community exercise sessions. ”

– Dr Christopher Lien,
Senior Consultant
Geriatrician, CGH

“Singapore is facing the challenges associated with a rapidly aging population and we are certainly seeing more elderly patients who suffered falls turning up at the SGH Emergency Department (ED). Often, this triggers a progressive decline in the well-being of the patient, including reduced mobility and difficulty with self-care, arising from the fear of falling,” explained Associate Professor Marcus Ong, Senior Consultant, Department of Emergency Medicine, SGH.

The Steps to Avoid Falls in Elderly (SAFE) study, a collaboration between Duke-NUS, SGH, Changi General Hospital (CGH) and the Agency for Integrated Care, has shown that a tailored physical therapy programme can be effective in mitigating the severity of future falls in the elderly.

The researchers recruited 354 patients above the age of 65 who sought medical attention at the ED for falls. Half of them were given tailored and intensive physical therapy with the aim of preventing future falls, while the other half received no structured physical therapy beyond the usual services.

Those in the first group who were identified to be at high-risk for future falls also received physical therapy at

home to improve their condition, before joining the rest in group exercises focused on progressive training in strength, balance and gait which were designed in accordance with each patient's physical condition and ability.

Mina Lim, Deputy Director of Community Programmes and physiotherapist at St Andrew's Community Hospital, one of the study sites, shared, “We recruited 20 physiotherapists from hospitals to provide tailored physical therapy in the patients' home and in the community. We trained them to prescribe exercises at the correct 'dosage', and to identify patients who are strong enough to progress to the next stage of exercise.”

Dr Christopher Lien, Senior Consultant Geriatrician at CGH, added that generally, there is very low participation in rehabilitative programmes after patients are discharged from the hospital. “To ensure that our patients in SAFE adhered to the programme, we followed up closely with them through phone calls and made all the arrangements for them to continue with the tailored physical

More stories online



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SingHealth Duke-NUS AMC launches Women in Science (WinS) Network (<http://bit.ly/2nWzdX1>)



Big meal in the northeast

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Community of Care in Chinatown

New programme supports more than 260 seniors with medical and social issues (<http://bit.ly/2q8Sp4G>)

What's inside

More than a signature on a form

Informed consent is a crucial aspect of ethical research involving human participants

Goodbye bak kut teh, hello chicken rice

A primary care physician's research helps patients make better diet choices to avoid kidney failure

Art therapy in healthcare: why does it matter?

Renowned art therapist and research psychologist Dr Cathy Malchiodi explains the tangible gains

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Goodbye bak kut teh, hello chicken rice

A primary care physician's research helps patients reduce risk of kidney failure



Dr Jasmine Lew

DR Jasmine Lew, Resident Physician at SingHealth Polyclinics (SHP) (Bedok Polyclinic), is probably a rare breed of clinician in our healthcare system; she is a primary care clinician-researcher.

Her interest in research was kindled during her undergraduate days in the US. She shared, "My university was an environment that allowed

research to thrive. My curriculum was research-intensive, and it taught me the many ways of conducting research."

Dr Lew continued to be involved in research during her medical training in outpatient paediatrics, nutrition and epidemiology, before returning to Singapore and joining SHP.

Recognised for being an enthusiastic advocate of research, Dr Lew was roped in by Professor Koh Woon Puay, Professor of Clinical Sciences at Duke-NUS Medical School, and Professor Tazeen Jafar, from the School's Health Services & Systems Research Programme, to study end-stage renal disease (ESRD).

Dr Lew and her collaborators delved into data from the Singapore Chinese Health Study (SCHS) to uncover the effect of different protein sources on kidney health.

SCHS was a large-scale study whose data from 63,000 middle-aged and elderly Chinese Singaporeans, have been used to find out how differences in lifestyle and diets affect health outcomes.

What they found was intriguing: eating red meat may increase the risk of kidney failure and replacing red meat with other types of protein can reduce the risk. They published their findings in the Journal of the American Society of Nephrology in July 2016.

"From a primary care physician's point of view, this information is very important," Dr Lew, who was first author of the paper, said. "The results from this study are directly applicable; we should advise patients who are at high risk of developing ESRD to reduce their red meat consumption, to help delay or prevent the onset of kidney failure."

" What they found was intriguing: eating red meat may increase the risk of kidney failure and replacing red meat with other types of protein can reduce the risk. "

Prof Tazeen, who is also Dr Lew's mentor in the Khoo Scholar Programme and is a visiting consultant at Singapore General Hospital, said, "I'm guiding Jasmine in further studies to determine the prevalence and determinants of chronic kidney disease in SHP patients, and to develop programmes that will enable us to diagnose and manage it more effectively."

To further the impact of their findings, Prof Tazeen and SHP's Director of Research Dr Tan Ngiap Chuan will be sharing their findings with general practitioners through dissemination workshops.

The ESRD project had its fair share of challenges, but none that Dr Lew couldn't overcome. Prof Koh, who is the site-principal investigator of SCHS, guided her throughout and Dr Tan ensured that she had protected time for research.

Dr Lew also worked hand-in-hand with an epidemiologist at the National Registry of Diseases Office to interpret the data for both the public and the patients.

"The knowledge gleaned from studies such as this is important because it has a wide impact on the local community. But what is even more important is how we interpret research findings for our patients so that it makes sense for them and empowers them to make decisions to take care of their own health," Dr Lew said.

> Continued from cover page
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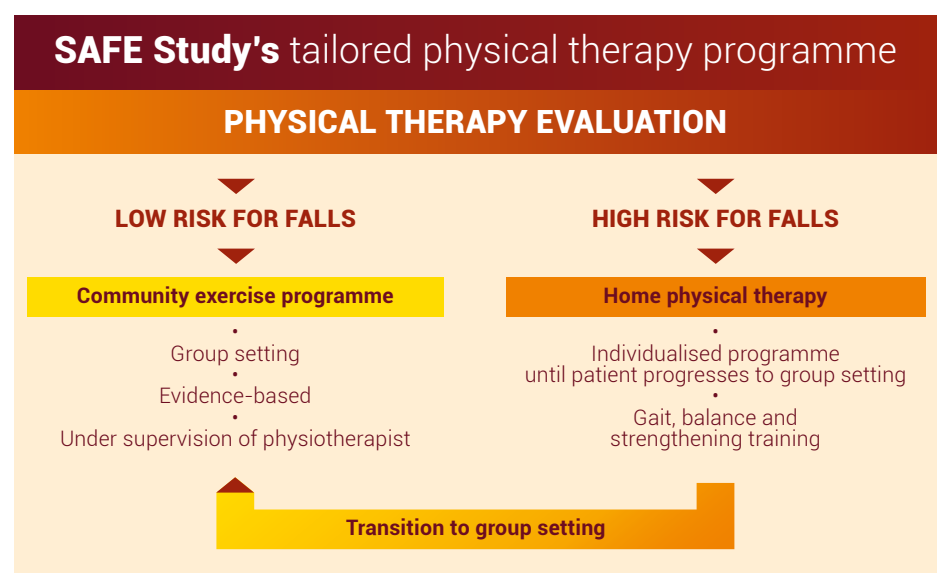
therapy programme, including providing free transport to the community exercise sessions."

The researchers followed each participant over a period of nine months. They found that while patients who were part of the tailored physical therapy programme did not experience fewer subsequent falls than their counterparts, they did experience less severe falls and slower physical decline.

The study also revealed that the elderly in the study fall less frequently than their counterparts worldwide. "This may be due to protective families and caregivers, or some other reason which we have not determined. It is an area that we are currently working on," said Professor David Matchar, Director of the Health Services and Systems Research Programme at Duke-NUS and first author of the SAFE study.

" The study also revealed that the elderly in the study fall less frequently than their counterparts worldwide. "

He also shared that SAFE's physical therapy programme did not show significant effect in those with multiple critical illnesses such as cancer, Parkinson's disease and cardiac failure. "This shows the complexity of a successful falls prevention programme and the necessity for it to be tailored to a patient's co-morbidities."



With these findings, the next step is to devise a way to make this programme sustainable on the national level.

This involves creating a framework that is engaging for patients, manageable for care providers, adaptable to the existing healthcare delivery system and is integrated with community programmes.

When this is achieved successfully, we can expect a drop in the number of severe falls cases seen at the ED and ultimately, a better continuity of care and quality of life for our elderly patients.

More than a signature on a form

Informed consent is a crucial aspect of ethical research involving human participants

THE use of anaesthesia during surgery, the smallpox vaccine, birth control pills, heart transplant. These are some examples of medical breakthroughs that have changed the practice of Medicine. Without clinical trial volunteers, we cannot conduct the relentless research that advance medicine and our fight against diseases.

In recruiting volunteers for clinical trials, it is not enough to get them to read and sign on the consent document. Obtaining each participant's *informed* consent is both an ethical responsibility of the investigator and an opportunity for participants to raise questions or concerns.

Through the informed consent process, the volunteers understand their rights, the purpose of the study, the exact procedures they will go through, potential risks of the treatments they will receive and the benefits of participating in the study, before making the voluntary decision to participate.

Anushia Panchalingham, Senior Clinical Research Associate at SingHealth's Research Quality Assurance unit, explained, "Informed consent ensures that the prospective

participants understand the study and affirms their willingness to take part. More importantly, during the process, they can ask any questions or raise concerns with the investigator."

To ensure all aspects of informed consent are covered, investigators are required to comply with various sets of national and international guidelines. In SingHealth, all informed consent forms for research must first be approved by the SingHealth Centralised Institutional Review Board (CIRB).

"The process can be very tedious and can often add to the pressure for researchers who are already stretched for time. But this stringent documentation process protects both the research team and the patients, and mitigates the need to take corrective measures later in the trial," said Anushia.

She added, "We should always bear in mind that trials participants are people under our care who have, usually for altruistic reasons, volunteered to help to do their part in advancing medical science. For this reason, we have to keep their best interests at heart. After all, they are the ones who make the trials and research possible and successful."

7 things to remember when obtaining informed consent for a clinical trial:

- 1** Informed consent is necessary if your research involves human participants, unless a waiver has been sought and given by CIRB.
- 2** Bear in the mind the four principles of medical ethics: autonomy, beneficence, non-maleficence and justice.
- 3** Communication is key. Explain the study in adequate depth and in layman terms to your participants. Consider providing translations or translators when needed.
- 4** Documentation is very important.
- 5** Give prospective participants ample time to understand and consider their decision to be involved. They should never feel coerced to take part.
- 6** Be diligent in ensuring compliance with current research regulations and guidelines. Non-compliance can result in severe consequences.
- 7** Stay updated - Researchers and study teams are encouraged to update themselves with institution's policies, CIRB requirements, ICH-GCP guidelines and MOH regulations.



Art therapy in healthcare: why does it matter?

Art therapist and research psychologist Dr Cathy Malchiodi explains the tangible benefits of art-based therapy



Dr Cathy Malchiodi

ONE is a heart transplant patient and the other is a US Marine Corps captain. Yet they share something in common - both found

critical healing in art-based therapy, a testament to how accessible it is in helping patients through their recovery journey.

"When I was 16 years old, I had to go through a heart transplant. I was in the hospital for three months... I remember writing [a letter] to my heart, asking it to please work with me so that I can lead a normal life," Stephanie Paseornek described her harrowing experience where she found respite and comfort in writing. "Some may think that writing has nothing to do with my getting better but to me, it was my medicine. Without it, I think I would still be sick."

Captain Jason Berner of the US Marine Corps too, found respite from

post-traumatic stress disorder (PTSD) in art therapy. A deep sceptic of how it would even help his condition initially, the soldier later understood how art allowed him to communicate his emotions in a non-threatening manner.

"There was something in me that was dying to get out. And through art, I was able to express it. Otherwise, I would never be able to come to terms with these emotions and that would have been an obstacle in my healing process" Captain Berner said.

Dr Malchiodi shared these stories at SingHealth's Academic Hour in February 2017.

Creative arts therapies, encompassing visual arts, music, dance, performance and writing, have existed for almost 70 years but are only formally recognised in the last 20 as educational programmes with certification and formal registration.

With this recognition, there has been more and more compelling evidence emerging in the last decade on the

relevance of art-based therapy in healthcare. The positive impact of art-based therapy on patients such as Stephanie and Captain Berner has been verified by quantifiable data in recent years. Primarily, this form of therapy helps patients by enabling them to cope with the trauma they are experiencing.

Dr Malchiodi shared that a number of researchers have provided insight into the value of art therapy in enabling healing by measuring cortisol, often called the 'stress hormone', and other physical responses. A 2012 study found that just 15 minutes of art therapy can decrease cortisol levels, lower blood pressure and slow down respiration significantly.

Most hospitals in the US use art therapy in cancer care as part of psychosocial intervention. In cancer patients, it has been shown to alleviate symptoms of stress and perception of pain, and can improve their general physical and emotional well-being. In paediatric cancer patients, art therapy has proven effective in

increasing compliance with treatment even outside the hospital. "It's a very encouraging outcome, with a very simple intervention," said Dr Malchiodi.

For the elderly, art therapy can help in the ageing process. The late Dr Gene Cohen, an American psychiatrist who pioneered research into geriatric mental health and author of "The Creative Age", proved that engaging in art therapy increases the number of essential connections in the brain that impacts memory. It also improves mood disorders associated with ageing, expands vocabulary and enhances one's sense of well-being and outlook in life.

Art therapy is still an emerging field and clinicians are only beginning to learn how to best incorporate it into our patients' care process. The real challenge lies in translating what we know about art therapy into care protocols. When this happens, it will allow bedside application and bring the benefits to different areas of healthcare.

For references, visit <http://bit.ly/2nD7BV3>

The science of fundraising



Cluster-wide donor management system to harmonise fundraising efforts

THE use of data has yielded tremendous insight into areas such as traffic behaviour, consumer buying habits and disease patterns, enabling policies and strategies to be mapped for change. When it comes to fundraising, data analysis plays the same critical role.

With the launch of the new cluster-wide Donor Management System (DMS) on 1 April 2017, SingHealth institutions are now equipped with a new platform to sharpen their fundraising strategies.

Spearheaded by SingHealth Development Office, the DMS is an initiative that integrates and harmonises the different existing systems across the cluster. Previously, institutions either use simple donor management systems or Excel spreadsheets to keep a database of donors. This results in differences in the type of data collected as well as complexity when reconciling figures for reporting.

With the new DMS, SingHealth institutions can access their donor database, have an overview of the donor landscape and have a better understanding of donor trends and behaviour.

Development officers are given access to functions like a 'relationship tree' where users can map relationships and connections between different

donors. They will also be able to track data that will give them a better idea of donors' preferences. This allows development officers to get a better understanding of donors' preferred areas for support and enables them to collaborate across institutions during prospecting.

Targeted giving messages and communication touchpoints can also be customised for segmented groups of donors based on their preferences.

Angela Chen, Deputy Director, SingHealth Development Office explained, "Data from thousands of donors from nine institutions had to be

'cleaned' to ensure the currency and accuracy of the data collected before being transferred to the DMS. From the learnings of matured development set-ups in overseas AMCs, having a comprehensive DMS will definitely increase the sophistication of our fundraising efforts."

In line with the transition of all Institutions of a Public Character in SingHealth to a single Company Limited by Guarantee, this shift to a shared cluster-wide DMS will enhance efficiency and synergy in fundraising efforts to advance medical research and education, and improve patient care.



A-Z of Philanthropy

G Government Grants
Refers to competitive funding or grants received for specific projects, usually pertaining to medical research, awarded at the national level.

I Institution Development Council (IDC)

Set up in July 2012, IDC promotes collaborative major gifts fundraising, shares best practices in healthcare philanthropy and coordinate approaches by different SingHealth institutions towards potential major donors.

SingHealth Duke-NUS Surgical and Anaesthesia Congress 2017



4-6 August 2017,
Academia (SGH Campus)
Register Now at
www.singhealthsac.com.sg

3rd SingHealth Duke-NUS Education Conference

29 - 30 Sep 2017,
Academia (SGH Campus)
Register Now and Submit Your Abstracts
at www.academic-medicine.edu.sg/educationconference2017/

Joint Office of Research Grant Calendar

NMRC May 2017 Grant Call: CS-IRG, CS-IRG-NIG, OF-IRG, OF-YIRG, CTG
(1 Jun 2017)

NMRC May 2017 Grant Call: OF-LCG
(13 Jun 2017, 5pm)

Khoo Bridge Funding Programme 2017
(16 Jun 2017)

A*STAR Industry Alignment Fund (IAF) – Health and Biomedical (HBMS) Domain
(Open throughout the year)

1. Pre-positioning Programmes (IAF-PP)
2. Industry Collaboration Projects (IAF-ICP)

NHIC-AstraZeneca Open Innovation Collaboration Grant
(Open throughout the year)

NHIC Innovation to Commercialisation (I2C) Grant (Open throughout the year)

1. Innovation to Protect (I2P)
2. Innovation to Develop (I2D)
3. Innovation to Implement (I2I)

Khoo Mentored Research Award (KMRA) & Khoo Pilot Award
(Open throughout the year)

For more information on funding sources and support for research in SingHealth, visit <http://research.singhealth.com.sg> or email office.research@singhealth.com.sg

Faces of Healthcare

Our people and their stories

"I was first diagnosed with deep vein thrombosis (DVT) two years ago, followed by multiple embolism in both lungs. A CT scan also confirmed that I had chronic thromboembolic pulmonary hypertension. As the saying goes, when it rains, it pours. After a surgery, I suffered from a brain haemorrhage and had to undergo two more surgeries.

As a nurse, I have been taking care of patients for the last 24 years but nothing prepared me for the long recovery as a patient myself. I reminded myself to be patient and that I would eventually get well. After being on medical leave for six months, I'm thankful to be back at work. Nursing brings me great joys and satisfaction and I miss my patients!

I am ever so thankful for my family, friends, colleagues and even patients who showed me love and concern. It is the little things like these that motivate me in my recovery journey. I hope to be able to encourage my patients and others in this manner as well."

— Mdm Puspavalli d/o Andan Seeni
Senior Enrolled Nurse,
KK Women's and Children's Hospital
Patient at National Heart Centre Singapore
Winner of Singapore Health
Inspirational Patient Award 2017
Facesofhealthcare.tumblr.com

