



Geriatric Education &
Research Institute

ANNUAL REPORT 2022/23

HEALTHY AGEING FOR OUR POPULATION

ABOUT THE GERIATRIC EDUCATION & RESEARCH INSTITUTE

The Geriatric Education and Research Institute (GERI) is a national research institute that seeks to address and rethink ageing in Singapore.

Since 2015, GERI has been conducting health and healthcare research focused on preventing functional decline and implementing integrated care for older adults. Our evidence-based research outcomes are driven by our multi-institutional research team, which works closely with collaborators across government, non-profit and community spaces. By translating research knowledge to reach decision-makers and practitioners, GERI contributes to health policy and practice to advance healthy ageing for our population.

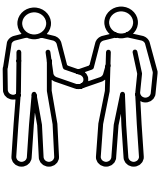
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MISSION

Improving the lives of seniors in Singapore through excellence in translational research and education that impact health policy and practice.

VALUES



Respect



Innovate



Teamwork



Excellence

MESSAGE FROM OUR EXECUTIVE DIRECTOR

“For GERI, we emerged from this past year with a renewed focus on forging new frontiers in partnerships, engagement and dissemination, whilst covering greater ground in our research activities to improve the lives of older adults in Singapore.”

Associate Professor Ding Yew Yoong
Executive Director, GERI



In a post-pandemic era, the research community continues to contend with an enduring yet ever more pressing challenge: How can research be better produced and harnessed to make a greater difference to the lives of those who need it? What needs to change, and what needs to be bolstered, so that the translation of evidence can be fast-tracked?

For GERI, we emerged from this past year with a renewed focus on forging new frontiers in partnerships, engagement and dissemination, whilst also covering greater ground in our research activities to improve the lives of older adults in Singapore.

To that end, I am pleased to share our Annual Report 2022/23, which captures our advancements across several areas.

GERI continued to champion this spirit of collaboration by growing new partnerships and strengthening existing ones in healthcare, the community and in research, both locally and internationally. Through this, we also deepened our cachet of research capabilities and methodologies.

To support Singapore’s health policy, GERI expanded our engagement with policymakers, contributing evidence towards national dialogues and platforms to aid informed decision-making.

Going beyond publications and presentations, we also initiated new dissemination conduits in the past year, such as our Research Briefs and Research Highlights, to increase the reach and accessibility of our research.

All this is in support of the core work that we remain committed to: producing evidence-based research insights to address Singapore’s ageing challenges. Please read on to learn more about our progress across various research projects, which strive to advance our understanding on preventing functional decline and implementing integrated care for older persons.

To influence policy and practice in a meaningful way, research should be conducted with, for and made available to our stakeholders, whether they are practitioners, policymakers or older adults. I am grateful for the hard work of our researchers and staff, as GERI continues to expand its efforts on this front and beyond, to help Singaporeans live and age well. ■

DIRECTORS & GERI ADVISORY COMMITTEE

DIRECTORS

Professor Philip Choo Wee Jin

Professor Pang Weng Sun

GERI ADVISORY COMMITTEE

Professor Chee Yam Cheng

Mdm Zuraidah Abdullah

Dr Goh Khean Teik

Ms Ho Weng Si

Adjunct Professor Lee Chien Earn

Dr Lee Heow Yong *(Up till Dec 2022)*

Professor Kalyani Kirtikar Mehta *(Up till Aug 2022)*

Professor Benjamin Seet

Professor Joseph Sung

Professor Teo Yik Ying

Dr Jeannie Tey

Mr Tow Heng Tan *(Up till Aug 2022)*

On 5 October 2022, GERI held an appreciation event to acknowledge the contributions of GERI Advisory Committee members who were stepping down.

"On behalf of GERI, we are grateful for the counsel and contributions that Professor James Best*, Professor Kalyani Kirtikar Mehta, Professor Lim Tock Han* and Mr Tow Heng Tan have given us these past few years," said Associate Professor Ding Yew Yoong, Executive Director, GERI.

*Professor James Best and Professor Lim Tock Han stepped down from the GERI Advisory Committee in 2021.



MANAGEMENT & RESEARCH MANAGEMENT COMMITTEE

MANAGEMENT



**Professor
Pang Weng Sun**
Senior Advisor



**Associate Professor
Ding Yew Yoong**
Executive Director



**Associate Professor
James Alvin Low**
Knowledge Translation Lead



Ms Kong Lai Ho
Deputy Director
Finance and Administration

RESEARCH MANAGEMENT COMMITTEE

Associate Professor Ding Yew Yoong

Dr Chong Mei Sian (*Up till Jun 2022*)

Associate Professor Lim Wee Shiong

Associate Professor James Alvin Low

JOINT & ADJUNCT FACULTY



JOINT FACULTY

Dr Chan Ee Yuee

Dr Rachel Cheong

Dr Chong Mei Sian (*Up till Jun 2022*)

Associate Professor Ding Yew Yoong

Associate Professor Lim Wee Shiong

Associate Professor James Alvin Low

Associate Professor Ng Tze Pin

Associate Professor Ng Yee Sien

Dr Sharon Straus

Dr Tan Woan Shin

Associate Professor Laura Tay

Dr Tew Chee Wee

Associate Professor Wee Shiou Liang

Dr Wong Chek Hooi

Associate Professor Philip Yap

Associate Professor Joanne Yoong

ADJUNCT FACULTY

Dr Lydia Au

Associate Professor Angelique Chan

Associate Professor Edwin Chan

Dr Justin Chew

Associate Professor Mihir Gandhi

Dr Allyn Hum

Dr Lee Eng Sing

Dr Christopher Lien

Professor David Matchar

Dr Mathew Mathews

Dr Nieh Chih Ming (*Up till Jun 2022*)

Dr Raymond Ng

Dr Noor Hafizah Bte Ismail

Associate Professor Iris Rawtaer

Dr Santhosh Seetharaman

Dr Shi Luming

Mdm Sim Lai Kiow (*Up till Jun 2022*)

Associate Professor Tan Hwee Pink

Dr Laurence Tan














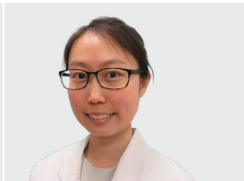

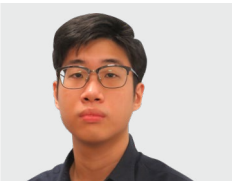


Dr Melanie Tan

Dr Robyn Tan

Dr Yong Woon Chai

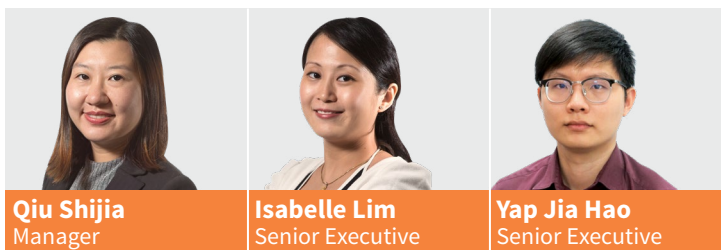
OUR STAFF

OUR RESEARCHERS

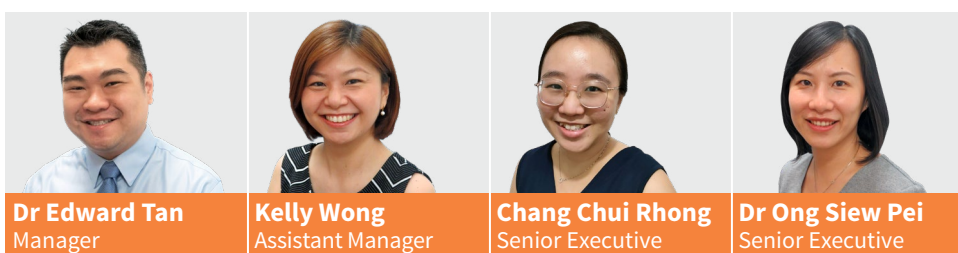
			
Dr Jonathan Gao Research Fellow	Dr Charlene Lau Research Fellow	Dr Zoe Lim Research Fellow	Dr Serene Nai Research Fellow
			
Dr Grace Sum Chi-En Research Fellow	Dr Tou Nien Xiang Research Fellow	Dr Yu Chou Chuen Research Fellow	Khalid Bin Abdul Jabbar Research Associate
			
Dr Mimaika Ginting Research Associate	Lynette Ha Research Associate	Penny Lun Research Associate	June Teng Research Associate
			
Nivedha Balachandar Research Officer	Fiona Goh Research Officer	Mumtaz Binte Mohammad Kadir Research Officer	Bernard Tang Research Officer
			
Tang Jia Ying Research Officer	Robin Choo Biostatistician		

OUR ADMINISTRATIVE STAFF

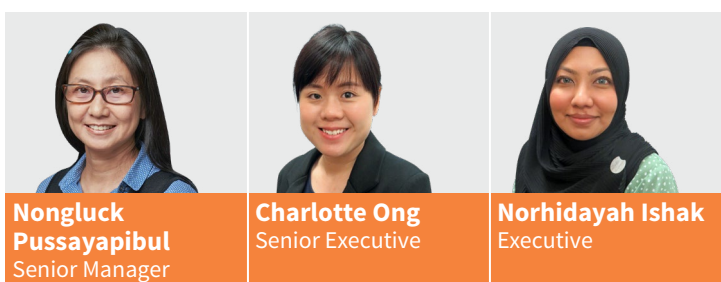
Research Administration (Policy & Governance)



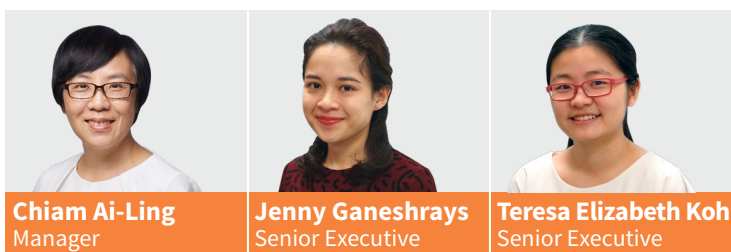
Research Administration (Support)



Knowledge Translation



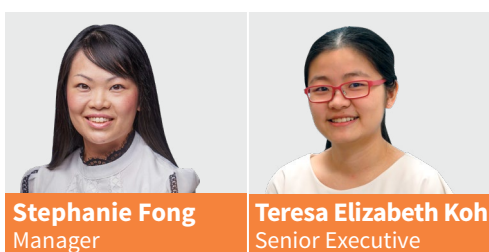
Corporate Communications



Finance and Administration



Operations



GERI'S RESEARCH FRAMEWORK

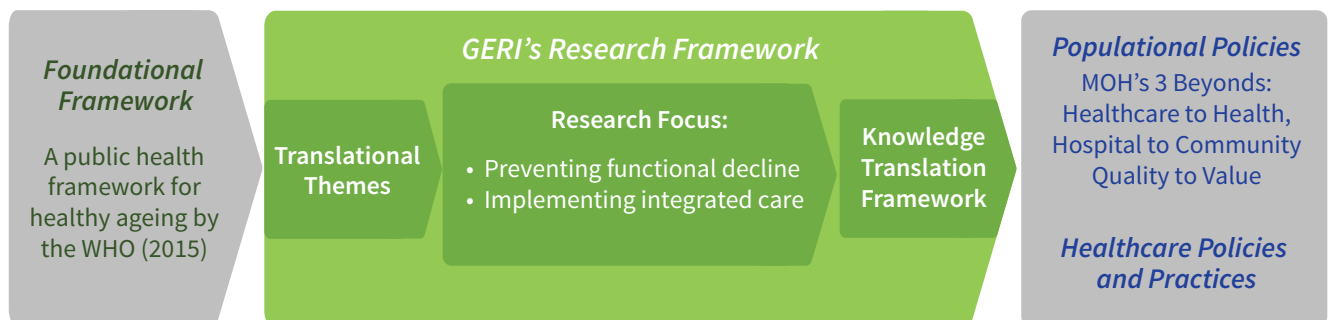
“GERI’s Research Framework articulates the roadmap which aligns our research focus areas, translational themes and Knowledge Translation framework to complement and support Singapore’s national agenda for population and healthcare policies. This roadmap augments the Ministry of Health’s strategic shift of the “3 Beyonds” to empower Singaporeans to age well in their homes and communities.”

Associate Professor Lim Wee Shiong

Research Management Committee and Joint Faculty Member, GERI
Director, Institute of Geriatrics and Active Ageing
Senior Consultant, Geriatric Medicine, Tan Tock Seng Hospital



Research, Innovation and Enterprise (RIE) 2025



GERI’s research activities are guided by a foundational framework that is based on the Public Health Framework for Healthy Ageing proposed by the World Health Organization (WHO)¹. Principally, it aims to foster functional ability of older adults at the individual level by improving and maintaining intrinsic capacity (combination of physical and mental capacities), and at the environmental level by enabling and supporting those with decline in capacity to do things that are important to them.

To this end, GERI has designed our research to focus on two specific areas:

- **Preventing functional decline:** Supporting the functional ability of older adults at the individual level by improving or maintaining intrinsic capacity (combination of physical and mental capacities). Research topics encompass intrinsic capacity, frailty, physical and cognitive functioning, falls and community mobility.

- **Implementing integrated care:** Optimising supporting environments by enabling and supporting those with decline in capacity to do things that are important to them. Research topics encompass care models for those with frailty, multi-morbidity, complex needs, dementia and advanced life-limiting illness; incorporating caregiving support.

These two focus areas help address opportunities for healthy ageing in Singapore, and flow out from GERI’s three principal translational themes:

- **Extending healthspan:** To increase the years that older adults spend in good health.
- **Ageing in place:** To assist older adults in living well in their communities for as long as possible.
- **Advancing care:** In support of the ongoing care transformation journey for older adults in Singapore’s health system. ■

¹ WHO World Report on Ageing and Health (2015): <https://www.who.int/publications/i/item/9789241565042>

RESEARCH PROJECTS

PREVENTING FUNCTIONAL DECLINE

[ONGOING]

Effect of community-based Baduanjin (八段锦) on functional performance in pre-frail/frail older adults: A randomised controlled and implementation research study

Principal Investigator:

Associate Professor Wee Shiou Liang

Collaborating Organisations:

Tsao Foundation, National University of Singapore

This study will conduct implementation and effectiveness research on a community-delivered popular intervention to improve/maintain function in frail older adults.

Help Optimise and Mobilise Elders (H.O.M.E)

Principal Investigator:

Dr Tan Mei Ying Melanie

Site-Principal Investigator:

Dr Charlene Lau Lay Khoon

Collaborating Organisations:

Ng Teng Fong General Hospital, National Healthcare Group

During hospitalisations, older inpatients commonly face issues such as immobility, loss of independence and functional decline. This leads them down the cascade of dependency with consequent increased risk of adverse outcomes, institutionalisation as well as higher post-acute care costs.

The aim of this study is to implement and evaluate a mobility intervention designed to improve mobility, while optimising reversible factors affecting mobility among inpatients admitted to a geriatric unit in Singapore. Both effectiveness and implementation are tested simultaneously.

Intrinsic capacity in the context of population health for older adults in Singapore

Principal Investigator:

Professor Paulin Straughan

Site-Principal Investigator:

Associate Professor Ding Yew Yoong

Collaborating Organisation:

Singapore Management University (SMU)

Intrinsic capacity captures the physical and mental capacities of an individual and represents the resources a person can tap into during his/her life.

Together, the SMU Centre for Research on Successful Ageing and GERI are studying intrinsic capacity of older adults in the Singapore Life Panel, to gain a better understanding of how individuals can flourish as one ages.

[NEW]**Evaluating the implementation of a nationwide active ageing programme for community-dwelling older adults**

Principal Investigator:
Dr Charlene Lau Lay Khoon

Collaborating Organisation:
Health Promotion Board

This study aims to evaluate:

1. The implementation of a nationwide active ageing programme across 40 community sites in Singapore, and
2. The implementation of referral pathways for identified pre-frail/frail older adults to more targeted interventions within Regional Health Systems.

Intrinsic Capacity Risk Evaluation – Towards Holistic Assessment and Targeted Management of Elderly in Acute Care (I-CREATE)

Principal Investigator:
Associate Professor Laura Tay Bee Gek

Collaborating Organisation:
Sengkang General Hospital

This study aims to examine the effect of intrinsic capacity assessment and targeted interventions addressing identified domain losses on 30-day readmission in hospitalised older adults admitted to the General Medical department of a restructured hospital.

[COMPLETED]**Evaluation and Development of Falls Prevention and Management in the Community of Central and North of Singapore for older adults aged 60 years and above (FrEDA Study)**

Principal Investigator:
Dr Wong Chek Hooi

Collaborating Organisations:
Khoo Teck Puat Hospital, Global Asia Institute, National University of Singapore; Tan Tock Seng Hospital, Singapore Institute of Technology, Duke-NUS Medical School, Monash University

GERI is the host institution for the FrEDA study, a cross-institutional collaborative project awarded under the National Innovation Challenge on Active and Confident Ageing Grant Call on Falls Prevention.

This study harnesses the capabilities of multi-institutions to understand motivation to participation in fall screening and interventions among community-dwelling older adults with fall risks.

The FrEDA study aims to assess the effectiveness of locally-adapted and evidence-based fall prevention programmes on fall risk and health outcomes among community-dwelling older adults who are at risk of falling in Singapore. The study will also evaluate the fall prevention ecosystem and programme from three perspectives of older adults, implementers and community partners.

IMPLEMENTING INTEGRATED CARE

[ONGOING]

Factors influencing the decision to uptake COVID-19 vaccine based on the Theoretical Domain Framework: A mixed methods study of older adults in Singapore

Principal Investigator:
Dr Yu Chou Chuen

Singapore's COVID-19 vaccination programme aims to fully vaccinate all who are eligible. Currently, data on the take-up rate is promising. Despite the progress, some vaccine hesitancy remains. A decision to vaccinate or not is often complex and beyond individual psychological factors, can be highly influenced by local vaccine policies, social media as well as an individual's social network.

Informed by the Theoretical Domains Framework, this study aims to understand the barriers and facilitators toward vaccination.

It will be conducted using a mixed methods design.

Understanding the thinking of Singaporean older adults on vaccination is important as this will allow the tailoring of interventions and campaigns to encourage vaccination especially since COVID-19 booster shots (and possibly yearly COVID-19 vaccination) are needed, particularly as more contagious variants emerge.

Understanding moral distress and adaptive responses of clinicians in Advance Care Planning

Principal Investigator:
Dr Raymond Ng Han Lip

Collaborating Organisations:
Woodlands Health, Nanyang Technological University, Khoo Teck Puat Hospital, National University of Singapore, National University Hospital

Since 2011, the Respecting Choices framework of Advance Care Planning (ACP) has been implemented as a nationwide programme named Living Matters.

Through a mixed methods study, relationships among factors in implementing ACP and moral distress and ethical conundrums will be examined and subsequently explored in-depth involving ACP facilitators.

The findings will inform training curricula for ACP facilitators and healthcare professionals.

[NEW]**Appropriate Prescribing for Older Adults with Multimorbidity (Pro-M): A feasibility study***Principal Investigator:*

Ms Penny Lun

Site-Principal Investigators:

Ms Tan Keng Teng, Dr Christine Chen Yuanxin

Collaborating Organisations:

Tan Tock Seng Hospital, Changi General Hospital

This is a two-site feasibility study to test the implementation of an intervention that aims to reduce inappropriate prescribing for older adults with multimorbidity in geriatric medicine specialist clinics at public hospitals.

[COMPLETED]**Multi-site Evaluation of the Geriatric Services Hub***Evaluation Lead:*

Associate Professor Ding Yew Yoong

Principal Investigator:

Dr Tan Woan Shin

Collaborating Organisations:

Ministry of Health (MOH), Singapore General Hospital, Sengkang General Hospital, Changi General Hospital, Ng Teng Fong General Hospital, National University of Singapore, Alexandra Hospital

One in four Singaporeans will be 65 years or older by 2030. With this, increasingly frail older adults with more complex needs will be encountered by health services. Thus, a recent MOH initiative supports development and implementation of five Geriatric Services Hubs (GSH) towards the vision of providing integrated care for frail older adults in the community. The study aims are:

1. To evaluate the effectiveness of GSH in improving health, experience of care, health services utilisation, social and economic outcomes, and
2. To evaluate effectiveness of the care model in the process domains of patient-focused care management and coordination/integration of care.

Data collected and analysed will generate a knowledge translation platform that documents the different mechanisms and impacts at different sites.

Vignette development for multi-country comparisons of long-term care for older persons

Principal Investigator:
Dr Wong Chek Hooi

Collaborating Organisations:
Tsao Foundation, University of Newcastle

This multi-country project is a joint initiative by 11 participating ILCs (i.e., Argentina, Australia, Czech Republic, Dominican Republic, France, Israel, Japan, Singapore, South Africa, UK and US) under the leadership of a core project team. The overall aim of the international-level project is to develop an international framework for comparing long-term care systems across countries based on older persons' needs and their perspectives.

MORE RESEARCH

[COMPLETED]

Combating misinformation, fear and stigma in response to the COVID-19 outbreak: An international collaboration between Canada and Singapore

Principal Investigator:
Dr Christine Fahim

Site-Principal Investigators:
Associate Professor James Alvin Low, Dr Yu Chou Chuen

Collaborating Organisations:
Unity Health Toronto

This study seeks to inform the development and usability testing of strategies and tools to combat stigma, fear and misinformation during COVID-19 and other infectious disease outbreaks.

Unpacking Empathy - What are the underlying beliefs and values that drive empathy in healthcare professionals: A study to develop and validate a new empathy scale for doctors and nurses

Principal Investigator:
Dr Laurence Tan

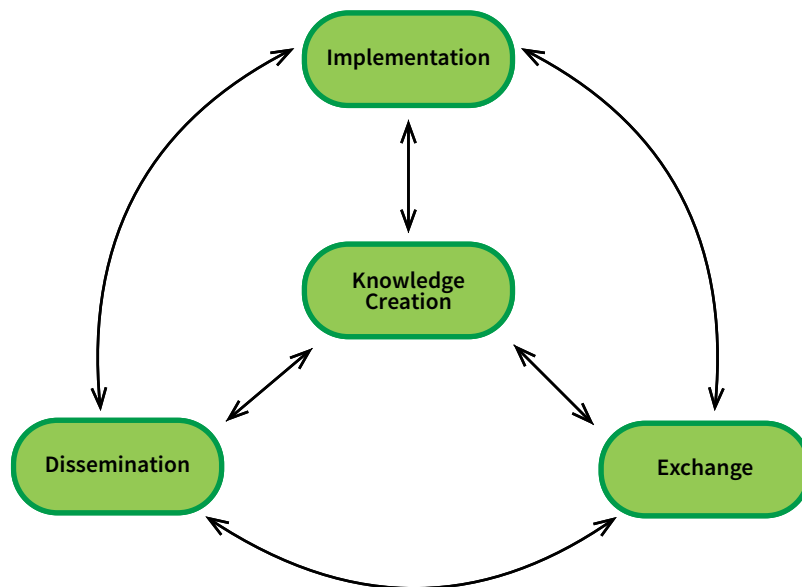
Collaborating Organisations:
Lee Kong Chian School of Medicine, Nanyang Technological University; Nanyang Polytechnic, Alice Lee Centre of Nursing Studies, National University of Singapore; Tan Tock Seng Hospital, Khoo Teck Puat Hospital, Yishun Community Hospital, Ngee Ann Polytechnic

Empathy is important in a healthcare context as empathetic behaviours by healthcare workers improve patient outcomes.

The study aims to re-explore the components of empathy from the views of healthcare workers (providers) and patients (receivers) and to use the data gathered to create a new tool to measure empathy, that takes into account underlying beliefs and values that drive empathy in addition to cognitive and emotive aspects of empathy. ■

KNOWLEDGE TRANSLATION FRAMEWORK

GERI's Knowledge Translation Framework allows us to disseminate research findings and information from evidence-based research into practice and policy in real-world situations. Through the four nodes of our framework, we can move the benefits emerging from our research into the hands of practitioners and policymakers.



Knowledge Creation

Working with our collaboration partners, we engage stakeholders to discover and identify issues and collect data in research projects. Methodologies employed at this stage include rapid reviews, Delphi technique and mixed methods designs, such as quantitative data analysis and qualitative interviews.

“Knowledge creation is often where the knowledge translation process begins at GERI. Evidence synthesis and primary research are our keys to assembling knowledge for dissemination, exchange and implementation in the real world.

As GERI cannot do this alone, we actively collaborate with experts, practitioners and policymakers. Our design and conduct of research this past year also saw us employ a broader range of evidence synthesis tools, applied implementation science principles, and more advanced statistical techniques to estimate causal effects.

This sustains our goal of creating trusted, valid and relevant evidence that can be translated to practice and policy for older people in Singapore.”



Associate Professor Ding Yew Yoong
Executive Director, GERI



Dissemination

Through various channels, such as publications, presentations and research briefs, we share knowledge and related evidence-based interventions amongst healthcare practitioners, policymakers and researchers.

“Scientific evidence and knowledge is useful only if it can be applied and utilised in real-life healthcare settings. Through GERI’s collective Knowledge Translation activities, we strive to bring to life the evidence that has been so strenuously created in the research setting, and to move it into the real world of caring for patients and their families.

This has galvanised us to venture into newer areas, with our Knowledge Translation platforms as well as dissemination efforts, which include Knowledge-to-Practice Briefs, Research Briefs, Research Highlights and other diverse means.

Through our varied platforms, we hope to drive translational research and help bridge the chasm between research and practice, with the ultimate goal of enhancing the well-being of the older and ageing person in a holistic manner.”



Associate Professor James Alvin Low
 Knowledge Translation Lead, GERI
 Senior Consultant, Department of Geriatric Medicine, Khoo Teck Puat Hospital



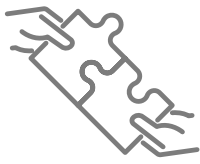
Exchange

Platforms for discourse are intentionally and thoughtfully created to engage our stakeholders with a view to facilitating the effectiveness, sustainability and scaling up of evidence-based approaches in various practice settings. Through this collaborative environment, new subsequent rounds of research opportunities may emerge.

The MOH Frailty Policy Workgroup was convened in 2022 to review the current frailty landscape as well as consider the World Health Organization’s recommendations and learnings from international developments on frailty prevention, detection and management.

Through representation in the Workgroup – which conducted a review of existing efforts, identified gaps and provided recommendations – GERI contributed domain expertise that supported the development of the National Frailty Strategy.

Such platforms continue to be crucial to GERI’s ongoing efforts to create policy-relevant evidence and amplify policymakers’ engagement with GERI and our research.



Implementation

Research findings may span behaviours, practices, knowledge and attitudes. To help move evidence into practice, we identify and utilise suitable interventions from a range of strategies used in implementation science and practice that enhance the understanding and adoption of a new idea or practice.

“The Knowledge Translation Program’s partnership with GERI aims to advance research that is relevant to older adults and that transforms clinical care, health policy and patient outcomes in Singapore and beyond.

Central to our collaboration is the adoption of an integrated knowledge translation approach which anchors the research process. This approach facilitates identifying questions and completing research that is applicable to seniors, thereby improving their quality of life for healthy ageing.

Through our joint efforts, we look forward to accelerating the implementation of this research, in order to make a difference in the lives of older adults and their caregivers.”



Dr Sharon E. Straus

Physician-in-Chief, St. Michael’s Hospital
Tier 1 Canada Research Chair in
Knowledge Translation
Director, Knowledge Translation Program
Professor, Department of Medicine,
University of Toronto
Joint Faculty, GERI ■

JOURNAL PUBLICATIONS

Our researchers continued to have their research findings published in internationally established journals such as *BMC Geriatrics*, *BMC Health Services Research*, *Frontiers Public Health* and *Gerontology*. Through such publications, we hope to contribute meaningfully to the existing wealth of knowledge on healthy ageing.

Chan EY, Wu LT, Ng EJY, Glass GF, Jr., Tan RHT. Applying the RE-AIM framework to evaluate a holistic caregiver-centric hospital-to-home programme: a feasibility study on Carer Matters. *BMC Health Serv Res*. 2022 Jul 19;22(1):933

Chen KK, Lee SY, Pang BWJ, Lau LK, Jabbar KA, Seah WT, Tou NX, Yap PLK, Ng TP, Wee SL. Associations of low handgrip strength and hand laterality with cognitive function and functional mobility - the Yishun Study. *BMC Geriatr*. 2022 Aug 16;22(1):677

Ginting ML, Wong CH, Lim ZZB, Choo RWM, Carlsen SCH, Sum G, Vrijhoef HJM. A Patient-Centred Medical Home Care Model for Community-Dwelling Older Adults in Singapore: A Mixed-Method Study on Patient's Care Experience. *Int J Environ Res Public Health*. 2022 Apr 14;19(8):4778

Jabbar KA, Tan DGH, Seah JWT, Lau LK, Pang BW, Ng DHM, Tan QLL, Chen KK, Jagadish MU, Ng TP, Wee SL. Enhanced gait variability index and cognitive performance in Asian adults: Results from the Yishun Study. *Gait Posture*. 2022 July 16

Lau LK, Abdul Jabbar KB, Pang WJB, Chen KK, Seah WT, Ullal Mallya J, Yap PLK, Ng TP, Wee SL. Physiological and Cognitive Determinants of Gait Variability of Asian Population: The Yishun Study. *Gerontology*. 2022 Oct 21:1-11

Lun P, Gao J, Tang B, Yu CC, Jabbar KA, Low J, et al. A social ecological approach to identify the barriers and facilitators to COVID-19 vaccination acceptance: A scoping review. *PLoS One*. 2022 October 3;17(10):e0272642

Sum G, Kadir MM, Ho SH, Yoong J, Chay J, Wong CH. Cost analysis of a Patient-Centred Medical Home for community-dwelling older adults with complex needs in Singapore. *ANNALS*. 2022 September 26;51(9):553-66

Sum G, Lau LK, Jabbar KA, Lun P, George PP, Munro Y, Ding YY. The World Health Organization (WHO) Integrated Care for Older People (ICOPE) Framework: A Narrative Review on Its Adoption Worldwide and Lessons Learnt. *Int J Environ Res Public Health*. 2023;20(1):154

Sum G, Nicholas SO, Nai ZL, Ding YY, Tan WS. Health outcomes and implementation barriers and facilitators of comprehensive geriatric assessment in community settings: a systematic integrative review [PROSPERO registration no.: CRD42021229953]. *BMC Geriatr*. 2022 Apr 29;22(1):379

Tan WS, Nai ZL, Tan HTR, Nicholas S, Choo R, Ginting ML, Tan E, Teng PHJ, Lim WS, Wong CH, Ding YY; Geriatric Services Hub Programme Group. Protocol for a mixed-methods and multi-site assessment of the implementation process and outcomes of a new community-based frailty programme. *BMC Geriatr*. 2022 Jul 15;22(1):586. PMID: 35840898; PMCID: PMC9288058

Tay L, Chua M, Ding YY. Depressive symptoms and malnutrition are associated with other geriatric syndromes and increase risk for 30-Day readmission in hospitalized older adults: a prospective cohort study. *BMC Geriatr*. 2022 Aug 2;22(1):634

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Tou NX, Wee SL, Pang BWJ, Lau LK, Jabbar KA, Seah WT, Chen Kk, Ng TP. Association of fat mass index versus appendicular lean mass index with physical function – The Yishun Study. *Aging and Health Research*. 2022 September 7;2(3)

Yu CC, Le KM, Low JA. Community nurses' perspectives on a novel blended training approach: a qualitative study. *BMC Nurs*. 2022 May 12;21(1):113. PMID: 35550068; PMCID: PMC9096061

Yu CC, Tan L, LE MK, Tang B, Liaw SY, Tierney T, Ho YY, Lim BEE, Lim D, Ng R, Chia SC, Low JA. The development of empathy in the healthcare setting: a qualitative approach. *BMC Med Educ*. 2022 Apr 4;22(1):245

Yu CC, Tang B, Low JA, Mathew M, Straus S, Fahim C. A qualitative study on health stigma and discrimination in the first year of the COVID-19 pandemic: Lessons learnt from a public health perspective. *Frontiers Public Health*. 2023 March 1;11:1143640 ■

PUBLICATIONS BY GERI

Over the past year, GERI created new channels to disseminate our research findings.

The chief aim of our **Research Briefs** is to disseminate the Institute's research findings as two-page briefs in more accessible language, targeted at practitioners, policymakers as well as researchers.

- Older adults in an Integrated Patient-Centered Medical Home (PCMH) model of primary care in Singapore reported better satisfaction of needs and self-management of health (Read it here: bit.ly/3sMXK6m)
- Text-mining of psychosocial information from patients' clinical notes improved prediction of readmission risk (Read it here: bit.ly/3qZVHeQ)
- A review of barriers and facilitators towards COVID-19 vaccine acceptance (Read it here: bit.ly/3ZfC1jr)
- The World Health Organization (WHO) Integrated Care for Older People (ICOPE) framework for healthy ageing: How has it been adopted across the world and what can we learn? (Read it here: bit.ly/463SCJp)

RESEARCH BRIEF
No. 2023-03-001

The World Health Organization (WHO) Integrated Care for Older People (ICOPE) framework for healthy ageing: How has it been adopted across the world and what can we learn?

Research article: The World Health Organization (WHO) Integrated Care for Older People (ICOPE) framework: A narrative review on its adoption worldwide and lessons learnt. Published in IJERPH MDPI in Dec 2022. Click [here](#) to view the published article online.
Authors: Dr Grace Sum, Dr Lay Khoo Lau, Mr Khalid Abdul Jabbar, Ms Penny Lin, Dr Pradeep Paul George, Ms Yasmin Lynda Munro, Dr Yew Young Ding.
Research brief written by: Dr Grace Sum, Research Fellow, GERI.

KEY FINDINGS

1. Across the 29 selected records in the review, there were 18 study teams that have adopted the ICOPE framework across the world. The study teams were primarily in Europe and China.
2. Majority of the study teams were in the stages of developing and testing the feasibility of the framework. A smaller number were in the early stages of implementation.
3. The authors proposed making five decisions before adopting the ICOPE framework. These included (i) whether the ICOPE programme should target older people in the general population or only those who come into contact with primary care, (ii) whether to apply it partially or all steps of the framework, (iii) whether to modify the proposed tools in the framework to assess intrinsic capacity, (iv) whether to use mobile health technology, (v) whether and how to conduct feasibility testing, prior to implementation of the framework.

IMPLICATIONS AND SIGNIFICANCE OF FINDINGS

1. Future adopters that have health systems with existing care processes (e.g., comprehensive geriatric assessment (CGA)) and elements of integrated care that are similar to Steps 2 to 5 of the framework could adopt Step 1 only. Importantly, the ICOPE framework will still be useful in informing how aspects of the care pathway can be improved in their existing health systems.
2. For future adopters with health systems that lack both assessment of intrinsic capacity and integrated care, they could adopt all five steps or at least Steps 1 to 3 of the framework.
3. The screening tools on intrinsic capacity proposed by the WHO may need to be modified according to available resources and local contexts. For instance, older adults need to self-report how well they can see and hear, if they are unable to do the visual and hearing tests described in the ICOPE framework.

For more information email enquiry@geri.com.sg

Published after each Knowledge to Practice Series (KPS) webinar, the **KPS Webinar Brief** serves as a potential catalyst to help participants translate key research findings into practice.

- Understand Older Adults' Response to Pandemics: Lessons Learnt from COVID-19 (Read it here: bit.ly/48e37M0) ■

Geriatric Education & Research Institute S/N: 001

**KNOWLEDGE TO PRACTICE SERIES
WEBINAR BRIEF**

Understand Older Adults' Response to Pandemics: Lessons Learnt from COVID-19
10 February 2023 | 2:00PM – 4:30PM | Zoom Webinar

The COVID-19 pandemic was a revelatory force that laid bare the impacts of environmental shocks on older people. It also surfaced gaps when dealing with various challenges in a climate of uncertainty. To address the unique health challenges faced by older adults during the pandemic, GERI embarked on a series of collaborative research projects. The insights from the research shared at the webinar has relevance beyond the pandemic towards the larger goal of helping healthcare professionals and decision-makers enhance support for our seniors in a complex future.

"A COMPARATIVE STUDY ON MENTAL HEALTH AND ADAPTABILITY BETWEEN OLDER AND YOUNGER ADULTS DURING THE COVID-19 CIRCUIT BREAKER IN SINGAPORE"
By Dr Tou Nien Xiang

Dr Tou Nien Xiang's study examined differences in mental health, adaptive behaviours, social support, perceived stress, digital media usage, and perceived change in circumstances between younger and older adults during the circuit breaker in Singapore. Below is a summary of key findings from Dr Tou's presentation:

- Older adults were reported to have better mental health and perceived less stress concerns during the circuit-breaker period as compared to their younger counterparts.
- Adaptability is important for maintaining mental well-being especially for younger adults.
- Be mindful of ageism stereotyping in portraying older adults as a homogeneous, vulnerable group.

References:

1. Yu, C. C., Tou, N. X., & Low, J. A. (2022). A comparative study on mental health and adaptability between older and younger adults during the COVID-19 circuit breaker in Singapore. *BMC Public Health*, 22(1), 1-11.
2. Cantanero, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist*, 54(3), 165-181.
3. Charles, S. T. (2010). Strength and vulnerability integration: a model of emotional well-being across adulthood. *Psychological Bulletin*, 136(6), 1068-1091.

"BRIDGING DISTANCES IN TIMES OF COVID-19: DOES COMMUNICATION TECHNOLOGY ACCEPTANCE AND USE COMBAT LOSS OF SOCIO-EMOTIONAL WELL-BEING IN OLDER ADULTS?"
By Dr Serene Nai

Dr Serene Nai presented her work on the effect of prolonged social isolation on older adults' mental and physical health. Her study looked at the older persons' attitudes towards technology (ATT) and perceived ease of use of technology (PEOU) to discover how they communicated with others, as well as their general well-being during the circuit breaker in Singapore. Below is a summary of key findings from Dr Nai's presentation:

For more information, please email enquiry@geri.com.sg

KNOWLEDGE TO PRACTICE SERIES (KPS) WEBINARS

KPS webinars provide a regular forum for the sharing of research outcomes and best practices, that spark discussions and collaboration opportunities which contribute to improving the health services for older adults in Singapore.

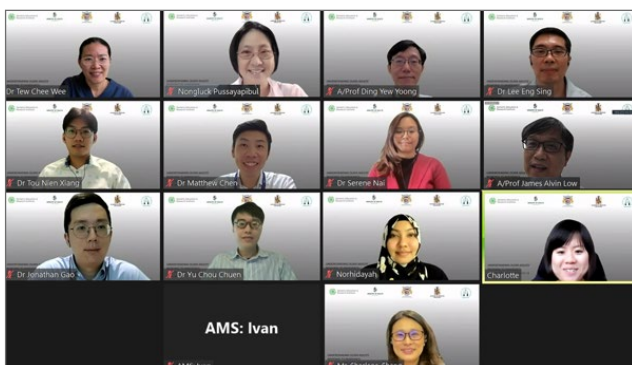
Respecting Dignity: Person-centred Care (PCC) in the Intermediate and Long-term Care Settings (27 July 2022)

Organised in collaboration with the Agency for Integrated Care, this webinar explored local research evidence in conjunction with relevant updates that were helpful in advancing the adoption of the PCC model of care.



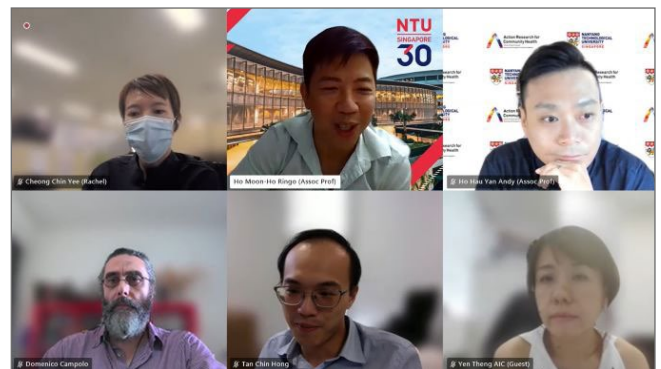
Understanding Older Adults' Response to Pandemics: Lessons Learnt from COVID-19 (10 Feb 2023)

The webinar covered topics that included mental health and socio-emotional wellbeing, the use of technology to connect and care for older adults and understanding the factors that shaped responses to the pandemic.



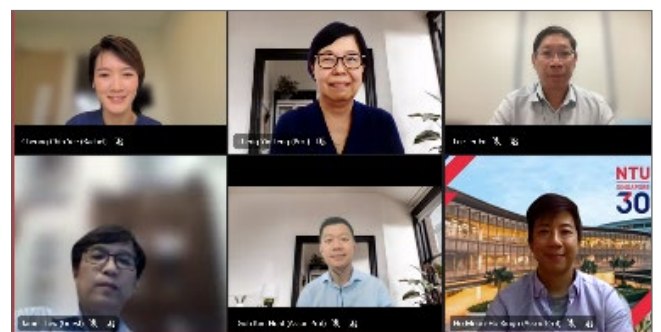
Understanding Cognitive Decline in Older Adults (4 Nov 2022)

Jointly organised by GERI and the Ageing Research Institute for Society and Education (NTU-ARISE), faculty and researchers from both institutes presented their research findings to help enhance the understanding of cognitive decline in older adults.



Electronic Health Records and Face-to-face Communication - Meeting of the New and Old in Care of Elderly Patients (1 Mar 2023)

This was the second of two KPS webinars jointly organised by GERI and NTU-ARISE. The speakers shared their findings which examined advancements in communication and technology and how it has shaped the care of older patients. ■



GERI NEWS

By featuring our research and our people across online and social media platforms, GERI strives to increase the reach of our research and engage a greater variety of readers from government and healthcare sectors to the community. Our researchers also continue to participate in conferences, workshops and exchanges, joining national conversations to advance healthy ageing while sharing their research.

Meet our Researchers series

We get to know the people behind GERI's research to advance healthy ageing: our diverse team of Faculty, Research Fellows and more.

Read the interviews here: bit.ly/3qZZIW4 & bit.ly/3EBaqQq

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News

Meet our GERI Researchers | Dr Jonathan Gao



Dr Jonathan Gao is a Research Fellow at GERI. His current research focus is on caregiving burden experienced by informal caregivers as well as evidence synthesis. He holds an undergraduate degree in Psychology and a PhD in Social Science.

In this series featuring GERI's researchers, we catch up with Dr Gao on the knock-on effects of caregiver stress and the challenges that a shifting healthcare landscape may pose for Singapore's seniors.

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News

Meet our GERI Researchers | Dr Charlene Lau



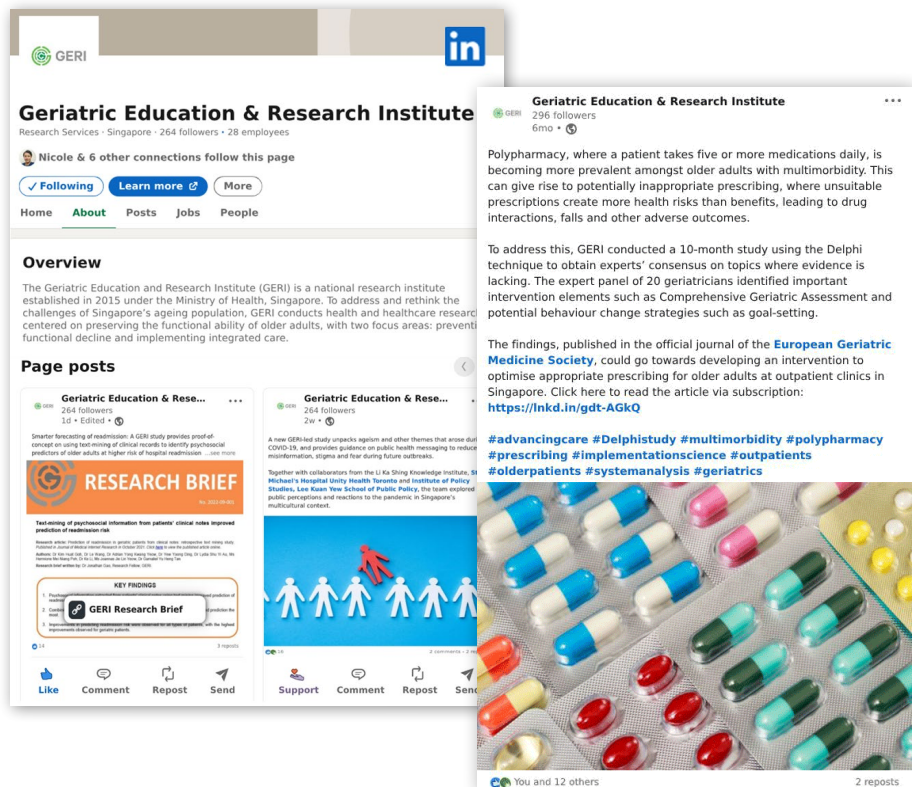
Dr Charlene Lau is a Research Fellow at GERI. Her research focus is on physical activity and exercises for older adults. She is interested in examining ways to encourage uptake of physical activity among older adults and the implementation of community-based physical activity programmes. She holds a PhD in Physiotherapy.

In this series featuring GERI's researchers, we chat with Dr Lau on her research beginnings as a polytechnic lecturer, working in a multi-disciplinary and collaborative environment, and why we should pay attention to frailty.

GERI is now on 

Follow us today!

Visit our LinkedIn page here: bit.ly/48cTrBG



The screenshot shows the GERI LinkedIn profile page. The profile name is "Geriatric Education & Research Institute" with 296 followers and 6mo of activity. A post from Nicole is visible, mentioning 6 other connections. Below the profile, there is an "Overview" section describing GERI as a national research institute established in 2015. A "Page posts" section shows a "RESEARCH BRIEF" post with the title "Smaller forecasting of readmission: A GERI study provides proof-of-concept on using machine learning of clinical records to identify psychosocial predictors of older adults at higher risk of hospital readmission." The post includes a "KEY FINDINGS" section and a "GERI Research Brief" link. The post has 14 likes and 3 reposts. At the bottom right, there is a close-up image of various colorful pills in blister packs.



Research Highlights


We take a deep dive into our recent studies, as we hear directly from the researchers behind the projects on how their findings can help our older adults.

Read it here: bit.ly/3Livpv4

Home > About Us > News

News

WHO framework, focused on screening for physical and mental wellness for personalised care, offers promise for healthy ageing: Study



RESEARCH HIGHLIGHT

The use of mobile apps for self-screening and other learning points are discussed in GERI's global study on the application of the WHO Integrated Care for Older People (ICOPE) framework—which is gaining relevance for countries with action plans to address ageing, like Singapore.

“For older persons to live and age well, a holistic view of health and well-being is needed. The concept of intrinsic capacity is very relevant for healthy ageing as it accounts for the physical, psychological, nutritional and functional health and wellness of seniors.”

Dr Grace Sum Chi-En
Principal Investigator and Lead Author
Research Fellow, GERI

"With Singapore embarking on HealthierSG which promotes the well-being and health of our population, the WHO Integrated Care for Older People (ICOPE) framework offers an attractive option for supporting preventive health among older persons through the early identification of deficits in key physical and mental capacities."

Associate Professor Ding Yew Yoong
Senior Author
Executive Director, GERI

Sharing Our Research

Singapore Population Health Symposium 2022: Life Space in Seniors – Integration of Health, Social and Environmental Dimensions (29 Apr 2022)

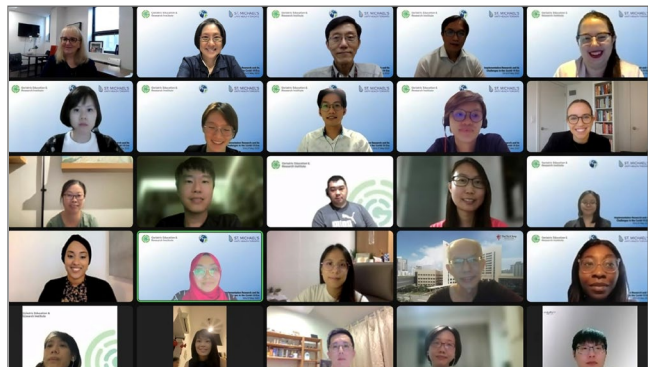
The Singapore Population Health Symposium Webinar was co-organised by SingHealth and GERI. Dr Janil Puthuchery was invited as the Guest-of-Honour and Associate Professor Ding Yew Yoong delivered the closing address for the Symposium.





Implementation Research and its Challenges in the COVID-19 Era (18 & 27 May 2022)

This symposium was jointly organised by GERI and the Knowledge Translation Program, Unity Health Toronto. On both days, Associate Professor Ding Yew Yoong and Associate Professor James Low, Knowledge Translation Lead, GERI delivered the opening speeches respectively.



GERI’s researchers and faculty – Dr Sharon Straus, Dr Yu Chou Chuen, Dr Serene Nai, Dr Tan Woan Shin, Dr Tou Nien Xiang – were also speakers at this symposium.

Visit by Deputy Prime Minister Heng Swee Keat to IGA (12 Aug 2022)

GERI hosted Deputy Prime Minister Heng Swee Keat to a visit at the Institute of Geriatrics and Active Ageing (IGA) where researchers from GERI, IGA, Active Living for the Elderly Research Centre at Nanyang Technological University, Singapore, and Singapore University of Technology & Design presented research projects that addressed issues associated with ageing.



Rapid Reviews: How to Get Started (25 Aug 2022)


Our Research Associate, Penny Lun, was a main speaker at IGA’s Research Webinar, where she shared her expertise on conducting rapid reviews.

IGA Research Webinar

Part 3 Rapid reviews: How to get started
 Translational Sharing : Taking the Plunge: Learning to Swim in the Vast Ocean of Research



Register NOW!
 25 Aug 2022 (Thu)
 1200 – 1300hr



Open to all TTSH staff.
 CME/CNE point will be awarded!

Singapore Health and Biomedical Congress (SHBC) 2022 (12-13 Oct 2022)

After a two-year hiatus, GERI researchers and staff attended SHBC in person at the Singapore Expo. Associate Professor James Low and Dr Tan Wan Shin gave presentations on the second day during the track on “Reinventing Aged Care: What Does the Future Hold for Us”. The panel discussion which followed was moderated by another GERI faculty, Dr Rachel Cheong.

Congratulations to our researchers for winning awards at SHBC 2022!



Healthy Ageing in the COVID-19 Era (1 Nov 2022)

Associate Professor Ding Yew Yoong delivered the opening lecture on “Healthy Ageing in the COVID-19 Era” at the SMU Centre for Research on Successful Ageing (ROSA)'s 2nd Annual Symposium on Successful Ageing.

In his presentation, Associate Professor Ding observed that healthy ageing, as the pandemic had demonstrated, calls for targeted and holistic efforts to strengthen both intrinsic capacity and extrinsic environments—key to preventing functional decline among older Singaporeans. ■



COLLABORATIONS

GERI continued to build on existing collaborations and partnered with new organisations with a focus on harnessing expertise from different domains, creating and translating knowledge that is beneficial to enhancing the health and well-being of older adults in Singapore.

Academy of Medicine, Singapore
 Ageing Research Institute for Society and Education, Nanyang Technological University (NTU)
 Agency for Integrated Care
 Alexandra Hospital
 Alice Lee Centre for Nursing Studies, National University of Singapore (NUS)
 Changi General Hospital
 Chapter of Geriatricians
 Duke-NUS Medical School
 Global Asia Institute, NUS
 Health Promotion Board
 Khoo Teck Puat Hospital
 Knowledge Translation Program, St. Michael's Hospital, Unity Health Toronto
 Lee Kong Chian School of Medicine, NTU
 Ministry of Health
 Monash University
 Nanyang Polytechnic
 NTU
 National Healthcare Group
 National University Hospital
 NUS
 Ngee Ann Polytechnic
 Ng Teng Fong General Hospital
 Sengkang General Hospital
 Singapore Clinical Research Institute
 Singapore General Hospital
 Singapore Institute of Technology
 Singapore Management University
 SingHealth
 Society of Geriatric Medicine Singapore
 Tan Tock Seng Hospital
 Tsao Foundation
 University of Newcastle
 Woodlands Health
 Yishun Community Hospital ■

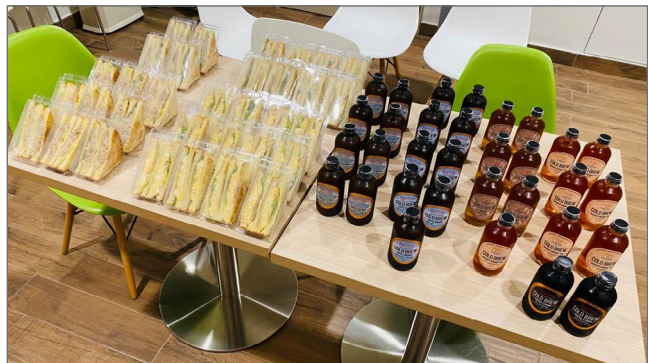
STAFF WELFARE

GERI's staff welfare activities continued to focus on promoting wellness and providing opportunities to engage and build bonds with each other.

Thank You to Dr Chong Mei Sian and Welcome Back to Office (7 July 2022)

After more than a year of working from home, staff were welcomed back to working in the office.

The GERI family also bade a warm farewell and conveyed their appreciation to Dr Chong Mei Sian, outgoing GERI Research Management Committee and Faculty member, for her many contributions to the Institute.





GERI Annual Staff Lunch (12 Jan 2023)

The annual staff lunch held at the Orchid Country Club commenced with a buffet followed by a presentation of long service awards and an invigorating game of bowling. ■



FINANCIAL STATEMENT

Balance sheet
As at 31 March 2023

	2023	2022
	\$'000	\$'000
Assets		
Plant and equipment	19	11
Intangible assets	9	–
Non-current assets	28	11
Prepayments	17	–
Trade and other receivables	63	212
Cash and cash equivalents	2,261	1,383
Current assets	2,341	1,595
Total assets	2,369	1,606
Equity		
Accumulated surplus	408	406
Total equity	408	406
Liabilities		
Deferred income	16	4
Non-current liability	16	4
Deferred income	12	7
Trade and other payables	1,933	1,189
Current liabilities	1,945	1,196
Total liabilities	1,961	1,200
Total equity and liabilities	2,369	1,606

Statement of comprehensive income
For the financial year ended 31 March 2023

	2023	2022
	\$'000	\$'000
Grant income	5,854	6,810
Other operating income	20	195
	5,874	7,005
Staff costs	(2,378)	(3,152)
Supplies and consumables	(28)	(45)
Depreciation of plant and equipment	(9)	(37)
Amortisation of intangible assets	(2)	(12)
Purchased and contracted services	(996)	(1,391)
Research expenses	(1,522)	(1,278)
Operating lease expenses	(252)	(308)
Repairs and maintenance expenses	(570)	(619)
Minor asset expenses	-	(5)
Other operating expenses	(127)	(76)
(Deficit)/surplus from operations before government subvention	(10)	82
Government subvention		
- Current year	12	-
Surplus from operations after government subvention	2	82
Income tax expense	-	-
Surplus for the year, representing total comprehensive income for the year	2	82



Geriatric Education & Research Institute

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