SINGAPORE CONFERENCE ON AGEING AND HEALTH 2026

2 - 3 February 2026

Programme Booklet

Ageing Well in the Community

Exploring New Horizons

Organiser

DukeNUS Medical School | Centre for Ageing Research & Education

Contents

About Centre for Ageing Research & Education (CARE)

CARE is an academic research centre based in Duke-NUS Medical School, Singapore. Drawing on its interdisciplinary expertise and collaborations across medical, social, psychological, anthropological, economic and environmental perspectives, CARE conducts research on the social and medical determinants of successful ageing, and actively engages with government and industry partners to identify needs and strategies to enhance the experience of ageing in Singapore.

Recognising the need for a consolidated and long-term approach towards longevity, CARE also spearheads educational programmes to build competencies on ageing amongst researchers, policy and programme professionals.

CARE's Objectives

- To undertake multidisciplinary ageing research, with a focus on the social and psychological dimensions, for a holistic understanding of the potentials and challenges of ageing at the individual and population level

- To undertake research which facilitates the development and implementation of evidence-based policies, programmes, services and products for older persons and their caregivers

- To contribute to and develop research capacity for high-quality ageing research

- To organise education activities for stakeholders in the academic, policy and practice sectors

CARE's Vision, Mission and Research Themes

CARE Executive Director's Message

With the ubiquity of population ageing, the urgent question we now face is: What does it truly mean to age well? Beyond extending lifespan and health span, we must ask how older individuals and ageing communities can thrive—with dignity, purpose, connection, and care. The *Singapore Conference on Ageing and Health 2026* responds to these pertinent issues by gathering representatives from academia, government and community sectors to present and discuss research findings, interventions and strategies that support ageing well in the community and to identify opportunities and avenues for translating ageing research into real-world practice.

This conference presents a rich programme with keynotes from eminent thought leaders. Professor Lum from The University of Hong Kong explores the role of time-banking in fostering social capital for mutual support and healthy ageing, and Associate Professor Boucher from Duke University addresses the critical importance of community engagement in caregiving research. Furthermore, more than 160 presenters from 17 countries in Asia and beyond contribute to a diverse range of oral and poster sessions, showcasing innovative research and fostering meaningful dialogue across research, policy and practice perspectives. A highlight is the panel discussion on *Pioneering Ageing Futures: From Imagination to Implementation*, where distinguished experts discuss how research and engaging the community can inform the formulation and implementation of programs and policies for older adults.

I greatly appreciate the CARE team for their relentless efforts in organising this conference. On behalf of the CARE team, I extend my heartfelt thanks to everyone at Duke-NUS Medical School and other institutions who have contributed to this conference. May the discussions and collaborations that unfold during the *Singapore Conference on Ageing and Health 2026* inspire new ways to create inclusive, sustainable, and thriving societies with and for our older generations.

I look forward to a fruitful exchange of knowledge and ideas that will shape the future of ageing research, policy, and practice.

Best regards,

Rahul Malhotra, MBBS MD MPH FGSA
Executive Director, Centre for Ageing Research & Education (CARE)
Duke-NUS Medical School, Singapore

Conference Programme

Day 1: Monday, 2 February 2026		
Time	**Session**	**Room**
08:00 – 09:00	**Registration**	Foyer
09:00 – 10:00	**Opening Ceremony** including 10th Anniversary Celebration of the Centre for Ageing Research & Education (CARE)	Auditorium
10:00 – 10:45	**Keynote Presentation** **Ageing Well in the Community: Using Time-banking to Promote Social Capital for Mutual Help and Healthy Ageing** **Professor Terry Lum** *Henry G. Leong Professor in Social Work and Administration,* *The University of Hong Kong, Hong Kong (SAR) China*	Auditorium
10:45 – 11:15	**Tea Break**	**Foyer**
11:15 – 12:45	**Oral Sessions 1A – 1F**	
	1A. Dignity, Connection and Belonging in Everyday Spaces	Auditorium
	1B. Evaluation of Implementation Strategies in Frailty Care	L1-S1
	1C. Digital Health Solutions for Managing Chronic Conditions	L1-S2
	1D. Understanding Patient Experiences Across The Care Continuum	L1-S4
	1E. Strengthening Long-Term Care Systems and Workforce	L2-S2
	1F. Cognitive Screening and Dementia Assessment	L2-T2
12:45 – 13:45	**Lunch**	**Foyer**
13:45 – 14:45	**Poster Presentation Session**	Foyer
14:45 – 16:15	**Oral Sessions 2A – 2F**	
	2A. Digital Design for Inclusive Ageing	Auditorium
	2B. Mobility, Environment, and Community Support for Ageing in Place	L1-S1
	2C. Determinants of Mental Health Across Diverse Ageing Populations	L1-S2
	2D. Novel Interventions for Cognitive Function	L1-S4
	2E. Reciprocity, Inclusivity and Community Support for Family Caregivers	L2-S2
	2F. Measuring What Matters in Ageing Research	L2-T2
16:15 – 16:45	**Tea Break**	**Foyer**
16:45 – 18:15	**Oral Sessions 3A – 3F**	
	3A. Person-Centred, Multicomponent Frailty Interventions	Auditorium
	3B. Alleviating Social Vulnerabilities, Isolation and Loneliness	L1-S1
	3C. Empowering Behaviour Change Through Digital Health Engagement	L1-S2
	3D. Validating Screening Tools for Age-Related Health Risks	L1-S4
	3E. Climate and Environmental Risks in Ageing	L2-S2
	3F. Improving Long-Term Residential Care	L2-T2
End of Day 1		

Day 2: Tuesday, 3 February 2026		
Time	**Session**	**Room**
08:30 – 09:15	**Registration**	Foyer
09:15 – 10:00	**Keynote Presentation** **Community Engagement as a Public Policy Imperative in Caregiving Research** **Associate Professor Nathan Boucher** *Associate Professor of Medicine, Nursing and Public Policy, Duke University, USA*	Auditorium
10:00 – 10:30	Tea Break	Foyer
10:30 – 12:00	**Oral Sessions 4A – 4E**	
	4A. Supporting Caregivers of Persons with Dementia	Auditorium
	4B. Screening and Assessment of Frailty and Physical Health Risks	L1-S2
	4C. Demographic Trends in Population Ageing	L1-S4
	4D. Intergenerational Solidarity in Practice	L2-S2
	4E. Implementing Community-Based Interventions for Preventive Health	L2-T1
12:00 – 13:00	Lunch	Foyer
13:00 – 14:00	**Poster Presentation Session**	Foyer
14:00 – 15:30	**Oral Sessions 5A – 5E**	
	5A. Designing Age-Friendly Neighbourhoods	Auditorium
	5B. Innovative Approaches For Physical Frailty, Falls, and Fractures	L1-S2
	5C. Social, Physical, and Life Course Influences on Cognitive Function	L1-S4
	5D. Technological Innovation for Health Maintenance	L2-S2
	5E. Economic Evaluation of Health Policies and Preventive Services	L2-T1
15:30 – 16:00	Tea Break	Foyer
16:00 – 17:30	**Panel Discussion** **Pioneering Ageing Futures: From Imagination to Implementation** **Moderator: Dr Ad Maulod** *Principal Research Scientist, CARE, Duke-NUS Medical School* **Panellists** **Professor John Wong Eu-Li Executive** *Director, Centre for Population Health, NUS* **Professor Elaine Ho** *Professor, Geography, NUS* **Dr Ritu Sadana** *Head, WHO Secretariat, UN Decade of Healthy Ageing, and PI, Extending Healthy Ageing across the Life Course WHO* **Ms Tan Zhi Xu** *Director, Successful Ageing, Ageing Planning Office, Ministry of Health* **Dr Lily Yeo** *Head, Active Ageing Centres, NTUC Health*	Auditorium
17:30 – 18:00	**Award Presentation and Closing Ceremony**	Auditorium
End of Day 2		

Keynote Speakers

Ageing Well in the Community: Using Time-Banking to Promote Social Capital for Mutual Help and Healthy Ageing

Community Engagement as a Public Policy Imperative in Caregiving Research

Professor Terry Lum
Henry G. Leong Professor in Social Work and Administration, The University of Hong Kong

PROFESSOR TERRY LUM is a renowned expert in long-term care, productive ageing, and geriatric mental health. As the Henry G. Leong Professor at The University of Hong Kong, he has advised the Hong Kong Government on major ageing policies, including long-term care assessment systems, community care voucher schemes, innovative support for caregivers, and a stepped-care model for mental health.

Professor Lum leads pioneering projects such as the HKJC JoyAge and Age Friendly City initiatives, and serves on two WHO committees on healthy ageing and long-term care, and is a commissioner of the Lancet Commission on Long Term Care. A Fellow of the Gerontological Society of America and recipient of the Career Leadership Award in Social Work Gerontology, Professor Lum's work extends across academic, policy, and community spheres to address the evolving challenges of an ageing society.

Associate Professor Nathan Boucher
Associate Professor of Medicine, Nursing and Public Policy, Duke University

ASSOCIATE PROFESSOR NATHAN BOUCHER is an expert in assessing patient and caregiver experiences during serious illness. As a Research Scientist with US Veterans Administration Health Systems Research and faculty at Duke University, he specialises in both qualitative and intervention research at the intersection of social care and healthcare for populations in need.

Dr. Boucher leads projects to support family caregivers and older adults—including those assisting older adults re-entering the community from prison—and develops innovative interventions for families living with dementia and other serious illness. Dr. Boucher's multidisciplinary perspective bridges clinical practice, health/social policy, and community engagement to drive meaningful advances in health and social supports for older adults.

Panel Discussion

Pioneering Ageing Futures:
From Imagination to Implementation

This dynamic panel explores the cutting-edge of ageing research and innovation, focusing on the journey from imaginative concepts to real-world implementation. Our distinguished speakers will share insights on how visionary ideas are being transformed into practical solutions that are reshaping the landscape of ageing in Singapore and beyond. We'll dive into groundbreaking initiatives that are redefining what it means to age in the 21st century. Panellists will discuss a range of concepts, including:

- *Regenerating Purpose:* Developing sustainable solutions for healthy longevity and promoting purposeful living

- *Reimagining Place:* Novel approaches to understanding and strengthening social networks for ageing-in-place

- *Revitalising Play:* Innovative initiatives and community-based programmes supporting healthy ageing and social connectedness

- *Revamping Policy*: Creative policy strategies and national initiatives harnessing the potential of an ageing population

Our experts will not only present their visionary ideas but also share the challenges and triumphs of bringing these concepts to life. This panel aims to inspire attendees with a vision of what's possible in ageing futures while providing practical knowledge on how to turn these possibilities into realities. It promises to be a thought-provoking discussion that bridges the gap between imagination and implementation in the exciting field of ageing innovation.

Panel Moderator

DR. AD MAULOD specialises in critical gerontology and leads a team of qualitative researchers using culture-centred approaches to interrogate intersections between culture, health and ageing. His primary focus is applied research, particularly ethnographic and evaluation studies examining older persons' experiences with community health and social services, identifying needs and determinants of healthy ageing and co-developing solutions to improve care and quality of life for vulnerable elders. He has led several research grants, completed over 13 studies spanning different topics of ageing and health, and conducted over 800 in-depth interviews with older persons. Dr Maulod believes in the wisdom and empowerment of our elders by amplifying their stories and advocating for an inclusive and compassionate society for all-ages. He is invested in advancing research and the development of policies and community-based care models promoting health equity, purposeful ageing, and community empowerment for older persons.

Dr Ad Maulod
Principal Research Scientist,
Centre for Ageing Research &
Education (CARE),
Duke-NUS Medical School

Panellists

PROFESSOR JOHN EU-LI WONG is the Isabel Chan Professor in Medical Sciences and Executive Director, Center for Population Health, National University of Singapore; Senior Advisor, National University Health System, Singapore. He is an elected member of the Academia Europaea, and an international member of the U.S. National Academy of Medicine, where he co-chaired an international commission which published the consensus report on a Global Roadmap for Healthy Longevity. He is currently a Commissioner, Lancet Commission on 21st Century Global Health Threats. He was the recipient of the David Rall Medal, US National Academy of Medicine, received the degree of Doctor Philosophiae Honoris Causa, Hebrew University of Jerusalem, and from Singapore, the President's Science & Technology Medal and The Public Administration Medal (Gold), among other awards.

Professor John Wong Eu-Li

Isabel Chan Professor in Medical Sciences
Executive Director, Centre for Population Health,
National University of Singapore
Senior Advisor, National University Health System

PROFESSOR ELAINE HO is a human geographer whose research focuses on the social and spatial dimensions of ageing. She led the project "Ageing and Social Networks: Mapping the Lifeworlds of Older Singaporeans," which integrates social network analysis, qualitative methods, and Geographic Information Science (GIS). She also headed the Transnational Relations, Ageing and Care Ethics (TRACE) project, exploring global care circulations such as grandparenting migration and retirement migration. With a co-investigator from the National University Health Systems, she is currently completing a project on the community participation and recovery experiences of post-ICU discharged older adults. Professor Ho's work contributes to ageing and social network theories, advances qualitative GIS methods, and rethinks care ethics in transnational contexts.

Professor Elaine Ho

Professor, National University of Singapore,
Geography

DR. RITU SADANA leads World Health Organisation's work on older people, ageing and health, and efforts to implement a life course approach in practice. With more than 30 years of global public health leadership, she guided the development of the first WHO Global Strategy on Ageing and Health and was lead author of the baseline report for the UN Decade of Healthy Ageing 2021–2030. As the principal investigator of WHO's "life-course approach" initiative, Dr. Sadana bridges health across all ages — from early life to older age — bringing evidence-based, equity-centred perspectives on how societies can connect optimal development and promote healthy ageing while strengthening health systems and multisectoral efforts. She holds an MS in Public Health from UCLA, and a Doctor of Science from Harvard University, with training in economics, epidemiology, health policy and demography, and brings analytical depth to strategic global work.

Dr Ritu Sadana

Head, WHO Secretariat, UN Decade of
Healthy Ageing
PI, Extending Healthy Ageing across the Life
Course

Panellists

MS TAN ZHI XU is the Director of Successful Ageing at the Ageing Planning Office (APO) in Singapore's Ministry of Health, where she leads whole-of-government efforts to shape national strategies that harness the opportunities of an ageing population. Her portfolio includes the development of residential care infrastructure, housing-cum-care models to support ageing in place, active ageing initiatives, senior outreach, and the coordination of national approaches to age-related conditions. She also oversees ageing-related research and innovation. Her cross-sector experience in strategic planning and industry development informs her current work in building integrated, forward-looking systems of care and support for Singapore's ageing population.

Ms Tan Zhi Xu
Director, Successful Ageing, Ageing Planning Office, Ministry of Health (Singapore)

Dr Lily Yeo
Head, Active Ageing Centres, NTUC Health

DR. LILY YEO heads NTUC Health's Active Ageing Centres, Singapore's largest network supporting seniors to age well. She spearheads strategic growth and service transformation, shaping inclusive and engaging community spaces for ageing. With a PhD in Chemistry and an MSc in Applied Gerontology, Dr. Lily brings over 20 years of leadership across corporate R&D, sales, and social innovation. Passionate about community well-being, she contributes to national initiatives in innovation, digitalisation, and healthy ageing, creating meaningful impact for seniors and society.

Oral Presentations

Day 1 | Monday, 2 February 2026

1A. Dignity, Connection And Belonging In Everyday Spaces

Room: Auditorium
Session Chair: Angelique Chan

Title *Presenting Author, Institution, Country*
1A-1 **Redefining Respectful, Responsive, and Dignified Care: Insights from the Respectful Elderly Project in Singapore** *Taufique Joarder, SingHealth Duke-NUS Global Health Institute (SDGHI), Duke-NUS Medical School, Singapore*
1A-2 **Creating Connection Beyond Access: A Mixed-Methods Pilot of a Structured Digital Engagement Platform for Older Adults** *Rivka Biggs, Wurzweiler School of Social Work, Yeshiva University, USA*
1A-3 **"If You're Caring and Sharing, You Will Make More Friends": Navigating the Social Infrastructure of Active Ageing Centres** *Atiqah Lee, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*
1A-4 **Exploring the Relationship Between Cultural Heritage, Nostalgia and Older Adult Subjective Wellbeing in Chinatown** *Thomas Lowe, Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore*

1B. Evaluation Of Implementation Strategies In Frailty Care

Room: L1-S1
Session Chair: Jing Wen Goh

Title *Presenting Author, Institution, Country*
1B-1 **Preliminary Findings of a Tailored, Multi-Component Falls Prevention Intervention for Community-Dwelling Older Adults** *Jing Wen Goh, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*
1B-2 **Implementation Barriers in Singapore's Community-Based Falls Prevention Programmes: A Root Cause Analysis** *Catherine Wen Huey Lim, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*
1B-3 **Nurse-Led Integrated Care for Hospitalised Older Adults with Frailty: Insights into Implementation Barriers and Enablers** *Araviinthansai Subramaniam, Geriatric Education & Research Institute (GERI), Singapore*
1B-4 **Evaluating Implementation Strategies' Implementation Quality for Intrinsic Capacity Management Programme in Primary Care** *Qing Wang, Geriatric Education & Research Institute (GERI), Singapore*

Oral Presentations

1C. Digital Health Solutions For Managing Chronic Conditions

Room: L1-S2

Session Chair: Keng Hao Chew

	Title *Presenting Author, Institution, Country*
1C-1	**mHealth, CGM and Coaching to Support Diabetes Care in Older Adults: Subgroup Analysis of a Randomized Controlled Trial** *Ginette Kong, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*
1C-2	**Digital Health–Supported Integrated Care Models for Older Adults: Insights from a Subgroup Analysis of an Ongoing Study** *Hui Xin Loh, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*
1C-3	**Effectiveness of Blended Exercise on Cognition, Physical Function, Metabolic Profile and Patient Experiences in Diabetes** *Jinghua Zhang, Alice Lee Centre for Nursing Studies (ALCNS), National University of Singapore (NUS), Singapore*
1C-4	**A Conceptual Framework for Virtual Reality Design in Improving the Well-Being of Young Seniors with Dementia** *Keng Hao Chew, School of Art, Design, and Media (ADM), Nanyang Technological University (NTU), Singapore*

1D. Understanding Patient Experiences Across The Care Continuum

Room: L1-S4

Session Chair: John Tay

	Title *Presenting Author, Institution, Country*
1D-1	**Instability in End-Of-Life Goals and Preferences of Seriously Ill Patients** *Shravya Murali, Health Services Research & Population Health (HSRPH), Duke-NUS Medical School, Singapore*
1D-2	**Mapping the Final Journey: End-Of-Life Frailty Trajectories and Cause of Death** *Chenkai Wu, Global Health Research Center (GHRC), Duke Kunshan University (DKU), China*
1D-3	**Two Settings, One Lesson: Relationship-Centered Communication in Community TCM vs Clinical Research** *Leona Quek, Clinical Trials and Research Centre (CTRC), Singapore General Hospital (SGH), Singapore*
1D-4	**The Causal Impact of Chewing Disability on Psychosocial Health in Later Life: A Longitudinal Study in Singapore** *John Tay, Health Services Research & Population Health (HSRPH), Duke-NUS Medical School, Singapore*

Oral Presentations

1E. Strengthening Long-Term Care Systems And Workforce

Room: L2-S2
Session Chair: Joelle Fong

Title *Presenting Author, Institution, Country*	
1E-1	**Trust and Demand for Formal Long-Term Care: Evidence from South Korea** *Joelle Fong, Lee Kuan Yew School of Public Policy (LKYSPP), National University of Singapore (NUS), Singapore*
1E-2	**Expanding the Supply of Long-Term Care Manpower in Singapore to Meet the Needs of an Ageing Population** *Hui Xiang Chia, Lee Kuan Yew School of Public Policy (LKYSPP), National University of Singapore (NUS), Singapore*
1E-3	**The Unheard Voices of Registered Nurses' Experiences Working in Aged Care in Australia** *Patricia Channell, School of Nursing, Midwifery and Social Sciences, Central Queensland University (CQUniversity), Australia*
1E-4	**Reablement: Person-Centered, Strengths-Based, and Sustainable Approach to Empowering Seniors and Reducing Dependency** *Rachel Lim, TOUCH Elderly Group, TOUCH Community Services, Singapore*

1F. Cognitive Screening And Dementia Assessment

Room: L2-T2
Session Chair: Aaron Chen Angus

Title *Presenting Author, Institution, Country*	
1F-1	**Barriers and Facilitators to Dementia Screening Among Elderly Chinese Singaporeans: A Qualitative Study** *Jiahui Jin, Wee Kim Wee School of Communication and Information (WKWSCI), Nanyang Technological University (NTU), Singapore*
1F-2	**Clinical Utility of Brainage Gap in Dementia: Evidence from a Local Memory Clinic** Elaine Teo, Duke-NUS Medical School, Singapore
1F-3	**Development, Usability Testing, and Psychometric Validation of a Digital MMSE for Cognitive Assessment in Older Adults** *Aaron Chen Angus, School of Sports and Health (SSH), Republic Polytechnic (RP), Singapore*
1F-4	**Nurses' Compliance with Delirium Assessment Protocol in a Tertiary Hospital: A Retrospective Study** *Siti Nur I'Faaf Binte Mohd Amin, Nursing, Singapore General Hospital (SGH), Singapore*

Oral Presentations

Day 1 | Monday, 2 February 2026

2A. Digital Design For Inclusive Ageing

Room: Auditorium

Session Chair: Lia Troeung

Title *Presenting Author, Institution, Country*	
2A-1	**Implementation of a Telehealth Service: User Age, Expectations and Realities** *Pirratheep Moorthy, Geriatric Education & Research Institute (GERI), Singapore*
2A-2	**Who Needs Digital Designs for Older People? Ageism and Agency in Technology Use and Design** *Frankie Wong Ho Chun, Department of Sociology and Social Policy (SOCSP), Lingnan University, Hong Kong (SAR) China*
2A-3	**Developing a Smartphone-based Behavioural Activation Intervention for Depression in Older Adults: A Co-design Approach** *Dara Kiu Yi Leung, Department of Social Work, The Chinese University of Hong Kong (CUHK), Hong Kong (SAR) China*
2A-4	**Frailty Prediction Tool With Wearable Sensors Using Machine Learning and Deep Learning** *Kai Zhe Tan, Future Health Technologies (FHT), Singapore-ETH Centre (SEC), Singapore*

2B. Mobility, Environment, And Community Support For Ageing in Place

Room: L1-S1

Session Chair: Teah Bayless

Title *Presenting Author, Institution, Country*	
2B-1	**Understanding the Environmental Determinants and Contexts of Ageing-in-place Among Seniors Living in Singapore Rental Flats** *Yong Ling Ng, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*
2B-2	**Reciprocal Association Between Global Positioning System Mobility and Subjective Well-being and Moderation of Cognition** *Jiayi Zhou, Department of Social Work and Social Administration (SWSA), The University of Hong Kong (HKU), Hong Kong (SAR) China*
2B-3	**Understanding the Aspects of Accessibility and Its Challenges in Supporting Ageing in Place for Seniors** *Srishti Arora, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*
2B-4	**Aging In Place: An Integrated Review of Community Models for Healthy Aging in the United States** *Teah Bayless, Department of Family Medicine and Community Health, Duke University, USA*

Oral Presentations

2C. Determinants of Mental Health Across Diverse Ageing Populations

Room: L1-S2

Session Chair: Evi Nurvidya Arifin

	Title *Presenting Author, Institution, Country*
2C-1	**Preparedness for Old Age and Its Mental Health Implications: A Latent Class Analysis** *Amanda Wang, Department of Social Work and Social Administration (SWSA), The University of Hong Kong (HKU), Hong Kong (SAR) China*
2C-2	**Beyond Family Support: Examining the Role of BKL Participation in Mental Health Among Older Indonesians** *Ayu Sajida Da'ad Arini, Directorate of Population Impact Analysis, Ministry of Population and Family Development (BKKBN), Indonesia*
2C-3	**Feeling Adequate, Feeling Well: The Nexus of Perceived Income Adequacy, Self-rated Health and Depressive Symptoms** *Evi Nurvidya Arifin, Centre for Advanced Research (CARe), Universiti Brunei Darussalam, Brunei Darussalam*
2C-4	**Subtypes of Geriatric Depressive Symptoms from the Singapore Longitudinal Ageing Study (SLAS-1): A Latent Class Analysis** *Timothy Singham, Viriya Psychological Services, Viriya Community Services, Singapore*

2D. Novel Interventions For Cognitive Function

Room: L1-S4

Session Chair: Nien Xiang Tou

	Title *Presenting Author, Institution, Country*
2D-1	**Sengkang General Hospital Club Programme** *Qinghui Yu, Medical Social Services, Sengkang General Hospital (SKH), Singapore*
2D-2	**Barriers and Facilitators of Implementing Resistance Training in Dementia Care: A Qualitative Study Using the COM-B Model** *Nien Xiang Tou, Geriatric Education & Research Institute (GERI), Singapore*
2D-3	**The Brain's Gambit: Can Regular Board and Traditional Gameplay Protect Seniors Against Dementia and Cognitive Decline?** *Shakthee Sivakumar, Medicine, International Medical University (IMU), Malaysia*
2D-4	**Beyond Access: Facilities and Facilitation of Museum Engagement with Older Adults** *Sasha Rouse, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*

Oral Presentations

2E. Reciprocity, Inclusivity And Community Support For Family Caregivers

Room: L2-S2

Session Chair: Dahye Kim

Title *Presenting Author, Institution, Country*	
2E-1	**Reciprocity in Upward Intergenerational Support Over the Life Course: Navigating Death, Inheritance, and Widowhood** *Dahye Kim, Department of Sociology, Hong Kong Baptist University (HKBU), Hong Kong (SAR) China*
2E-2	**Is Caregiving a Barrier to Employment in Indonesia?** *Aris Ananta, Faculty of Economics and Business, Universitas Indonesia, Indonesia*
2E-3	**Caregivers: Co-Designing Care to Involve Caregivers in Building Supportive Communities** *Laetitia Tay, Fei Yue Community Services, Singapore*
2E-4	**Evaluating a Peer Support Programme to Support Caregiver Well-being in the Community: A Feasibility Study** *June Poh Hoon Teng, Geriatric Education & Research Institute (GERI), Singapore*

2F. Measuring What Matters In Ageing Research

Room: L2-T2

Session Chair: Pildoo Sung

Title *Presenting Author, Institution, Country*	
2F-1	**Embedding Context in Implementation: Lessons From a Community-based Intrinsic Capacity Programme in Singapore** *Mimaika Luluina Ginting, Geriatric Education & Research Institute (GERI), Singapore*
2F-2	**Oral Health and Social Engagement Among Older Adults: A Gendered Story** *Pildoo Sung, Department of Sociology, Hanyang University, South Korea*
2F-3	**It's All in the Content! Exploring the Content Validity and Feasibility of the QOL-ACC and EQ-5D-5L with Older People Across Health and Aged Care Systems** *Kiri Lay, College of Nursing and Health Sciences, Flinders University, Australia*
2F-4	**Exploring Living Life Spaces of Older Adults in Singapore: A GIS Perspective** *Hui Yun Rebecca Neo, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*

Oral Presentations

Day 1 | Monday, 2 February 2026

<div style="background-color:orange">Sessions 3A – 3F: 4:45pm – 6:15pm</div>

3A. Person-Centred, Multicomponent Frailty Interventions

Room: Auditorium
Session Chair: Jing Wen Goh

	Title *Presenting Author, Institution, Country*
3A-1	**SPICE Program: Implementing Integrated, Multi-sectoral Care to Advance the WHO Decade of Healthy Aging** *Reshma Merchant, Division of Geriatric Medicine, National University Health System (NUHS), Singapore*
3A-2	**Clinical Effectiveness of the Multicomponent Frailty Management Program in Singapore: A Cluster-RCT Study** *Tim Xu, Health and Social Sciences Cluster (HSS), Singapore Institute of Technology (SIT), Singapore*
3A-3	**A Novel Allied Health-led Falls Prevention Programme to Empower Community-dwelling Seniors in Northeast Singapore** *Cherie Chung Yan Tong, Dietetics, Sengkang General Hospital (SKH), Singapore*
3A-4	**Multicomponent Group Therapy to Improve Physical Function and Mobility in Nursing Home Residents** *Bee Yin Ooi, Rehabilitation Department, Ren Ci Hospital, Singapore*

3B. Alleviating Social Vulnerabilities, Isolation And Loneliness

Room: L1-S1
Session Chair: Si Yinn Lu

	Title *Presenting Author, Institution, Country*
3B-1	**Mapping the Organisation of Care for Older Adults Experiencing Loneliness in Singapore: A Qualitative Study** *Si Yinn Lu, Public Health Sciences, University of Toronto, Canada*
3B-2	**Science Meets Stories: Using the Global Diet Quality Score to Assess Diet Quality Amongst Isolated Seniors in Singapore** *Silvia Yu Hui Sim, Geriatric Education & Research Institute (GERI), Singapore*
3B-3	**Uncovering Social Vulnerability: Factors Associated With Social Isolation Risk Among Seniors in Singapore** *Zhen Yang Ivan Ng, Strategy, Research and Data Division (SRDD), Agency for Integrated Care (AIC), Singapore*
3B-4	**Social Frailty and Depression Among Older Adults: The Mediating Role of Meaningful Activities and Life Purpose** *Betsy Seah, Alice Lee Centre for Nursing Studies (ALCNS), National University of Singapore (NUS), Singapore*

Oral Presentations

3C. Empowering Behaviour Change Through Digital Health Engagement

Room: L1-S2

Session Chair: Stephanie Hilary Xinyi Ma

	Title *Presenting Author, Institution, Country*
3C-1	**Health Coaching Attendance and mHealth Engagement in Older Adults: Preliminary Findings From an Ongoing Trial** *Iva Bojic, Lee Kong Chian School of Medicine (LKCMedicine), Nanyang Technological University (NTU), Singapore*
3C-2	**Improving Adoptability, Acceptability, and Effectiveness of mHealth Interventions: A Qualitative Study** *Ivan Shin Kai Thong, Lee Kong Chian School of Medicine (LKCMedicine), Nanyang Technological University (NTU), Singapore*
3C-3	**Effectiveness of Video Conferencing, Gamification and Self-guided Exercise to Improve Fall Outcomes in the Elderly** *Matthew Hao En Wong, Curtin School of Allied Health, Curtin University, Australia*
3C-4	**Empowering Self-management Through CADENCE D-PHA: Qualitative Insights on the Usage of a Multicomponent mHealth App** *Stephanie Hilary Xinyi Ma, Lee Kong Chian School of Medicine (LKCMedicine), Nanyang Technological University (NTU), Singapore*

3D. Validating Screening Tools For Age-Related Health Risks

Room: L1-S4

Session Chair: Jojo Yan Yan Kwok

	Title *Presenting Author, Institution, Country*
3D-1	**Validation of Fall Screening Algorithms and Development of a Questionnaire-Based Fall Risk Tool for Elderly in Singapore** *Thu Khong, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*
3D-2	**Do Preventive Checkups Reach Those Most at Risk? Evidence From Japan** *Saki Sugano, Department of Economics, Aoyama Gakuin University, Japan*
3D-3	**Measuring What Matters in Later Life: A Multidomain Healthy Ageing Index and Its Behavioral and Disease Drivers** *Abhishek Kumar, Department of Population & Development, International Institute for Population Sciences (IIPS), India*
3D-4	**Validation of the Parkinson's Disease Preliminary Risk Assessment Questionnaire in Non-Parkinson's Disease Populations** *Jojo Yan Yan Kwok, School of Nursing, The University of Hong Kong (HKU), Hong Kong (SAR) China*

Oral Presentations

3E. Climate and Environmental Risks In Ageing

Room: L2-S2

Session Chair: Zahirah Suhaimi

	Title *Presenting Author, Institution, Country*
3E-1	**"Hoping For the Breeze": Older Persons' Experiences of Climate Change in Urban-dense Singapore** *Zahirah Suhaimi, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*
3E-2	**Association of Air Pollution and Residential Greenness With Blood Glucose Among Older Adults in India** *Arabindo Tanti, Department of Public Health & Community Medicine (PH & CM), Central University of Kerala (CUK), India*
3E-3	**Understanding Health Impacts of Disasters on Older Adults in India: Findings From the Longitudinal Aging Study (LASI)** *Ravina Ranjan, Centre for the Study of Regional Development, Jawaharlal Nehru University, India*
3E-4	**Elder Abuse, Neighbourhood Environment and Food Insecurity Among Older Adults in India: A Cross-Sectional Study** *T Sathya, School of Public Health, SRM Institute of Science and Technology (SRMIST), India*

3F. Improving Long Term Residential Care

Room: L2-T2

Session Chair: Thiviyah Raman

	Title *Presenting Author, Institution, Country*
3F-1	**Interventions to Reduce Restrictive Practices in Residential Aged Care Homes: A Scoping Review** *Thiviyah Raman, College of Nursing and Health Sciences, Flinders University, Australia*
3F-2	**Delivering Specialist Respiratory Care to Nursing Home Residents Through Collaborative Community Outreach** *Cecilia Bishan Fu, Care Coordination, Changi General Hospital (CGH), Singapore*
3F-3	**Pilot Study: Evaluation of Cognitive Stimulation Therapy in Long-term Residential Care Setting in Singapore** *Diyanah Wahab, Division of Specialist Services, Viriya Community Services, Singapore*
3F-4	**Occupational Therapist-Led Sensory Engagement Group for High-need Nursing Home Residents: A Feasibility Study** *Shi Hui Foo, Rehabilitation, Ren Ci Hospital, Singapore*

Oral Presentations

Day 2 | Tuesday, 3 February 2026

4A. Supporting Caregivers Of Persons With Dementia

Room: Auditorium

Session Chair: Jeremy Lim-Soh

	Title *Presenting Author, Institution, Country*
4A-1	**Communicating a Dementia Diagnosis: Caregiver-Preferred Tools, Gaps, and a Roadmap for Standardised Evaluation** *Howard Haochu Li, Department of Social Work and Social Administration (SWSA), The University of Hong Kong (HKU), Hong Kong (SAR) China*
4A-2	**Dementia Spousal Caregivers Maintaining Continuous Relationship with Care Recipients** *Yiqi Wangliu, Social Work, Yunnan University, China*
4A-3	**A Phenomenological Inquiry on Informal Caregivers' Perspectives on Nursing Home Services for Older Adults with Dementia** *Yoke Chuan Lee, Rehabilitation, ECON Healthcare Group, Singapore*
4A-4	**Support for Family Caregivers of Older Adults with Mild Cognitive Impairment - A Qualitative Study** *Yuanyuan Cao, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*

4B. Screening and Assessment Of Frailty And Physical Health Risks

Room: L1-S2

Session Chair: Su Aw

	Title *Presenting Author, Institution, Country*
4B-1	**Prevalence, Correlates and Psychosocial Outcomes of Frailty, Using the Clinical Frailty Scale, Among Older Singaporeans** *Meagan Yijing Goh, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*
4B-2	**Influence of Osteo-Sarcopenia on the Hip Fracture Risk in Community-Dwelling Older Asian Adults** *Dheeraj Jha, Future Health Technologies (FHT), Singapore-ETH Centre (SEC), Singapore*
4B-3	**Validating Community for Successful Ageing (ComSA) BioPsychoSocial Risk Screener Version II (BPS-RS II) with Diverse Multi-Ethnic Senior Populations in Singapore: A Mixed-Methods Study** *Su Aw, Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore*
4B-4	**The TARGET Study: Effects of Falls and Cognition on Resilience, Fear of Falling, And Quality of Life in Older Adults** *Serine CW Thye, Christina HY Chai, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*

Oral Presentations

4C. Demographic Trends In Population Ageing

Room: L1-S4
Session Chair: Hangqing Ruan

	Title *Presenting Author, Institution, Country*
4C-1	**Sources and Measures of Singapore's Ageing in the Early 21st Century** *Denys Dukhovnov, Department of Demography, University of California, Berkeley (UCB), USA*
4C-2	**Healthy Ageing Across Diverse Contexts: Insights from India, China, England and Brazil** *Mohammad Hammad, Department of Biochemistry, Manipal Tata Medical College (MTMC), India*
4C-3	**Harnessing Longitudinal Health Data for Aging Populations: Insights from East and Southeast Asia** *Shuhan Tang, Global Health Research Center (GHRC), Duke Kunshan University (DKU), China*
4C-4	**Win Some, Lose Some: Cohort Differences in Social Networks of Older Singaporeans Aged 60–69 In 2009 and 2016-2017** *Hangqing Ruan, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*

4D. Intergenerational Solidarity In Practice

Room: L2-S2
Session Chair: V Vien Lee

	Title *Presenting Author, Institution, Country*
4D-1	**Reciprocal Social Participation: Older Adults as Beneficiaries and Contributors to Ageing-In-Place** *V Vien Lee, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*
4D-2	**The Current Status of Intergenerational Solidarity and its Implications for the Future of Ageing in Singapore** *Susana Harding, International Longevity Centre - Singapore (ILC-S), Tsao Foundation, Singapore*
4D-3	**Evaluating the Experience of Living Together: Psychometric Tools for Intergenerational Families** *Lathifah Hanum, Faculty of Psychology, Universitas Indonesia, Indonesia*
4D-4	**Co-designing an Intergenerational Community Dance Program (ICDP) – An Exploratory Qualitative Study** *Wen An Matilda Heng, Alice Lee Centre for Nursing Studies (ALCNS), National University of Singapore (NUS), Singapore*

Oral Presentations

4E. Implementing Community-Based Interventions For Preventive Health

Room: L2-T1
Session Chair: Siat Yee Yap

Title *Presenting Author, Institution, Country*
4E-1   **Rebuild, Reconnect, Revitalize (3R) Program to Transit Older Cancer Survivors in the Community: A Mixed-Methods Study** *Siat Yee Yap, Alice Lee Centre for Nursing Studies (ALCNS), National University of Singapore (NUS), Singapore*
4E-2   **We Know What We Need: Older Adults' and Stakeholders' Perspectives on Ageing, Health, and Wellbeing in Pakistan** *Sonia Sameen, Community Health Sciences, Aga Khan University, Pakistan*
4E-3   **A Multicomponent Intervention to Improve Functional Independence in Rural Indian Elders: A Randomised Controlled Trial** *Swati Roy, Amrita Patel Centre for Public Health (ACHPH), Bhaikaka University, India*
4E-4   **Living Well After Stroke: Psychosocial Outcomes of a Community-Based Coaching Intervention for Survivors and Caregivers** *Melanie Chng, Psychology, Nanyang Technological University (NTU), Singapore*

Oral Presentations

Day 2 | Tuesday, 3 February 2026

5A. Designing Age-Friendly Neighbourhoods

Room: Auditorium
Session Chair: Zahirah Suhaimi

	Title *Presenting Author, Institution, Country*
5A-1	**Causal Pathways Linking Ageing in Place, Social Connectivity, and Intrinsic Capacity** *Yi Wen Tan, Centre for Research on Successful Ageing (ROSA), Singapore Management University (SMU), Singapore*
5A-2	**Typologies of Ageing Neighbourhoods in Singapore: A Multi-Site Mapping of Community Assets for Ageing-In-Place** *Lucas Puah, Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore*
5A-3	**Momentary Associations Between Urban Green Space Exposure and Affective States Among Older Adults** *Peichao Liang, Department of Social Work and Social Administration (SWSA), The University of Hong Kong (HKU), Hong Kong (SAR) China*
5A-4	**Developing A Built Environment and Health (BEH) Index to Advance Age-Friendly Urban Planning Across the Life Course** *Ming Kai Chua, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*

5B. Innovative Approaches for Physical Frailty, Falls and Fractures

Room: L1-S2
Session Chair: Anitha D Praveen

	Title *Presenting Author, Institution, Country*
5B-1	**TARGET: A National Cohort for Assessing Geriatric Fall and Fracture Risk in the Community in Singapore** *Kok Yang Tan, Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore*
5B-2	**Beyond Bone Mineral Density: Improving Hip Fracture Risk Stratification in Older Adults with Osteopenia** *Anitha D Praveen, Future Health Technologies (FHT), Singapore-ETH Centre (SEC), Singapore*
5B-3	**CXCL9 Links Accelerated Biological Age and Frailty in a Longitudinal Human Aging Cohort** *Vanda Ho, Yong Loo Lin School of Medicine, National University of Singapore (NUS), Singapore*
5B-4	**Can Intrinsic Capacity Provide Links Between Healthy Aging and Risk of Falling?** *Yixing Liu, Future Health Technologies (FHT), Singapore-ETH Centre (SEC), Singapore*

Oral Presentations

5C. Social, Physical, And Life Course Influences On Cognitive Function

Room: L1-S4

Session Chair: Sadhvi Maheshwari

Title *Presenting Author, Institution, Country*	
5C-2	**Longitudinal Associations Between Weight-Adjusted Waist Index and Cognition in Middle-Aged and Older Adults in China** *Chang Li, School of Population Medicine and Public Health, Chinese Academy of Medical Sciences (CAMS) & Peking Union Medical College (PUMC), China*
5C-3	**Educational Gradients in Later-Life Cognition in India: National Estimates from LASI** *Sadhvi Maheshwari, School of Health Systems Studies (SHSS), Tata Institute of Social Sciences (TISS), India*
5C-4	**Adverse Childhood Conditions, Cumulative Disadvantage and Gender Difference in Cognition Among Older Adults in India** *Y Selvamani, School of Public Health, SRM Institute of Science and Technology (SRMIST), India*

5D. Technological Innovation For Health Maintenance

Room: L2-S2

Session Chair: Fazila Aloweni

Title *Presenting Author, Institution, Country*	
5D-1	**Empowering Informal Caregivers with the RemindMe App for Pressure Injury Prevention** *Fazila Aloweni, Nursing, Singapore General Hospital (SGH), Singapore*
5D-2	**Utilising Artificial Intelligence Assisted Image Recognition Technology in Virtual Stoma Care Training** *Siew Hoon Lim, Nursing Division, Singapore General Hospital (SGH), Singapore*
5D-3	**An Imputation-Enabled Machine Learning Approach for Fall Risk Assessment of Older Adults in the Community** *Sai G. S. Pai, Future Health Technologies (FHT), Singapore-ETH Centre (SEC), Singapore*
5D-4	**Assessing Reliability & Validity of Computer Vision–Derived Metrics for Senior Baseline Fitness Testing via Digital App** *Li Qing Sonia Lau, School of Computing and Information Systems (SCIS), Singapore Management University, Singapore*

Oral Presentations

5E. Economic Evaluation of Health Policies and Preventive Services

Room: L2-T1

Session Chair: Seoyeon Ahn

	Title *Presenting Author, Institution, Country*
5E-1	**Early Policy Engagement and Preventive Health Uptake: A Regression Discontinuity Evaluation of Singapore's Healthier SG** *Seoyeon Ahn, Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore*
5E-2	**The Role of U.S. Value-Based Payment by Medicare Advantage Plans in Annual Wellness Visits and Risk Scores Via EHR** *Zhang Zhang, Department of Health Policy and Management (HPM), Johns Hopkins Bloomberg School of Public Health (BSPH), USA*
5E-3	**Economic Returns of Disability Reduction in Ageing Societies: Evidence from Japan and the Philippines** *Michael Ralph M Abrigo, Department of Research, Philippine Institute for Development Studies (PIDS), Philippines*
5E-4	**Cost-Effectiveness of a Community-Based Referral Pathway for Hearing Aid Provision in Older Adults in Singapore** *Evania Shu Fang Wong, Health Services Research & Population Health (HSRPH), Duke-NUS Medical School, Singapore*

1A-1

Redefining Respectful, Responsive, and Dignified Care: Insights from the Respectful Elderly Project in Singapore

Sharon Low[1], Huso Yi[2], Shahaduz Zaman[3], Jingyi Lei[1], <u>Taufique Joarder</u>[1]

[1]SingHealth Duke-NUS Global Health Institute (SDGHI), Duke-NUS Medical School, Singapore, [2]Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore, [3]Department of Global Health and Infection, University of Sussex, United Kingdom

Background and Objectives: As Singapore's population rapidly ages, ensuring respectful and responsive healthcare for older adults is increasingly critical. Yet, current frameworks often focus on interpersonal interactions, overlooking structural dimensions that shape dignity in care. To assess older adults' experiences of respectful care in Singapore across both relational and systemic domains and to develop validated tools and conceptual models that inform eldercare policy and practice.

Methods: The Respectful Elderly Project (REP) employed a sequential mixed-methods design. From July 2024 to April 2025, qualitative data were collected through 21 in-depth interviews and 10 focus group discussions with older adults, caregivers, and healthcare workers. Insights informed a structured survey administered to 264 seniors across diverse settings. Quantitative analysis included factor analysis, gap analysis, and cluster segmentation. Qualitative data were coded thematically using ATLAS.ti.

Results: Older adults rated interpersonal respect highly (mean satisfaction scores: 4.0–4.2) but reported significant systemic gaps. The largest satisfaction–importance gap (1.4) was for wait times, followed by medication collection (1.3), end-of-life planning (1.2), and booking systems (1.1). Cluster analysis identified three elder profiles: a generalist high-needs group, a transport- and affordability-sensitive group, and a digitally enabled low-needs group. Qualitative narratives confirmed these patterns and highlighted barriers linked to language, digital exclusion, and emotional neglect. The REP tool demonstrated strong internal reliability (Cronbach's $\alpha > 0.90$) and cultural adaptability.

Implications: The REP pilot reframes respect in eldercare to include both interpersonal courtesy and structural responsiveness. It provides validated tools, actionable insights, and scalable models to inform national frameworks. Tailored interventions - particularly for digitally excluded and mobility-constrained seniors - are critical to equitable and dignified healthcare delivery.

1A-2

Creating Connection Beyond Access: A Mixed-Methods Pilot of a Structured Digital Engagement Platform for Older Adults

Soohyoung Lee[1], <u>Rivka Biggs</u>[1]

[1]Wurzweiler School of Social Work, Yeshiva University, USA

Background and Objectives: Loneliness and depressive symptoms are persistent concerns in later life, particularly for those with functional or sensory limitations. Digital programs may help, yet evidence on feasibility and mental health correlates in diverse samples is limited.

Methods: This study evaluated the Virtual Senior Center (VSC), a facilitator-led, routine-based online program, examining loneliness, depressive symptoms, digital confidence, and perceived benefits, supplemented with focus group interviews. Twenty-three racially diverse older adults completed baseline surveys after enrollment and participation in at least one session. Measures included the UCLA Loneliness Scale, Geriatric Depression Scale-10, digital confidence, functional limitations, and participation. Descriptive statistics, Mann-Whitney U, and Spearman's ρ were used. Focus groups were analyzed using rapid content analysis.

Results: Participants reported moderate loneliness (M = 41.4, SD = 15.0) and mild depressive symptoms (M = 2.3, SD = 2.2). Digital confidence was negatively associated with loneliness ($\rho = -.49$, $p = .02$) and depressive symptoms ($\rho = -.54$, $p = .01$). Functional limitations were associated with higher depressive symptoms ($\rho = .53$, $p = .01$), but not loneliness, and did not reduce program use. Focus group themes emphasized the value of structured routines and consistent opportunities for peer connection, making VSC a meaningful part of weekly life.

Implications: Findings suggest that digital confidence supports emotional well-being and that structured, inclusive programs can sustain engagement even among older adults with impairments. By fostering routine, familiarity, and continuity, areas where many digital interventions failed to provide, VSC demonstrates potential to reduce isolation and support ang well in the community.

1A-3

"If You're Caring and Sharing, You Will Make More Friends": Navigating the Social Infrastructure of Active Ageing Centres

Atiqah Lee[1], Malcolm Ravindran[1], Zahirah Suhaimi[1], Ad Maulod[1]
[1]Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore

Background and Objectives: Social disconnection transcends living arrangements, affecting older persons living alone and with family alike. Recognizing isolation and loneliness as health risks, Singapore has accelerated AAC development in residential neighbourhoods to reduce access barriers and facilitate social engagement. We examine older persons' lived experiences of forming meaningful connections at AACs.

Methods: We draw on data from a larger implementation evaluation of Singapore's AAC service model. Methods included ethnographic observations, in-depth interviews, and focus group discussions with older persons (n=83) and staff (n=24) across 10 centres. Our analysis focused on three dimensions: older persons' meanings and aspirations for social connection; the role of AAC actors and activities in shaping connection-building experiences; and how these processes enabled or constrained feelings of connectedness.

Results: Despite AACs' potential to facilitate meaningful social ties through programme offerings and regular touchpoints, older persons reported a misalignment between desired and actual social connections. Barriers to forming meaningful relationships spanned three domains: people (limited bandwidth for staff to facilitate deeper engagement and sustain meaningful interactions), place (polarised perceptions of the AAC being for the 'sick and very old' or 'very active and healthy'), and processes (challenges balancing programme and KPI priorities with relationship building).

Implications: To address the barriers identified, active ageing spaces should consider: (i) cultivating relationships embedded in broader community networks rather than place-dependent ties; (ii) designing activities around older persons' existing routines and aspirations, and (iii) curating programme elements that foster mutual trust, deeper exchanges and peer collaboration, which contributes to strengthening weak ties in the community.

1A-4

Exploring the Relationship Between Cultural Heritage, Nostalgia and Older Adult Subjective Wellbeing in Chinatown

Thomas Lowe[1], Lucas Puah[1], Zoe Hildon[1]
[1]Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore

Background and Objectives: Continued population ageing in Singapore means there is a growing proportion of older adults, who are remaining in the community for longer, in line with the ageing in place policy encouraged in almost all ageing populations. This article focuses on Singapore's Chinatown as a unique place where cultural heritage and older adults intersect and where both are experience and perceiving change in different ways, which contributes toward older adults' subjective wellbeing.

Methods: Utilising focus group discussions with community members of Chinatown, this article aims to: 1. To discover how the relationship between nostalgia and cultural heritage plays a role in the subjective wellbeing of older adults in Singapore's Chinatown; and based on the relationship discovered: 2. To explore what solutions there are to some of the concerns raised by participants in terms of the cultural heritage and older adults of Singapore's Chinatown.

Results: Our reflexive thematic analysis emphasises that participants felt that cultural heritage, both tangible and intangible, has changed for the worse for older adults and this means older adults feel nostalgic for a past Chinatown. While most participants feel that the past Chinatown is gone, they feel some elements can be re/enacted or brought back. Ultimately, participants identified solutions which aimed to improve both the subjective wellbeing of older adults and help pass on and restore the cultural heritage of Singapore's Chinatown.

Implications: The findings have significant implications for the role of older adults in the community, in terms of ageing in place and as guardians of, but also part of cultural heritage themselves.

1B-1

Preliminary Findings of a Tailored, Multi-Component Falls Prevention Intervention for Community-Dwelling Older Adults

Jing Wen Goh[1], Vanessa Koh[2], Kok Yang Tan[1], Angelique Chan[1], David B Matchar[2]
[1]Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore, [2]Health Services Research & Population Health (HSRPH), Duke-NUS Medical School, Singapore

Backgrounds and Objectives: Despite strong evidence supporting personalized, multi-component falls prevention programs, many existing programs in Singapore focus primarily on exercise and lack individualization. Objective: This study aims to address this gap by assessing the effectiveness of a tailored multi-component program, integrating both exercise and education, to reduce falls and injurious falls among community-dwelling older adults at high risk for falls.

Methods: A 12-month randomised controlled trial was conducted, where the intervention group participated in a tailored exercise and education program twice a week for 12 weeks, while the control group received falls prevention booklet. Intention-to-treat (ITT) and per protocol analyses (PPA) were conducted to assess the impact on number of fallers and injurious fallers, physical performance (assessed using the Short Physical Performance Battery, SPPB), falls efficacy (assessed using the Falls Efficacy Scale, FES), and falls prevention behaviours (assessed using the Falls Behavioural Scale, FaB).

Results: Preliminary results from both ITT and PPA analyses demonstrated that the intervention group had positive improvements in the SPPB lower limb strength subscale compared to the control group, along with improvements in falls efficacy and falls prevention behaviours. The PPA analysis also revealed a positive improvement in the SPPB total score and balance subscale for the intervention group.

Implications: These preliminary findings highlight the need for a multi-component, tailored falls prevention program that not only improves physical performance but also enhances awareness and knowledge about falls, leading to positive behavioural changes and a more proactive approach to safety—supporting a shift toward individualized, holistic, and community-based interventions in Singapore.

1B-2

Implementation Barriers in Singapore's Community-Based Falls Prevention Programmes: A Root Cause Analysis

Catherine Wen Huey Lim[1], Vanessa Koh[2], Goh Jing Wen[1], Lia Troeung[1], David B Matchar[2,3], Angelique Chan[1]
[1]Centre for Ageing Research & Education (CARE), Duke-NUS Medical School, Singapore, [2]Health Services Research & Population Health (HSRPH), Duke-NUS Medical School, Singapore, [3]Department of Medicine (General Internal Medicine), Duke University, Durham, NC, USA

Background and Objectives: Falls are a critical public health challenge for ageing populations. In Singapore, 85% of geriatric emergency cases are fall-related. Despite evidence for multi-component falls prevention programmes (FPPs), a pronounced implementation gap exists in community settings. This study investigates systemic barriers to delivering FPPs, focusing on resource constraints, operational capacities, and scaling risks.

Methods : This qualitative study employed a structured Facilitated Process Improvement (FPI) workshop grounded in the Theory of Constraints (TOC). Fourteen management representatives from seven diverse Integrated Community Care Providers participated in the half-day workshop. The workshop featured three core activities: (i) capacity mapping of current and projected FPP delivery capabilities, identification of (ii) challenges in fall risk screening processes and (iii) barriers in programme monitoring and evaluation. Workshop discussions were moderated through probing and clarifying using Categories of Legitimate Reservation, a logical framework from the ensure all identified challenges were clearly defined and the causal linkages proposed were logically sound. Workshop insights were systematically analysed through the construction of a Current Reality Tree (CRT) to map fundamental constraints.

Results: The core constraint was the continued prevalence of avoidable injurious falls. Root causes identified: (1) no systematic effort to inform older adults about falls and falls prevention, (2) community provider lack of training resources, (3) community provider insufficient funding, (4) a lack of both formal and informal data on demand for FPPs, and (5) high manpower cost for vendors to conduct FPPs. Findings from the CRT analysis are organised into three themes, which are: older adult perception and awareness, provider operational capacities, and inconsistent vendor supply.

Implications: Findings reveal three systemic gaps: an information gap obscuring need, a resource/capacity gap crippling delivery, and an economic gap making programmes unsustainable. Their recurrence in systems like China and Thailand indicates a broader regional failure to fund preventive care enablers. Hong Kong's integrated data and tiered workforce model provides a viable alternative for structural redesign of FPP implementation.

1B-3

Nurse-Led Integrated Care for Hospitalised Older Adults with Frailty: Insights into Implementation Barriers and Enablers

Araviinthansai Subramaniam[1], Mimaika Ginting[1], Jia Ying Tang[1], Celestine Lim[2], Shi Yun Chua[2], Edbert Rodrigues[3], Grace Sum[1], Justin Chew[4]

[1]Geriatric Education & Research Institute (GERI), Singapore, [2]Centre for Geriatric Medicine, Tan Tock Seng Hospital (TTSH), Singapore, [3]Institute of Geriatrics and Active Ageing (IGA), Tan Tock Seng Hospital (TTSH), Singapore, [4]Department of Geriatric Medicine, Tan Tock Seng Hospital (TTSH), Singapore

Background and Objectives: Forging a frailty-ready healthcare system amid increasing prevalence of frailty is crucial. Yet, a gap exists in managing frailty among older patients in non-geriatric acute wards.

Methods: The Inpatient Nursing Frailty Assessment (INFA) integrated care programme involves nurses screening for geriatric syndromes in frail patients, facilitating multidisciplinary management and discharge planning for coordinated care transition to community. This study reports anticipated barriers and enablers elicited before implementation, and on early implementation barriers and facilitators to inform adaptation efforts. Before implementation, we employed qualitative research by conducting 11 focus group discussions and in-depth interviews (IDIs) with 25 healthcare administrators, nurses, clinicians and allied health professionals, underpinned by maximum variation purposive sampling. Data was coded and analysed deductively using the updated Consolidated Framework for Implementation Research. We used table-based method for data synthesis and mind-mapping to derive themes inductively. During implementation, we conducted and analysed five IDIs with nurses using similar qualitative methods. Before implementation, INFA's systematic and proactive approach to bridge frailty care gaps was anticipated to facilitate adoption and implementation.

Results: Anticipated implementation barriers pertained to compatibility with existing workflows, competing priorities across specialist departments, capability gaps, and interprofessional communication. These anticipated barriers were partially validated during actual implementation manifesting as nursing workload pressures and time constraints, alongside inaccurate assessments and referrals. However, the implementation phase revealed more salient facilitators than initially anticipated: INFA was perceived to render added value through early and streamlined care interventions towards improving patient outcomes. Nurses' anticipated concerns on workflow compatibility were replaced by appreciation of INFA's alignment with existing practices, bolstered by feedback and recognition from clinicians.

Implications: Adapting workflows, capability-building efforts, quality monitoring, and leveraging communication channels were key for optimising adoption and implementation. Identifying expected barriers and facilitators facilitated implementation. Eliciting experienced barriers and facilitators during actual intervention guided important adaptations for continued implementation success.

1B-4

Evaluating Implementation Strategies' Implementation Quality for Intrinsic Capacity Management Programme in Primary Care

Qing Wang[1], Ezra Ho[1], Jonathan Gao[1], Mimaika Luluina Ginting[1], Choon Aik Jonathan Ng[2], Sing Cheer Kwek[3], Zhen Sinead Wang[4], Grace Sum[1]

[1]Geriatric Education & Research Institute (GERI), Singapore, [2]Toa Payoh Polyclinic, National Healthcare Group Polyclinics (NHGP), Singapore, [3] Clinical Services, National University Polyclinics (NUP), Singapore, [4]Outram Polyclinic, SingHealth Polyclinics (SHP), Singapore

Background and Objectives: The Intrinsic Capacity ProMotion in PrimAry Care for The Frail (IMPACTFrail) programme is being piloted in five polyclinics across Singapore's three Regional Health Systems. It aims to manage early functional decline in mildly frail older adults through intrinsic capacity (IC) screening (vision, hearing, mobility, vitality, cognition, mental health), clinical assessments, and tailored follow-up. Existing literature tends to focus on evaluating programme effectiveness, with less attention to how programmes are implemented. This limits our ability to ensure their feasibility, sustainability, and scalability. Our study addresses this gap by assessing the implementation quality of the implementation strategies -- activities designed to mitigate contextual challenges to programme delivery.

Methods: Each polyclinic operationalised two to five implementation strategies, including staff training, champions, conducting implementation team meetings, sending text reminders for appointments, and distributing patient educational materials. Implementation quality was assessed using indicators guided by implementation science concepts and frameworks: reach, participant response, dosage, temporality, fidelity to the intended actors, recipients, and actions. Each domain is assessed using a set of quantitative criteria and narratively. Data was systematically triangulated from clinics' structured self-reported templates and in-depth interviews with implementation leads and frontline staff.

Results: Implementation quality was high for staff training and patient-facing strategies, showing good reach and fidelity to intended roles, actions, and intensity across sites. All providers received in-person or online training and hands-on guidance before conducting frailty and IC screening. Text reminders were sent consistently in bilingual formats before appointments and existing educational materials were adapted for IMPACTFrail based on patients' frailty status. Conversely, strategies involving champions and implementation team meetings were more variable, with less clarity of roles, some inconsistent follow-through and mixed engagement.

Implications: Systematically assessing the quality of implementation strategies provides insights to optimise feasibility, guide ongoing adaptation during the pilot, and support sustainability and future scale-up of this primary care programme.

1C-1

mHealth CGM and Coaching to Support Diabetes Care in Older Adults: Subgroup Analysis of a Randomised Controlled Trial

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Background and Objectives: Type 2 diabetes mellitus (T2DM) is a major global health concern. Digital health solutions, including mHealth applications, have emerged to support self-management: however, some common challenges include low digital literacy, difficulty interpreting glucose data, and low motivation to sustain medication adherence and lifestyle modifications, particularly among older adults. To address these gaps, we designed an intervention integrating continuous glucose monitoring (CGM) and health coaching with a diabetes self-management app. This abstract presents its impact on older adults (≥ 60 years) within an ongoing 24-week two-arm randomised controlled trial (1:1 ratio) comparing the intervention and app only.

Methods: We conducted a sub-group analysis on changes in HbA1c, cholesterol levels, and patient activation measure (PAM) score among a total of 144 older adults (intervention: 71; control: 73).

Results: Though not statistically significant, HbA1c improved in both groups with greater reduction in the intervention group (0.25% vs 0.23% at week 12, 0.28% vs 0.16% at week 24) and a higher proportion of intervention participants achieving clinically meaningful HbA1c improvement at week 12 (32.7% vs 24.4%). Mean PAM scores improved significantly in the intervention group at both week 12 (4 points) and week 24 (6 points) but declined in the control group. For triglycerides, 23.3% of intervention participants achieved clinically meaningful improvement at week 12 (0% in the control group), with the trends sustained at week 24 (33.3% vs 23.8%).

Implications: Results suggested that adding CGM and health coaching to an mHealth app may enhance patient activation while improving glycaemic and lipid outcomes among older adults with T2DM. The findings highlight the potential for digitally enabled, coach-supported care to complement the usual diabetes management and address common self-management challenges in the older population. Further studies can confirm long-term benefits and cost-effectiveness and explore its scalability in the clinical workflow.

1C-2

Digital Health–Supported Integrated Care Models for Older Adults: Insights from a Subgroup Analysis of an Ongoing Study

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Background and Objectives: With population ageing, chronic diseases such as type 2 diabetes mellitus (T2DM) has become increasingly prevalent among older adults, requiring sustained self-management and coordinated support. Patient-generated health data (PGHD) offers opportunities to strengthen chronic disease care, yet their broad use in clinical workflows remains limited, with uncertainties on how PGHD can best support patient-centred care. In Singapore, the national strategy, Healthier SG, emphasises preventive and team-based community care, but practical approaches for integrating PGHD into such models are still emerging. Hence, we are piloting a digital health–supported integrated care model with individuals with T2DM that combines a wearable tracker and the EMPOWER+ mobile app to collect and synthesise PGHD, providing community nurses (CMNs) and wellbeing coordinators (WBCs) with actionable insights to guide health coaching. Objective To evaluate the impact of this integrated care model on older adults (≥ 60 years) within this ongoing study.

Methods: We conducted a subgroup analysis of 54 older participants with baseline HbA1c $\geq 6.5\%$, who have completed a 12-week follow-up. Outcomes included HbA1c, triglycerides, low-density lipoprotein cholesterol (LDL-C), and Patient Activation Measure (PAM) scores.

Results: Participants demonstrated improvements in both clinical outcomes and patient activation. Mean HbA1c decreased from 7.6% to 7.4% (p = 0.02), while triglycerides declined from 1.6 to 1.2 mmol/L (p = 0.02). Additionally, 21.4% of participants achieved a $\geq 10\%$ reduction in LDL. PAM scores increased from 63.5 to 74.5 (p < 0.001), with 63.0% achieving a clinically meaningful improvement of ≥ 2.5 points.

Implications: This study demonstrates the promise of integrating PGHD into Healthier SG workflows using digital health tools for older adults. By equipping CMNs and WBCs with actionable insights, such integrated care models may enhance clinical outcomes and patient engagement, thus contribute to healthier ageing in community-based chronic care.

1C-3

Effectiveness of Blended Exercise on Cognition, Physical Function, Metabolic Profile and Patient Experiences in Diabetes

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Background and Objectives: Patients with Type 2 Diabetes Mellitus (T2DM) have a high prevalence of cognitive impairment. Combined aerobic and resistance training has the potential to improve cognition, however, there is a lack of specific exercise guidelines, and adherence among middle-aged and older adults remains low. This study aims to evaluate the effectiveness of a 12-week Intensive Aerobic and Resistance Exercise Program (IAREP) on cognition, metabolic and inflammatory health, physical performance, and patient experiences in middle-aged and older adults with T2DM.

Methods: This study employed a mixed-methods design, combining a quasi-experimental approach with a qualitative process evaluation. Participants (n=53; mean age, 66.7 years) were allocated to an intervention group that received IAREP (blended face-to-face, Zoom, and video-recorded sessions) or a control group that received usual care. Those who completed the exercise intervention were invited to participate in a focus group discussion through a semi-structured interview.

Results: The intervention group demonstrated good adherence (88.9%), increased exercise frequency (W=101.0, p=0.002), and improved physical function (W=83.0, p=0.007). There was a significant improvement in the intervention group, which lowered the risk of cognitive impairment (U=474.0, p=0.025), improved the attention cognitive domain (U=455.0, p=0.024), reduced HbA1c (W=231.0, p=0.034), enhanced physical function (W=474.0, p=0.022), and eliminated the risk of sarcopenia (W=232.0, p=0.022). The thematic analysis revealed a transformative journey marked by discipline, resilience, and personalisation, underscored by the motivational power of social connections and culminating in a holistic commitment to wellness that integrates physical, mental, and emotional health, offering valuable insights for community health interventions and preventive management of chronic conditions.

Implications: IAREP blended delivery models with technology may enhance accessibility and compliance of exercise in diabetic management, which can be adapted for community programs. With social support and personalised routines, these initiatives improve accessibility, adherence, and inclusivity for middle-aged and older adults with T2DM.

1C-4

A Conceptual Framework for Virtual Reality Design in Improving the Well-Being of Young Seniors with Dementia

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Background and Objectives: Virtual Reality (VR) has emerged as a promising tool in digital health. Yet, its application for older adults, particularly young seniors living with dementia, remains underexplored and often misaligned with user needs. Many VR interventions in Singapore are developed based on intuition or outcome-focused evaluations, with limited attention to how the design itself affects user experience. This gap is especially critical for young seniors with dementia, who may exhibit heightened sensitivity to VR's sensory and interactive features.

Methods: To address this, ten key stakeholders were engaged, including healthcare professionals, caregivers, and young seniors, to identify essential design considerations for dementia-friendly VR experiences. In-depth interviews were conducted to uncover the various considerations, ranging from elements that enhance experiential comfort to content or themes that could trigger positive reactions.

Results: From these insights, the VR Design Conceptual Framework (VRDCF) was developed, a human-centred approach that integrates cognitive and physical abilities, psychosocial states, therapeutic goals, and engagement levels into the design process.

Implications: By shifting the focus from outcome measurement to an intentional user-driven design, this work offers practical guidance for creating VR interventions that are not only safe and accessible but also therapeutic and meaningful for young seniors with dementia. The VRDCF contributes to advancing digital health innovation in Singapore and provides a foundation for future VR applications that prioritise dignity, well-being, and quality of life in ageing populations.

1D-1

Instability in End-Of-Life Goals and Preferences of Seriously Ill Patients

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Background and Objectives: Advance care planning (ACP) aims to ensure goal-concordant end-of-life (EOL) care based on patients' pre-recorded goals and preferences, assuming these remain stable. However, this assumption has not been systematically examined. We aimed to assess evidence on stability of EOL care goals and preferences over time among seriously ill patients, and identify factors associated with changes over time.

Methods: We conducted searches using PubMed, EMBASE, and Scopus. English-language longitudinal studies published between 2014 and September 2024 that assessed outcomes at least twice among adults with a serious illness were included. Studies lacking sufficient data to calculate proportions of patients with unstable goals and preferences during the study period were excluded. We conducted a dual-independent screening, single-author data extraction and quality assessment with verification by second author. We used study-level regression analyses and narrative synthesis to identify factors associated with instability. Our outcome was the proportion of patients whose EOL care goals/preferences changed at least once during the study period.

Results: In this systematic review of twenty-five studies examining data from 5,711 patients across seven countries, ten studies had at least 50% of seriously ill patients changing EOL care goals and preferences over time. Study-level regression of studies rated as good quality using the 'National Institute of Health Quality Assessment Tool for Observational Studies' found a higher number of assessments was significantly associated with greater observed instability. Interval between assessments and length of follow-up were not significantly associated. Narrative synthesis identified that changes in health status, emotional states and prognostic understanding were key influences on instability. Prior ACP did not stabilise preferences over time.

Implications: Our findings highlight the importance of reframing ACP—not as a means to achieve goal-concordant care, but as an ongoing process of preparing patients and families for real-time decision-making in the face of uncertainty.

1D-2

Mapping the Final Journey: End-Of-Life Frailty Trajectories and Cause of Death

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Background and Objectives: Frailty, a geriatric syndrome causing reduced resilience, accelerates with age. How it progresses at end-of-life, especially by cause of death, remains unclear. This study investigated frailty trajectories in the last year of life and their distribution across conditions leading to death.

Methods: We analysed 37,465 UK Biobank decedents, linked to national death registries. Monthly frailty scores for the year preceding death used the Hospital Frailty Risk Score. Latent class trajectory models estimated distinct frailty trajectories across six primary causes of death: cancer, cardiovascular, respiratory, neurodegenerative, digestive, and other diseases. Trajectory distribution by underlying cause and associated risk factors via multinomial logistic models were examined.

Results: Among the 37,465 decedents, 2,895 (7.7%) died from neurodegenerative diseases. For these individuals, we identified three distinct frailty trajectories: rapidly progressive frailty (6.9%), moderate progression of frailty (21.1%), and advanced and stable frailty (72.0%). These patterns significantly differed from those observed in decedents with other causes of death, who generally exhibited persistently low frailty (24.7%), intermediate and progressive frailty (46.5%), and advanced and progressive frailty (28.8%). Compared to cancer decedents, individuals with neurodegenerative diseases presented with higher baseline frailty and a distinct acceleration pattern, with a substantial proportion experiencing prolonged and severe frailty throughout their final year. Frailty trajectories among other causes of death were more heterogeneous. The advanced and progressive frailty trajectory was consistently linked to older age, lower education, and a greater burden of chronic conditions.

Implications: End-of-life frailty trajectories are complex and vary by cause of death, with neurodegenerative disease decedents showing distinctly more severe, prolonged frailty. These findings emphasize quantifying frailty to guide person-centred interventions: timely palliative care and tailored symptom management. This is vital for individuals with neurodegenerative diseases, often facing communication challenges and severe frailty in their final year, necessitating proactive, individualized care.

1D-3

Two Settings, One Lesson: Relationship-Centred Communication in Community TCM vs Clinical Research

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Background and Objectives: As Singapore's population ages, some older adults seek care in community TCM clinics, while others participate in clinical trials. Engagement in each setting hinges on relationship-centred communication.
Objectives: To reflect on how relationship-centred communication fosters engagement in community TCM encounters versus clinical research visits, and to detail practical, context-specific strategies, from the perspective of a clinical research coordinator who also volunteers as a community TCM physician.
Methods: Comparative reflection using field observations, post-visit debriefs, and brief vignettes. Analysis focused on three domains: trust, disclosure, and autonomy.
Results: In community TCM, trust emerged from holistic inquiry and tailored advice to body constitution, enabled by narrative invitations and perceived cultural fit, though continuity was limited by sparse documentation. In clinical research, trust was strengthened by plain-language explanations, predictable workflows, and prompt responses, aided by patient-facing materials, reminders, and clear roles; jargon and rigid visit windows were barriers. The holistic TCM frame normalized wide-ranging disclosure, supported by open-ended questions and continuity, but tracking was hindered by inconsistent quantification (severity/frequency), explicit goals, and scheduled follow-up. In trials, some participants may underreport issues deemed "off-study," mitigated by explicit invitations to report any changes and teach-back, yet constrained by protocol focus, fear of errors, and technical language. Autonomy in TCM was enacted through shared agendas, behaviour plans (diet, activity, alcohol/smoking reduction), and constitution-guided tips, but goal-tracking and follow-up intervals were often vague. In trials, autonomy was bounded by protocol, with clear responsibilities and bounded scheduling choices, yet limited by a "participant" identity.
Implications: Proposal of a dual approach-- Introduce light structure to TCM (shared agendas, brief written plans, scheduled follow-up) to track symptoms and habit change. Advocate for humanizing trials (explain the "why," translate jargon, invite concerns beyond protocol tasks, offer bounded choices, and close loops) to reduce "participant" experiences and strengthen understanding.

1D-4

The Causal Impact of Chewing Disability on Psychosocial Health in Later Life: A Longitudinal Study in Singapore

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Background and Objectives: Chewing disability may have psychosocial outcomes such as an increased risk of depression. However, potential mechanisms underlying this association, and the use of time-varying confounders, remain unexplored. This study examines the longitudinal relationship between chewing disability and clinically significant depressive symptoms (CSDS) and assesses whether loneliness mediates this association among older persons.
Methods: A cohort of 1,165 participants aged ≥60 years, without CSDS at baseline, was selected from a nationally representative longitudinal study of older persons in Singapore with follow-up from 2009 to 2015 (three waves). Data were collected for chewing disability, depression, and loneliness. Time-invariant confounders included sex, ethnicity, education, and housing type, while time-varying confounders included age, smoking, mobility difficulty, cerebrovascular disease, coronary heart disease, diabetes mellitus, cancer, and social network scores. Marginal structural models were utilised to estimate the total and indirect effects, with mediation quantified as the proportion of the total effect attributed to loneliness.
Results: Across the study period, 10.3% developed CSDS, 40.7% experienced loneliness, and 33.6% had chewing disability. Individuals with chewing disability had a 48% higher risk of CSDS (RR: 1.48, 95% CI: 1.15–1.82), and the indirect effect through loneliness was 26% (RR: 1.26, 95% CI: 0.99–1.53; 17.3% of the total effect). Nonetheless, the estimates varied by the operationalisation of chewing disability and loneliness. A broader definition of chewing disability showed stronger total effects (RR: 1.57, 95% CI 1.24–1.91), while a stricter loneliness threshold had a greater indirect effect (RR: 1.70, 95% CI: 1.30–2.09; 21.8% of the total effect).
Implications: Chewing disability increases the risk of CSDS among older adults, with partial mediation by loneliness. Further research on oral rehabilitative interventions that improve chewing function and mitigate depressive symptoms in older adults is needed.

1E-1

Trust and Demand for Formal Long-Term Care: Evidence from South Korea

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Background and Objectives: The Republic of Korea has become a "super-aged" society with one in five people aged 65 or older, underscoring the country's deepening demographic crisis. Our study seeks to examine the association between trust and demand for benefits in Korea's national long-term care insurance (LTCI) system.

Methods: We utilize data from the 2014-2022 Korean Longitudinal Study of Aging. The sample comprises community-dwelling adults aged 65 and above. Hierarchical logistic regressions are implemented to evaluate the respective roles of trust in government and trust in the LTCI program on the application for care benefits in the social insurance scheme.

Results: Older adults' levels of trust in the two public entities are generally mediocre. Regression estimates, however, reveal that trust in the LTCI program does matter. Specifically, one unit increase in the level of trust in the LTCI program is associated with a 11% increase in the odds of LTCI benefit request, controlling for health-related factors and other covariates. Furthermore, the effects of trust in the public insurance program on the application for formal LTCI service benefits are most pertinent for persons who are female, as well as the oldest-old. Older Koreans who are aged 80 and above, unmarried, not working, with functional disabilities, depression, poor self-rated health, cognitive impairment, and without private health insurance are more likely to apply for benefits in the national LTCI scheme.

Implications: Policymakers and health administrators should pay attention to cultivating institutional trust in public LTCI schemes through good governance, scheme sustainability, and other relevant strategies.

1E-2

Expanding the Supply of Long-Term Care Manpower in Singapore to Meet the Needs of an Ageing Population

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Background and Objectives: Singapore's population is ageing rapidly, leading to a growing need for long-term care (LTC). However, there is a serious shortage of workers to meet this demand. This study examines the extent of Singapore's LTC manpower shortage, identifies its key drivers, and explores strategies to address the challenge. A cross-national approach was used to analyse how other countries are managing their LTC manpower, focusing on Japan—an ageing society with experience in addressing long-term care needs—and Indonesia, a source country of care workers.

Methods: Semi-structured interviews were conducted with 29 stakeholders from the LTC sector in Singapore, Japan, and Indonesia. This included government, service providers, workers, training institutes, labour advocates, and researchers.

Results: The manpower shortage is severe in Singapore, with persistent challenges in attracting local workers. Contributing factors include low wages, poor working conditions, and limited career progression. This has resulted in a heavy reliance on foreign manpower, though competition for care workers globally is intensifying and making recruitment and retention increasingly difficult. In Japan, efforts have centred on deploying technology to reduce indirect care tasks, thereby enabling workers to devote more time to direct care and communication. The country has also invested in improving working conditions, expanding foreign manpower, and educating young people on the value of care work. Indonesia views care work as a major employment pathway for its migrant workforce. However, aligning worker training with international standards remains a key challenge. To address this, bilateral agreements have been established with countries such as Japan and Germany to facilitate training and overseas deployment of Indonesian care workers.

Implications: Drawing on our findings, we proposed policy recommendations to address Singapore's LTC manpower shortage in the following areas: (1) enhancing worker motivation; (2) foster technology adoption; (3) strengthen skills and training; (4) expand foreign manpower.

1E-3

The Unheard Voices of Registered Nurses' Experiences Working in Aged Care in Australia

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Background and Objectives: As Australia's population ages, residents in aged care facilities require complex nursing care due to their high dependency. Currently, quality of care does not meet the expectations of the national standards for aged care in these facilities partly as a result of inadequate guidelines and funding leading to the rationing of the care able to be provided, resulting in the delivery of substandard care according to an Aged Care Commission. This presentation explores the experiences of registered nurses' provision of care to residents of long-term facilities.

Method: Using a narrative inquiry approach, eight registered nurses located across Australia were interviewed about their experiences working in residential aged care. The interview data was analysed using a thematic analysis.

Results: Three major themes emerged including staff shortages, a lack of education and training, and compromised care. These were further condensed into the concept of 'work intensification'. Issues included an increase in residents' comorbidities and complexity of care needs, a lack of education and training for personal care workers, an inappropriate skill mix, and low staff to resident ratios. All of the findings and the work intensification negatively impacted on the ability of the registered nurses to deliver safe and appropriate care.

Implications: This research established that the voice of registered nurses working in residential aged care remained unheard and highlighted major issues for registered nurses working in the Australian system. This review has implications for future education given the rising dependency levels amongst residents and the demand for specialised aged care nursing skills and expertise. Prioritising support for registered nurses in their leadership role remains crucial for quality care delivery in long term aged care facilities.

1E-4

Reablement: Person-Centered, Strengths-Based and Sustainable Approach to Empowering Seniors and Reducing Dependency

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Background and Objectives: Singapore's ageing population strains its intermediate and long-term care (ILTC) system through care demands stemming from post-hospitalisation deconditioning, frailty progression, and poor self-management of chronic diseases. Current fee-for-service homecare models inadvertently promote service dependency rather than autonomy. In response, TOUCH Community Services piloted Reablement, a time-bound strengths-based intervention which empowers seniors to pursue what matters to them.

Methods: Between April 2022 and March 2025, 158 seniors with recent functional decline partnered an in-house interdisciplinary team over 12 weeks to achieve functional, health, or social goals. The National University of Singapore's Centre for Health Intervention and Policy Evaluation Research conducted a mixed-methods evaluation examining Reablement's reach, implementation, effectiveness, and sustainability. It reviewed pre-post outcome data from 158 clients, 237 comparators, and 30 caregivers; retrospective service utilisation data reported by 37 clients and 32 comparators; interviews with 46 stakeholders; and administrative data. Descriptive and interaction analyses and multivariable linear mixed models were triangulated with thematic analyses where feasible.

Results: By end-2024, 121 clients had completed Reablement. 96.7% achieved minimally one goal; 80.2% improved functional independence; 83.9% enhanced well-being; and 36.1% increased social engagement. Most gains were sustained six months post-discharge. Improvements in functional independence were statistically significant vis-à-vis comparators. Clients' average homecare service utilisations and hospital admissions dropped, while comparators' were higher and more variable. 66.7% of caregivers reported lower caregiving burden. Staff, including mature workers, highlighted satisfaction in empowering clients through motivational interviewing, co-solutioning, and tailored health-promoting routines, while external partners described responsive referrals and information sharing.

Implications: Reablement also contributed to mean monthly ILTC cost savings of 13.5% or $129 per client. Reablement demonstrates effectiveness in enhancing care outcomes and value for its stakeholders while aligning to national priorities on productive and healthy ageing. Scaling efforts are underway in collaboration with the Agency for Integrated Care and partner-providers in various integrated care sub-regions.

1F-1

Barriers and Facilitators to Dementia Screening Among Elderly Chinese Singaporeans: A Qualitative Study

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Background and Objectives: Despite growing dementia cases, widespread hesitancy to undergo screening leads to a large number of undiagnosed cases. This study explored attitudes toward dementia screening among elderly Chinese Singaporeans to identify barriers and facilitators for dementia screening intention.

Methods: Two focus group discussions were conducted with 16 elderly Chinese Singaporeans (aged 60+) recruited from a local Active Ageing Centre. Participants discussed dementia knowledge, screening attitudes, and care preferences. A brief survey was administered before discussion sessions. Thematic analysis identified patterns in screening willingness, barriers, and facilitators.

Results: Despite more than 56% having direct dementia exposure, only 37.5% were willing to undergo screening according to the survey. Primary barriers included cost concerns despite government subsidies, perceived treatment futility given limited therapeutic options, stigma associated with dementia diagnosis, fatalistic beliefs about aging, and fear of "disrupting the status quo" when feeling well. Key facilitators included guidance from family healthcare workers, availability of free screening programs, and desire to avoid burdening adult children. Regarding care preferences, participants expressed strong preference for institutional over family care, reflecting what they described as increasingly Western values in contemporary society that prioritize individual autonomy over traditional filial obligations.

Implications: Cost remains the dominant barrier despite subsidies, requiring expanded financial support for screening programs. Treatment futility perceptions and social stigma necessitate community education emphasizing early detection benefits for care planning and normalizing cognitive health screening. Healthcare systems should encourage family members as advocates while expanding institutional care capacity to meet preference shifts away from traditional family caregiving. Policy interventions must simultaneously address financial, emotional, and social barriers to improve screening uptake rates.

1F-2

Clinical Utility of Brainage Gap in Dementia: Evidence from a Local Memory Clinic

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Background and Objectives: Brainage gap (BAG)—the difference between predicted brain age and chronological age—is a potential biomarker for brain health, associated with diverse health outcomes (Franke & Gaser, 2019; Leonardsen et al., 2022). Clinically, BAG may offer a simple metric to quantify neurological damage. This study validates BAG in a local dementia cohort and assesses its relevance for neurodegenerative conditions.

Methods: Using a pre-trained deep neural network (Leonardsen et al., 2022), we estimated brainage in 647 NNI memory clinic patients (75 HC, 124 SCI, 57 MCI-NA, 214 MCI-A, 144 AD, 33 FTD*; mean age=64.2, SD=8.7; 353 female) from 2013–2025. BAG was computed as brainage minus chronological age, adjusted to the HC mean. We investigated: (i) brainage vs. chronological age in HC, (ii) BAG differences across diagnoses, and (iii) BAG relationships with regional brain volumes.

Results: BAG in HC averaged -5.7 years (used for correction). Brainage correlated strongly with chronological age (r=.84 in HC, r=.80 overall). ANOVA showed that BAG significantly differed across diagnoses (F $(641,5)$ =30.5, p<.001), increasing with disease severity. BAG widely correlated with regional brain volumes, especially CSF, ventricles, accumbens, hippocampus, amygdalae, inferior-parietal cortex, middle temporal cortex.

Implications: Brainage was underestimated in our Asian cohort, highlighting the need for population-specific correction. Importantly, there was a strong linear relationship between brainage and chronological age, validating that BAG reliably captures age-related changes in brain structure. With regards to clinical utility, BAG systematically differed between diagnostic groups according to disease severity. BAG was related to key brain volumes implicated in dementia. Clinically, BAG may offer a promising, interpretable biomarker for assessing neurodegeneration and monitoring disease progression in dementia care.

*HC: Healthy Controls, SCI: Subjective Cognitive Impairment, MCI-NA: non-amnestic Mild Cognitive Impairment, MCI-A: amnestic Mild Cognitive Impairment, AD: Alzheimer's Disease, FTD: Frontotemporal Dementia

1F-3

Development, Usability Testing, And Psychometric Validation of a Digital MMSE for Cognitive Assessment in Older Adults

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Background and Objectives: The Mini-Mental State Examination (MMSE) is one of the most widely used cognitive assessment tools for older adults. However, its traditional paper-based format can be time-consuming, prone to scoring errors, and less engaging for seniors. To address these limitations, we developed a digital MMSE integrated within a mobile application aimed at facilitating ease of administration, automated scoring, and greater accessibility in community and institutional settings. This study sought to evaluate the usability, user experience, and psychometric properties of the digital MMSE among older adults.

Methods: Around 50 older adults were recruited from nursing homes and active ageing centres. Participants completed both the paper-based MMSE and the digital MMSE. Psychometric validation was conducted to examine construct validity, convergent validity, internal consistency, and inter-rater reliability. Parallel focus groups and semi-structured interviews were conducted with participants, caregivers, and clinical experts to optimise the interface and content. Feedback guided iterative refinements to improve usability, accessibility, and engagement, including incorporation of clear instructions, culturally appropriate design elements, and interactive features.

Results: The digital MMSE demonstrated high internal consistency (Cronbach's α =0.87) and strong inter-rater reliability (intraclass correlation coefficient =0.91). Construct validity was confirmed through strong correlations with the paper-based MMSE (r =0.89, p <0.001). Usability testing revealed that seniors valued the simplified navigation, larger font sizes, and multimodal cues (visual and auditory prompts). Focus groups highlighted that gamified elements and interactive activities increased motivation and reduced test anxiety. Experts affirmed that the digital version preserved the clinical rigour of the original tool while enhancing efficiency and accessibility.

Implications: The digital MMSE offers a reliable, valid, and engaging alternative to traditional cognitive screening, with potential to improve large-scale cognitive monitoring and early detection of decline in older adults. By combining rigorous psychometric validation with user-centred design, this innovation demonstrates how technology can transform cognitive assessment and promote healthier ageing.

1F-4

Nurses' Compliance with Delirium Assessment Protocol in a Tertiary Hospital: A Retrospective Study

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Background and Objectives: Delirium is an acute neurocognitive disorder commonly affecting older adults and associated with serious complications. With Singapore's ageing population, early detection and management of delirium has become increasingly critical. The 4AT assessment is a widely recommended tool for rapid delirium screening; however, delayed or inconsistent use may prevent us from achieving the intended outcomes. Despite its routine application, compliance with the Modified 4AT protocol has not yet been assessed in an acute tertiary care setting in Singapore. This study objective is to assess the compliance rate and timeliness of Modified 4AT delirium screening among inpatients older adult, with the ultimate goal of improving patient outcomes.

Methods: Electronic medical records of patients aged 65 and above admitted over June 2022 to June 2023 period were reviewed. Descriptive statistics were used to evaluate compliance rates and timeliness, while associations with outcomes were explored. Each documentation entered in the 4AT chart within 24 hours of patient admission was considered as one compliant count. Entry documented more than 24 hours was considered as one non-compliant count. The total compliant counts divided by the total number of patients was used to determine the overall compliance rate of delirium risk assessment protocol.

Results: A total of 4,821 patients were eligible for assessment. Of these, 73.5% (n=3,545) underwent 4AT assessment, with only 32.9% (n=1,168) completed within 24 hours of admission. The remaining 67.1% (n=2,377) had their 4AT screening after 24 hours. Among patients assessed within 24 hours of admission, 12.2% (n=143) scored ≥4 on the 4AT, indicating a potential delirium diagnosis. In comparison, 12.5% (n=296) of patients assessed after 24 hours scored ≥4 on the 4AT. Preliminary findings suggest suboptimal compliance.

Implications: Strengthening adherence to delirium screening protocols may lead to early detection, timely intervention and improve patient outcomes for at risk patients.

2A-1

Implementation of a Telehealth Service: User Age, Expectations and Realities

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Background and Objectives: Results on effectiveness of hospital telephone support is mixed, possibly contributed by user factors and implementation variations. Older adults may have unique expectations and challenges in using telehealth. An Implementation research approach is needed to evaluate how such interventions work within a complex health system to ensure telehealth services meet the needs of all age groups. This study evaluates the implementation of a hospital telehealth centre to identify the barriers and facilitators of implementation and explores whether experiences differ between older and younger adult users.

Methods: A mixed-method, two-phase study was conducted. In Phase 1, 47 users (22 older adults) completed in-person surveys on their demographics, language proficiency, technology literacy, Telehealth Usability Questionnaire (TUQ, total=147) and Partners-in-health scale (PIH, total=96). In phase 2, in-depth interviews, based on the Consolidated Framework for Implementation Research, were conducted on a purposive sample of 10 service implementors and 19 users (8 older adults) to identify barriers and facilitators of implementation. Quantitative survey data were analysed using STATA. Qualitative data were analysed with NVivo using thematic analysis.

Results: Both older and younger users report high usability [TUQ (mean±SD) 113.3±19.0, 102.4±23.4 respectively] and improvement in self-management [PIH (mean±SD) 66.5±24.9, 56.6±31.4 respectively]. Key facilitators include perceived relative advantage, time savings and ease of access to reliable, personalized healthcare information and health professionals. Major barriers include financing, language, and appropriate patient targeting. While key facilitators and barriers were consistent across the groups, their impact was evidently more pronounced in older adults.

Implications: Older adults were expected to benefit most from telehealth support but benefitted less in reality due to significantly more barriers, particularly in language and unmet complex needs. With growing adoption of telehealth to support ageing in place, this study identified critical themes that must be addressed to ensure its accessibility and effectiveness for older adults.

2A-2

Who Needs Digital Designs for Older People? Ageism And Agency in Technology Use and Design

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Background and Objectives: Age-friendly hardware and software designs aim to support older adults in adopting technologies in day-to-day and care settings. Nonetheless, they sometimes risk homogenizing the needs of demographically and culturally diverse older adults, yielding counterproductive digital experiences. This study investigated the inclusion, exclusion, and agency of older adults in daily digital use to scrutinize the ageism that was internalized and embedded in digital designs, and to inform inclusive design that suits the needs of populations.

Methods: A semi-structured focus group on digital use was conducted with tech-savvy older adults in Hong Kong (N=12, age 60-81 years), in part of a program that co-designed a digital intervention. This group of participants used digital technologies in their daily lives, informing us of their perspectives and experiences with digital designs.

Results: A thematic analysis identified two problem definitions and two dilemmas. First, functionally-based challenges that older adults face varied between individuals to a different extent. Second, age cohort, but not chronological age, was related to the techno-social culture of users, shaping their digital habits and attitudes. Third, a dilemma of oversimplification was demonstrated. While reducing design complexity may make technologies easier to navigate, it limited their potential affordances. Consequently, it may construct an illusion of tech-incapable older adults. Fourth, an internalized ageist dilemma showed that older adults self-categorized into "smart" and "vulnerable" groups, creating a self-fulfilling segregation that prevented some who had the capacity from utilizing technologies.

Implications: Findings suggest that digital designs should move beyond using chronological age alone to define older users, which prompts a one-size-fits-all solution. Instead, designs should better integrate into an accessibility-based inclusive design framework that addresses functionally-related challenges specifically, such as hearing and visual needs. Digital literacy should be promoted in ways that suit the demographic backgrounds and techno-social culture of older adults, fitting into their already-established habits in handling technologies.

2A-3

Developing A Smartphone-Based Behavioural Activation Intervention for Depression in Older Adults: A Co-Design Approach

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Background and Objectives: Depression in older adults represents a significant public health challenge, impacting individual well-being and societal resources. Recent advancements in information and communication technology (ICT) offers opportunities to enhance the accessibility and personalisation of mental health interventions. This study aimed to develop, in collaboration with older adults, a smartphone-based ecological momentary intervention (EMI) for depression, grounded in behavioural activation, self-compassion, and self-efficacy.

Methods: The EMI was informed by a literature review of behavioural activation interventions for depression and three co-design workshops with 12 older adults (age 60-81 years) with subsyndromal depressive symptoms. The workshops explored participants ICT experiences through semi-structured discussion, identified potential challenges through empathy map exercises, and shaped the intervention's structure and content through interactive activities.

Results: The EMI was designed to be simple, flexible, and easily integrated into everyday life. It was delivered through WhatsApp, a familiar platform that enabled both synchronous and asynchronous engagement, allowing participants to interact with the content at their own pace. Content was scheduled four days a week over four weeks, with psychoeducational audio recordings and infographics sent in the morning, and mood and activity log prompts in the evening. This structure aligned with participants' habits, with many treating the morning recordings like a "radio" during breakfast or other morning tasks and the infographics as summaries to be revisited any time during the day. The evening prompts helped reduce anxiety around real-time mood tracking and encouraged end-of-day reflection. Recaps and summaries were incorporated in each session to enhance session continuity based on participant feedback.

Implications: This study co-designed a potential smartphone-based EMI for depression based on theoretical framework and feedback from older adults with subsyndromal depressive symptoms. Further research is needed to evaluate its effectiveness and potential for broader implementation.

2A-4

Frailty Prediction Tool with Wearable Sensors Using Machine Learning and Deep Learning

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Background and Objectives: Frailty is a multifactorial condition that affects both quality of life and overall health, often leading to an increased risk of falling. Current assessments often require multiple clinical tests that are inherently subjective and must be administered by a trained professional. The aim was to investigate whether deep learning models (specific artificial intelligence - AI type) applied to inertial measurement unit sensors (IMUs) data collected during a six-minute overground walk can accurately predict frailty status using the Fried Frailty Phenotype (healthy, pre-frail, frail).

Methods: Six-minute walk data were collected from 867 community-dwelling older adults (mean age 72 ± 6 years; 55% female) with IMUs attached to both feet and the pelvis, at their preferred walking speed along a hallway in a clinic. 3-dimensional time-series of acceleration and angular velocity signals were fed into a convolutional neural network (CNN). Models were trained to classify the older adults into three frailty categories, using bootstrapping to ensure robustness of the results. Performance of the model was evaluated by the area under the receiver operating characteristic curve (AUC), sensitivity and specificity.

Results: Across five-fold cross-validation, the CNN models achieved moderate discrimination: mean AUC = 0.82, sensitivity = 76.23%, and specificity = 88.12% for classifying healthy, pre-frail and frail older adults. Bootstrapping with 100 resamples ensured the stability of the model, with a standard error for the AUC of approximately 0.05.

Implications: AI models applied to IMU data from a simple six-minute walk test provide scalable, ecologically valid approach for frailty assessment among older adults. By using overground walking data, rather than clinical functional assessments, this method can be used to facilitate community-based frailty monitoring for early intervention. Future work will explore other modelling techniques to further increase predictive accuracy.

2B-1

Understanding the Environmental Determinants and Contexts of Ageing-In-Place Among Seniors Living in Singapore Rental Flats

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Background and Objectives: Seniors in rental flats tend to perceive their neighbourhood less favourably than those living in purchased flats. This is especially so in aspects concerning safety, convenience, and physical conditions. As such, they may have needs and preferences surrounding ageing-in-place (AIP) that differ from those living in purchased flats. This study, therefore, aims to investigate the environmental determinants and contexts of healthy AIP among seniors in Singapore's rental flats, using a capability AIP framework.

Methods: 66 seniors aged 60-86 (28 female, 38 male), living in Singapore's rental flats underwent a semi-structured interview, to understand the determinants and contexts of ageing well in their community. Purposive sampling was utilised to ensure a representative sample across age, ethnicity, gender, and frailty status. All interviews were audio-recorded, transcribed verbatim, de-identified, and analysed using thematic analysis.

Results: Findings indicated that shelters, pedestrian crossings, and wheelchair-accessible walkways are key factors of an accessible and safe neighbourhood. Common areas such as void deck benches, provide a barrier-free shared space with opportunities for spontaneous interactions. Additionally, seniors have also cited availability and accessibility of services and amenities—specifically to areas like marketplaces, food centres and AACs—as critical for AIP, as it enables them to maintain their independence while promoting mobility and social engagement. Lastly, a reliable and efficient transport system played a critical role in linking seniors to essential destinations outside of their immediate neighbourhood, including healthcare facilities, family and friends' residences, and places supporting daily needs and well-being.

Implications: Understanding the determinants and contexts of AIP for seniors living in Singapore's rental flats contributes another perspective that aids policy development and neighbourhood-level planning. This ensures that specific needs of this sub-population will not be overlooked, thereby reducing inequality in ageing outcomes between them and seniors living in purchased flats.

2B-2

Reciprocal Association Between Global Positioning System Mobility and Subjective Well-Being and Moderation of Cognition

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Background and Objectives: Emerging research has used objective Global Positioning Systems (GPS) to investigate people's mobility behaviors and their association with well-being. However, the direction of the association and the moderating role of cognition have yet to be fully explored. This study aimed to examine the bidirectional associations between GPS-derived mobility and subjective well-being of older adults in Hong Kong and assess whether cognition moderates the associations.

Methods: Older people aged over 65 (N=312, mean age=71⎕4 years) were asked to wear a mobile GPS sensor for over 7 days and complete ecological momentary assessments on affective states (5 times per day) and daily life satisfaction and self-rated health (in the evening). Nine measures of mobility that were representative of older adults' daily mobility were calculated. Cognition was measured at baseline by Montreal Cognitive Assessment. Multilevel modeling was used to explore the concurrent and longitudinal relationships between mobility and daily subjective well-being, and the moderating role of cognition.

Results: Our findings revealed a significant within-person association between time in active and passive transport mode, number of locations visited, time out of home and daily well-being. A larger life space, more time spent in passive transport mode and a higher number of locations visited predicted more negative affect the following day. Conversely, these mobility behaviors were predicted by higher self-rated health the prior day. The moderation analysis showed that better cognition attenuated the within-person association between time in passive and active transportation and negative affect.

Implications: Our findings directly examine how daily mobility and well-being co-fluctuate in real time, which may offer key insights into mental health monitoring and interventions for people experiencing emotional dysregulation. The moderation of cognition warrants caution in targeted strategies.

2B-3

Understanding the Aspects of Accessibility and Its Challenges in Supporting Ageing in Place for Seniors

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Background and Objectives: As the population continues to age, the need for accessible community resources becomes a crucial part of healthy ageing. Accessibility is a key enabler of successful ageing-in-place as it promotes independence and autonomy among seniors. It facilitates their integration with the community, encouraging connectivity and social participation, while also boosting mental and physical health. Consequently, the present study aims to understand seniors' perspectives on accessibility and the role it plays in ageing-in-place.

Methods: 16 seniors (10 females, aged 64-91) were purposively sampled based on age, gender, ethnicity, frailty status and current housing type. They underwent hour-long semi-structured interviews to understand their perspective on accessibility and ageing-in-place. Interviews were recorded, transcribed verbatim and analysed using reflexive thematic analysis.

Results: Preliminary findings highlight two essential aspects of accessibility pertaining to ageing-in-place: physical access to neighbourhood amenities and informational access allowing informed decisions. Seniors reported various environmental accessibility challenges, with a clear link between mobility and access. Common concerns included uneven sidewalks, steep ramps, inadequate seating along routes, hazardous crossings due to the absence of traffic lights and considerable walking distance to neighbourhood resources like polyclinics or MRT stations. Enriched outdoor experiences were tied to the new MRT line or sheltered pathways, allowing improved access to regions beyond their neighbourhood. Regarding informational access, some seniors were unaware of potential help services, facilities, or community programs. Nevertheless, adaptive strategies allowed seniors to seek information from peer networks, learn from outreach posters and even adopt social media and artificial intelligence platforms to resolve questions in their day-to-day lives.

Implications: Findings show that accessibility plays a pivotal role in ageing-in-place. Seniors perceive accessibility in both physical and informational forms and emphasising targeted environmental modifications and effective communication strategies can make their neighbourhoods more senior-friendly and inclusive as they age.

2B-4

Aging in Place: An Integrated Review of Community Models for Healthy Aging in the United States

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Background and Objectives: Advancements in social and economic development, as well as health innovation, have meant that Americans live longer. Leveraging partnerships and creative community engagement strategies to improve health and wellbeing is critical in helping older adults remain active and engaged in the community of their choice. This integrated review aims to identify evidence-based community programs that promote aging in place and discuss the roles of stakeholders in designing, improving, and implementing these models of care in the community.

Methods: This integrated review searched for evidence-based aging-in-place care models that have shown effectiveness and sustainability. Key components, outcomes, and roles of stakeholders in these care models are identified and discussed.

Results: A total of 6 care models were identified, including Veterans Administration Home-Based Primary Care Caring for Older Adults and Caregivers at Home, Just for Us, Beacon Hill Village, Program of All-Inclusive Care for the Elderly, The GreenHouse Project, and the Charles House Association. Successful models share three core components: interdisciplinary care teams (physicians, nurse practitioners, social workers, occupational therapists, dieticians), comprehensive service integration (primary care, chronic disease management, medication management, mental health services), and community engagement strategies. Key stakeholders include healthcare providers, community organizations, family care-partners, and older adults themselves as active participants. Primary outcomes demonstrate significant cost savings, reduced hospitalizations and emergency department visits, improved chronic disease control (hypertension management), enhanced caregiver satisfaction and support, and delayed institutionalization.

Implications: Community-engaged aging models reduced healthcare costs while improving outcomes through coordinated care delivery. Success requires long-term stakeholder commitment, community partnership building, and flexible implementation that respects local culture.

2C-1

Preparedness for Old Age and Its Mental Health Implications: A Latent Class Analysis

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Background and Objectives: Preparedness for old age (POA) involves both cognitive and behavioral investments to address anticipated aging-related challenges. However, there is no consensus on the typologies of POA and the relationships among preparation patterns, sociodemographic predictors, and mental health outcomes remain unclear. This study is among the first to apply Latent Class Analysis (LCA) to multi-domain preparation using a two-step assessment that distinguishes between awareness and action. It further examines sociodemographic predictors of these patterns and assess their associations with mental health outcomes.

Methods: A cross-sectional survey was conducted in 2024 with 1,133 community-dwelling adults aged 60 and above in Hong Kong. Participants reported their perceived preparation status and engagement in 15 preparation activities. LCA was applied to identify preparation typologies. Multinomial logistic regression examined sociodemographic predictors of class membership, and multiple linear regression models assessed the association between class membership and four mental health outcomes: psychological distress, personal well-being, loneliness, and intolerance of uncertainty.

Results: A five-class solution was identified: (1) Non-Preparers(17.3%)--no intention to engage in preparation; (2) Comprehensive Preparers (14.5%) -- highly proactive, with the majority reporting completed action for nearly all preparation activities; (3) Selective Preparers (16.3%)—engaged selectively in certain preparation activities; (4) Ambiguous Preparers (15.8%) -- expressed a strong intention or engage in activities without explicitly recognizing them as preparation; and (5) Minimal Preparers (36.1%) -- the largest group, with limited intention and action. Six sociodemographic predictors—age, education, caregiver status, private property ownership, cohabitation status, and insurance coverage—were significantly associated with class membership. Comparing with Non-preparers, Minimal Preparers reported higher psychological distress and greater intolerance of uncertainty while Comprehensive Preparers and Ambiguous Preparers reported higher levels of personal well-being.

Implications: Findings highlight the need for targeted interventions for Minimal Preparers and support policy initiatives promoting accessible tools, community education, and early planning program.

2C-2

Beyond Family Support: Examining the Role of BKL Participation in Mental Health Among Older Indonesians

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Background and Objectives: Mental health in later life is a growing concern in Indonesia. The Family Development for Older People (BKL) program aims to improve well-being through family-based activities, yet its impact on mental health remains under-explored. This study examines whether BKL participation is linked to improved mental health and explores the roles of socio-economic status (SES) and family support.

Methods: Data from the 2023 Indonesia Longitudinal Aging Survey (n = 3,860) were analysed, with depression assessed using the CES-D Depression Scale.

Results: Logistic regression models showed a marginal protective association between BKL participation and depression (OR = 0.56, p = 0.081). Older adults (60+) and rural residents had lower odds of depression (OR = 0.54, p = 0.028; OR = 0.55, p = 0.015). Support from children and other family members were linked to higher BKL participation but not depression.

Implications: Expanding access to the BKL program is crucial to achieving broader mental health improvements. Particularly, targeting low-participation groups and those with limited family support, could enhance the program's effectiveness. Furthermore, program design should integrate family dynamics, especially the role of children, to increase engagement and address mental health needs more effectively.

2C-3

Feeling Adequate, Feeling Well: The Nexus of Perceived Income Adequacy, Self-Rated Health and Depressive Symptoms

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Background and Objectives: Perceived income adequacy (PIA) has been an increasingly important indicator of economic security and subjective wellbeing in later life. Financial strain can be associated with poorer self-rated health (SRH) and elevated depressive symptoms (Centre for Epidemiologic Studies Depression Scale /CES-D). This study examines the links between PIA, SRH and CES-D among older adults, and whether SRH mediates the association between PIA and CES-D, controlling for socioeconomic-demographic variables.

Methods: This paper analyses cross-sectional data from 428 community-dwelling individuals aged 50 years and above in Brunei Darussalam. PIA and SRH were dichotomous, and depressive symptoms were measured by a continuous CES-D total score (Cronbach's alpha = 0.74). Socioeconomic-demographic variables included age, sex, marital status, ethnic group, geographic location, education, employment status, individual income and household income. Statistical analytical methods include descriptive and bivariate analyses (Chi-square and ANOVA tests). Binary logistic regression models were used to examine the association between PIA and SRH. Linear regression models for CES-D on PIA and SRH, controlling for covariates.

Results: The results show that, controlling for other variables, older adults who feel financially adequate were strongly associated with feeling well SRH (OR=3.03, p<0.001) and with lower depressive symptoms or CES-D score (β=-1.80, p<0.001). Adding SRH to the CES-D regression model did not affect the PIA association with CES-D (β=−1.65, p=0.002), while SRH was not significant (β=−0.76, p=0.184). However, excluding PIA from the model, SRH became significantly associated with CES-D (β=−1.12, p=0.046), indicating no evidence that SRH mediates the relationship between PIA and CES-D.

Implications: Findings suggest that policies aiming to alleviate perceived income inadequacy can have double benefits for healthy ageing: improving general health and reducing depressive symptoms, thereby strengthening intrinsic capacity and functional ability. Feeling financially adequate protects against depression directly, beyond the influence of general health.

2C-4

Subtypes of Geriatric Depressive Symptoms from the Singapore Longitudinal Ageing Study (SLAS-1): A Latent Class Analysis

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Background and Objectives: Rates of depression and subsyndromal depression in the geriatric population have been found to be between 5-12% in recent local studies. Despite extensive population-wide preventive efforts over the years, prevalence rates have continued to rise steadily, causing significant public health concerns. While several overseas studies have identified geriatric depressive symptom subtypes that could allow for greater tailoring of interventions, to the best of our knowledge, no local study has identified such heterogenous subtypes in the local Singapore population.

Objectives: This study aims to identify subtypes of geriatric depressive symptoms based on the Geriatric Depression Scale (GDS-15) in a local Singaporean sample.

Methods: A latent class analysis was conducted on data from the Singapore Longitudinal Ageing Study (SLAS-1). Excluding participants with MMSE scores below 18, and non-complete GDS-15 data, the final sample included 2691 participants (Female = 63%; Mean age = 66, range 54 to 97 years; mean MMSE = 27.32).

Results: A 4-class solution was found to fit the data appropriately: Class 1: "Asymptomatic" (70%), Class 2: "Anhedonia/Amotivation" (15%), Class 3: Anxious/Withdrawn (8%), and Class 4: Severe (7%). Socio-demographic factors such as education level, ethnicity, housing type, and marital status were found to be significantly different across classes, while no significant differences were found for age and gender. Impairments in activities of daily living and MMSE scores were also significantly different across classes.

Implications: This study contributes to the existing local literature on geriatric depression, demonstrating that there is significant heterogeneity in geriatric depressive symptoms. Of particular interest was the uncovering of a "Anxious/Withdrawn" subtype, which highlights anxiety's role in geriatric depression which may be overlooked currently. Further research could examine whether these classes are invariant across gender, and to identify possible mechanisms by which depressive symptoms affect cognitive health and activities of daily living longitudinally.

2D-1

Sengkang General Hospital Club Programme

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Background and Objectives: People living with dementia (PLWD) in hospital wards experience restlessness, disengagement, and sleep disturbances due to inadequate sensory stimulation and meaningful activities. Caregivers struggle to manage concerning behaviours in environments lacking structured activities addressing patients' core emotional needs. SKH introduced the Club Programme combining Person-Centred Care (emphasising respect, dignity, and autonomy) with the Spark of Life Model (focusing on emotional wellbeing through safe, inclusive environments). The programme aimed to improve wellbeing scores of patients rated below excellent, targeting excellent scores in at least 50% of this group, whilst conducting weekly sessions over six months (27 sessions).

Methods: The study included 46 patients with mild-moderate dementia from Ward 310's Geriatric Assessment and Intervention unit. Participants were engaged in English/Mandarin and tolerated one-hour sitting sessions. Exclusions included patients with Multi-Drug Resistant Organisms, severe behavioural symptoms, or sexual disinhibition. Ward staff identified eligible patients for Medical Social Worker referral, with caregivers invited when present. Weekly Tuesday sessions (June-December 2024, excluding September) followed structured rituals: tea service, introductions, balloon warm-up activities, themed content (festivals, music, reminiscence), and appreciation ceremonies. The validated Bradford Well-Being Profiling scale measured emotional and psychosocial wellbeing pre- and post-intervention.

Results: Pre-intervention, 64.7% (n=34) demonstrated excellent wellbeing scores, whilst 35.3% (n=12) had below-excellent scores. Post-intervention, 83.3% of patients with initially below-excellent scores achieved excellent wellbeing, significantly exceeding the 50% target. Statistical analysis confirmed significant improvement (t=5.15, p<0.001). The programme achieved 96% attendance rates, 4.5% dropout rates, and 85.2% implementation rate (23/27 sessions). Eight patients participated multiple times, indicating strong engagement.

Implications: The Club Programme successfully enhanced patient wellbeing, far exceeding targets through structured, person-centred activities. Based on these outcomes, the programme will expand to other SKH wards and collaborate with day care centres to share this effective intervention across different care settings.

2D-2

Barriers and Facilitators of Implementing Resistance Training in Dementia Care-A Qualitative Study Using The COM-B Model

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Background and Objectives: Resistance training is a well-established non-pharmacological intervention to maintain functional ability and manage progression of dementia. However, its implementation in community setting remains varied. This study aimed to explore the behavioural determinants influencing implementation in a minimal-equipment resistance training programme implemented in a community dementia daycare centre.

Methods: Qualitative insights were gathered through semi-structured observations during sessions and stakeholder engagement with centre staff involved in delivering the resistance training programme. Data were analysed thematically using a deductive approach, with findings mapped onto the core constructs of the COM-B model including Capability, Opportunity and Motivation, to identify key barriers and facilitators to fidelity toward three core components (PIE) in the resistance training programme: consistent Progression, adequate Intensity and. appropriate Execution.

Results: Preliminary findings reported Opportunity (social) to be the key facilitator, including positive attitude of staff, supportive team dynamics and organisational support. Capability and Motivation were found to be the barriers in implementing PIE. Specifically, centre staffs were found to have varying level of knowledge of what constitutes appropriate PIE. Although staff were experienced in leading group exercise, their focus was on engaging seniors (who were easily distracted) rather than achieving PIE. Motivation (reflective) was a barrier because staff were concerned about the possibility of falls and other potential side effects of the exercise, leading to over-cautious delivery and reduced implementation fidelity. Additionally, we also identified barriers in opportunity (physical) attributing to time constraint, space limitation, and competing demands.

Implications: Applying COM-B provides a nuanced understanding of the behavioural influences on implementation. Perceived risk and varying capabilities in delivering higher-intensity exercise were identified as the key determinants that may affect implementation fidelity. Findings highlight the need for implementation strategies to enhance staff capability and motivation to deliver safe, yet physiologically effective, resistance training in dementia care settings.

2D-3

The Brain's Gambit: Can Regular Board and Traditional Gameplay Protect Seniors Against Dementia and Cognitive Decline?

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Background and Objectives: Leisure activities, including board and traditional games, may help protect seniors against cognitive decline by providing rich cognitive, social, and emotional stimulation. Popular games among Singaporean seniors include Chess, Go, and Mahjong. This review evaluates whether such games lead to reduced dementia risk and improvements in related outcomes.

Methods: A systematic literature review was conducted across PubMed, Scopus and Google Scholar. Out of 424 studies screened, 20 met the predefined inclusion and exclusion criteria. These included observational cohorts, randomized controlled trials (RCTs), and laboratory studies. Outcomes assessed were dementia incidence, global cognition [Montreal Cognitive Assessment (MoCA), Mini-Mental State Examination (MMSE)], executive function, quality of life (QOL), depressive symptoms, and neurobiological markers such as brain-derived neurotrophic factor (BDNF). Reported effect estimates were presented with 95% confidence intervals (CI).

Results: In a 20-year cohort of 3,675 older adults, regular chess players had a 15% reduced dementia hazard compared to non-players [Hazard Ratio (HR), 0.85, 95% CI 0.74–0.99; $p = 0.04$]. This association attenuated after adjusting for baseline cognition and depression (HR 0.96, 95% CI 0.82–1.12; $p = 0.61$), suggesting possible mediation. Across randomized and quasi-experimental studies, board games consistently improved global cognition (e.g., MMSE and MoCA, $p < 0.05$), executive functioning, and working memory. Chess enhanced QOL, Mahjong reduced depressive symptoms and Go training improved attention and memory. Studies demonstrated increased BDNF in cognition-related brain regions among Go players. Socially interactive games were more effective than solitary digital games in enhancing outcomes.

Implications: Such games are associated with modest reductions in dementia risk and improvements in cognition, mood, and QOL. However, attenuation after adjusting for baseline factors suggests potential reverse causality or mediation. Larger longitudinal RCTs are needed to clarify causality. Finally, we advocate incorporating game sessions in senior homes and community centers as a low-cost, engaging intervention for cognitive health.

2D-4

Beyond Access: Facilities and Facilitation of Museum Engagement with Older Adults

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Background and Objectives: The National Museum of Singapore (NMS) launched Refresh & Reconnect (R&R)—a six-week arts- and heritage-integrated programme exploring museums as mediated spaces for older persons' well-being. Situated within wider international efforts to reimagine museums as socially inclusive cultural institutions amid changing demographic and funding landscapes, this presentation examines how R&R promotes cognitive engagement and social interaction among older persons with cognitive impairment (PWCI).

Methods: This presentation draws on ethnographic observations from a larger mixed-methods evaluation study (January 2025-May 2026). We observed 48 programme sessions involving 97 older persons, 38 care facilitators, and 6 artist-facilitators. Each two-hour programme session was observed within a four-hour observation period that included pre- and post-session interactions. Field notes systematically documented environmental settings, interaction patterns and facilitation strategies as part of engagement dynamics within the museum environment.

Results: Three key findings emerged. First, the museum functioned as a dynamic space of engagement where static exhibits "come alive" through active mediation between care facilitators and older persons. Second, older persons were positioned as active contributors rather than passive recipients, with the programme acknowledging their diverse capacities, and autonomy. Third, productive tensions emerged between the museum as an informational versus relational space, with facilitation navigating between content delivery and social connection without privileging one over the other.

Implications: The museum sector's evolution toward social inclusion for older persons requires both appropriate facilities and skilled facilitation to meet learning needs and desires for social connection. The museum environment alone does not generate cognitive and social engagement; rather, the interplay between place, people, and programmes brings meaningful engagement to life. This research underscores the potential for older persons to transition from visitors to contributors within museum spaces, with implications for programme design in cultural institutions serving aging populations.

2E-1

Reciprocity in Upward Intergenerational Support Over the Life Course: Navigating Death, Inheritance, And Widowhood

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Background and Objectives: Reciprocity is central to understanding support exchanges between parents and children across the life course. While earlier parental financial transfers to children often predict greater upward support in later life, little is known about whether lump-sum transfers at a parent's death (i.e., inheritance) influence children's support for the surviving parent. This study examines whether inheritance distribution affects adult children's support for widowed mothers, applying a reciprocity framework to test direct, relative, and anticipatory reciprocity.

Methods: Using Waves 1–9 of the Korean Longitudinal Study of Ageing, we analyzed 1,151 adult children of 316 widowed mothers in South Korea whose late husbands left any inheritance. Key predictors included each child's inheritance receipt, their share relative to siblings, and whether mothers inherited the full estate. Multilevel models estimated the effects of these inheritance measures and their interactions with mothers' functional impairment on upward support in early widowhood, measured as structural (coresidence), instrumental, and financial support. Interactions with the child's gender were also examined.

Results: Larger inheritance shares to a child were associated with a higher likelihood of coresidence and greater financial support to widowed mothers in early widowhood. Relative inheritance, compared to siblings' shares, was more predictive than receipt alone. Sons who received inheritance were less likely than daughters to coreside with widowed mothers. When mothers inherited the full estate, children were more likely to provide caregiving, but only when mothers had functional impairments.

Implications: These findings support reciprocity as a mechanism in intergenerational exchanges and highlight the understudied role of inheritance distribution in shaping post-widowhood support. Relative reciprocity appears more influential than direct reciprocity, while anticipatory reciprocity operates primarily under conditions of health decline. Inheritance patterns within families not only redistribute resources but also influence the dynamics of parent–child relationships in later life.

2E-2

Is Caregiving A Barrier to Employment in Indonesia?

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Background and Objectives: Indonesia's ageing population increases the need for family caregivers. A common option is young adults (<30) as unpaid caregivers, but this may hinder their careers. This paper examines whether caregiving lowers young people's employment prospects, and whether employment reduces their likelihood of providing care.

Methods: This study uses wave 4 (2007) and wave 5 (2014) of the Indonesian Family Life Survey (IFLS) to examine the relationship between caregiving and employment among young people. Caregiving is a binary variable, while employment is measured both as binary (working vs. not working) and categorical (not working, informal, formal). The analysis has two parts. Cross-sectional models for 2007 and 2014 (four regressions) assess associations using logistic and multinomial logistic regressions, controlling for demographic and socioeconomic factors. Lag models then test causality: caregiving in 2014 is regressed on caregiving and employment in 2007, and employment in 2014 on caregiving and employment in 2007 (four regressions).

Results: In 2007, caregiving was not linked to overall employment in the binary model, but caregivers were more likely to be in informal work than in formal work or non-employment. By 2014, the pattern shifted: caregiving was positively associated with employment in both binary and multinomial models, with carers least likely to be non-working. The lag analysis shows strong persistence in both caregiving and employment: caregiving in 2007 predicts caregiving in 2014, and employment in 2007 predicts employment in 2014. However, caregiving and employment do not affect each other across periods.

Implications: The evidence shows that caregiving is not necessarily a barrier to employment, though caregivers are more likely to continue being caregivers. Yet, policies supporting flexible work and care infrastructure remain crucial to ensure caregiving does not hinder economic participation

2E-3

Caring for the Caregivers: Co-Designing Care to Involve Caregivers in Building Supportive Communities

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Background and Objectives: The Caregiver Empowerment Programme (CEP), developed to improve caregivers' well-being and reduce stress and burnout, provides counselling, support groups, interest-based activities and workshops.

Methods: It was designed from a Human-Centred Design (HCD) approach adapted to the social service context, comprising five phases.   In the first phase—understanding the context—the key user profile was identified: seniors caring for elderly parents living with chronic conditions. Caregivers often juggle multiple responsibilities, heightening their risk of burnout.

Results: Research found that older caregivers experience increased depression and lower well-being, while those caring for persons with dementia may encounter aggression, which can intensify stress and lead to neglect or withdrawal. These findings highlight caregivers' need for knowledge, support, and effective coping strategies. Using a survey, caregivers' needs were captured, specifically their desired caregiving journey and preferred activities. Next, we explored possibilities. Survey findings informed the activities that were held, which became a platform for the recruitment of caregivers for groupwork. Findings also informed the topics that were covered. To prioritise, plan and prepare – a Theory of Change that shaped evaluation and resource allocation was developed. This led to the delivery of a four-month pilot of CEP.   For the last phase, feedback and forward, survey results (Rapid Caregiver Well-Being Scale) and focus groups showed that 63% of caregivers experienced improved well-being, due to a reduction in stress and greater awareness of respite needs and coping strategies through attending groupwork – which was characterised by positive group dynamics and a safe sharing space.

Implications: Future iterations will group caregivers according to care recipient condition, build on positive programme factors, support caregivers in strengthening peer connections and equip caregivers with more skills and knowledge.   Guided by user-centric principles, grounded in evidence-based practice and supported by tools such as Theory of Change, CEP continues to evolve to achieve outcomes meaningful to caregivers.

2E-4

Evaluating A Peer Support Programme to Support Caregiver Well-Being in the Community: A Feasibility Study

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Background and Objectives: Family caregivers in Singapore play an important role in supporting ageing-in-place. However, they often report stress and need for more support. To support patients and caregivers in the community, a peer-support programme (Caregiver Strength Circle [CSC]) was created by a social service agency (SSA) to improve caregivers' well-being. We aimed to examine feasibility of implementing CSC and its potential benefits via a multiple-methods study.

Methods: 10 caregivers, 2 peer leaders and 5 SSA staff took part in three focus group discussions to explore their perspectives on CSC. Inductive-deductive coding and thematic analysis were adopted, with RE-AIM as a guiding framework. To assess effectiveness, we collected demographic variables and outcomes, including social isolation (Lubben Social Network Scale – Revised), loneliness (3-item UCLA Loneliness Scale), caregiving burden (Zarit Burden Interview), mental well-being (Hospital Anxiety and Depression Scale) and quality-of-life (EuroQol 5-Dimension 5-Level Tool) from 10 caregivers at the start and end of the 6-month programme. Pre-post programme outcomes were analysed using the Wilcoxon signed-rank-test.

Results: Qualitative themes were organised by the RE-AIM domains. Participants joined the programme for diverse reasons and through multiple channels and caregivers felt they provided mutual support to each other. Being a ground-up programme, CSC need organisational support for wider adoption. Staff turnover during the programme had a more significant impact on peer leaders than caregivers. Lastly, caregivers wish for CSC to continue as an ongoing source of support.   The survey results suggested maintenance for social isolation (z-score=-0.66,p=.54), loneliness (z-score=-1.49,p=.19), caregiving burden (z-score=1.28,p=0.22), anxiety (z-score=1.36,p=0.22), depression (z-score=1.03,p=0.29) and quality-of-life (z-score=-0.16,p=0.92).

Implications: Participants and implementers reported positive experiences, although no significant changes were found in measures on caregivers' well-being. To demonstrate clearer impact, future studies with larger sample sizes and the clarification of pathways between the intended outcomes and CSC's core functions may be needed.

2F-1

Embedding Context in Implementation: Lessons from a Community-Based Intrinsic Capacity Programme in Singapore

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Background and Objectives: While context is essential across implementation phases, contextual analysis is often one-off or isolated from subsequent phases, limiting insights into its dynamic interactions with the programme elements and implementation over time. We conducted contextual analysis during the pre- and pilot-implementation of a community-based intrinsic capacity programme, the Optimising INtrinsic Capacity for Functional INdependence and to Impede FrailTY in Older Adults: Adaptation of the WHO-ICOPE for Healthy Ageing in Singapore (INFINITY-ICOPE), to understand contextual dynamics influencing implementation and augment strategy development.

Methods: The updated Consolidated Framework for Implementation Research and its Outcome Addendum (multi-domain contextual determinants), Theoretical Domains Framework (behavioural determinants), and the Expert Recommendations for Implementing Change (implementation strategies) informed our contextual analysis. We did a stepwise approach: (i) identification of expected implementation barriers/facilitators via qualitative inquiry, (ii) mapping, selection and development of strategy with stakeholder panel, (iii) identification of actual implementation barriers/facilitators via qualitative inquiry, and (iv) augmentation of strategy. We illustrate these steps in the context of seniors' characteristics.

Results: Implementers expected seniors' passive health-seeking behaviour and 'quick-fix' mentality to affect programme's uptake and adherence. Expected capability-related challenges included difficulties differentiating similar community-based programmes and processing complex information. Shortlisted strategies to mitigate these anticipated barriers included seniors' engagement, feedback, and needs assessment. However, stakeholders prioritised developing strategies to build programme delivery capability, identify and prepare champions, and create programme roadmap to mitigate other pertinent expected barriers. During pilot implementation, similar seniors' capability-related challenges were confirmed while uncovering various factors influencing motivation: different perceived needs, mindsets, health attitudes, goal setting, coping mechanisms, social/peer influences and emotions. Recommended additional later-phase strategies included targeted/tailored messaging on familism and health consequences to social/family life, alongside involving healthcare professionals or participating seniors as promoters.

Implications: Multi-phase contextual analyses enabled strategy augmentation. Incorporating contextually relevant implementation strategies could optimise implementation success.

2F-2

Oral Health and Social Engagement Among Older Adults: A Gendered Story

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Background and Objectives: Growing evidence supports the interdependence between oral health and social engagement in later life. However, the causal direction of this relationship, and potential gender differences therein, remains underexplored. This study, informed by the social determinants of health and health selection perspectives, examines gender-specific patterns in the reciprocal relationship between oral health and social engagement among older adults in South Korea.

Methods: A random-intercept cross-lagged panel model was applied to data from 5,735 adults aged 55 years or older. These data were collected in the Korean Longitudinal Study of Aging in 2018, 2020, and 2022. Oral health was assessed using the 12-item Geriatric Oral Health Assessment Index and social engagement was measured by the frequency of participation in various formal activities.

Results: Significant bidirectional associations were identified between oral health and social engagement, with distinct gender-specific patterns. Among men, better oral health predicted subsequent social engagement, but not vice versa (a health selection effect). In contrast, among women, more frequent social engagement predicted better oral health, with no evidence of the reverse path (a social causation effect).

Implications: These findings highlight gender-specific dynamics in later-life oral health and social engagement. For older men, oral health is a key enabler of social life, whereas social engagement is a crucial resource for maintaining oral health for older women. Tailored interventions that address oral health barriers to social engagement among men and leverage women's social pathways to oral health may help optimize healthy aging.

2F-3

It's All in the Content! Exploring the Content Validity and Feasibility of the QOL-ACC and EQ-5D-5L with Older People Across Health and Aged Care Systems

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Background and Objectives: Older people are significant health system users in Australia and internationally. Currently over 50% of all Australian hospital admissions are older people (> 65 years). Frequent cross-sectoral movements of older people between health and aged care highlight the importance of consistent outcome data for quality assessment and economic evaluation. The EQ-5D is an established measure of health-related quality of life developed for application with adults of all ages. The Quality Of Life-Aged Care Consumer (QOL-ACC) instrument is a new quality of life measure developed from its inception with older people. This in-depth qualitative study aimed to assess the content validity and feasibility of the EQ-5D-5L and the QOL-ACC with older Australians in health and aged care settings.

Methods: Older in-patients and aged care residents were invited to complete the QOL-ACC and the EQ-5D-5L using a think-aloud protocol. Data were analysed using Tourangeau's four stage survey response model where response issues were categorised into one of four response stages, comprehension, recall, judgement and response mapping.

Results: Participants (N=70) had a mean age of 81, 64% were female and n=26 (37%) had an MMSE score <27 indicating cognitive impairment. For the EQ-5D-5L common response issues were evident, particularly in relation to interpretation of the 'usual activities' and 'mobility' dimensions. In contrast, for the QOL-ACC response issues were infrequent with the most common issue in recall for the 'hobbies and activities' dimension.

Implications: This study highlights that the context older people bring to the EQ-5D-5L differs from that of younger adults, potentially necessitating dimension descriptors that are more relevant to this population. Given its co-design with older people and recent adoption nationally as a new quality indicator for aged care in Australia, the QOL-ACC shows promise for routine application with older people across health and aged care systems.

2F-4

Exploring Living Life Spaces of Older Adults in Singapore: A GIS Perspective

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Background and Objectives: Older adults' life spaces, which are positively associated with social participation, quality of life and physical activity, can offer valuable insights into how they interact with the environment. Identifying key places of interest can lead to a better understanding of the factors that enable these places to become areas of use in the neighbourhood. Similarly, it can identify barriers that prevent effective use of their environment to support ageing well in the community.

Methods: This study explored the life spaces of older adults through their perspectives, using a Geographic Information System (GIS) approach. One-hour semi-structured interviews and mapping exercises were conducted with sixteen older adults living in Marine Terrace. Participants were presented with a map and asked to identify places of importance and places for improvement within their neighbourhood. Participants' living life space maps were plotted using ArcGIS, a geospatial software. Mean spatial distances from their home and the minimum area of travel were also calculated for analysis.

Results: Preliminary findings showed that most older adults shape their daily activities around the availability of amenities and services around the neighbourhood, making them key activity hotspots and areas of social interactions. For more mobile older adults, distance was not a barrier to visiting key areas of interest. The average travelling coverage ranges from $0.112km^2$ to $1.054km^2$, with the wider coverage being aided by accessible transportation that facilitates mobility beyond the neighbourhood. Walking distances averaged between 2.5km to 7.6km, with less mobile older adults remaining closer to home and traveling shorter distances within the neighbourhood.

Implications: Exploring the living life spaces of older adults contributes to a deeper understanding of the drivers and barriers that either enable or hinder meaningful interactions with their environment. This could enhance future policy recommendations, ensuring improvement of existing neighbourhoods to be more age-friendly for future older adults.

3A-1

SPICE Program: Implementing Integrated, Multi-Sectoral Care to Advance the WHO Decade of Healthy Aging

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Background and Objectives: The WHO Decade of Healthy Aging (2021–2030) calls for innovative, scalable approaches to preserve intrinsic capacity (IC) and support aging in place. In Singapore, the SPICE program (Screen, Prevent frailty, Inspire, Connect, Exercise/Eat well) implements the Integrated Care for Older People (ICOPE) framework through collaboration across multiple stakeholders. SPICE aligns with the Decade's four action areas by promoting positive attitudes toward aging, fostering supportive communities, delivering person-centred, integrated care, and enabling timely access to care to maintain functional ability.

Methods: SPICE integrates four ICOPE steps: (1) community-based IC screening (2) in-depth assessments, and risk stratification (3) personalized care planning with multidisciplinary teams, and (4) monitoring and follow-up through coordinated referrals to appropriate health and community services. Risk levels are classified as green (low risk), orange (moderate risk), or red (high risk) to prioritize interventions and optimize resource allocation. Outcomes on IC are systematically evaluated over 12 months, while the continuity of care is being managed by relevant partners. Implementation outcomes are guided by the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance).

Results: Preliminary findings over four months in over 300 older adults screened demonstrated high feasibility and strong community engagement. Among participants, 30% were stratified as orange (moderate risk) and 25% as red (high risk), indicating significant needs for targeted and multidisciplinary support. Frequent sensory and cognitive declines were identified, prompting early interventions such as cognitive stimulation programs, dual-task exercise, nutrition workshops, and mental health activities. Key facilitators include trusted community partnerships, culturally tailored communication, and digital tools that enhance adherence and self-management.

Implications: The pilot shows that a multi-stakeholder, community-driven approach can be used to preserve IC and support healthy aging. Future versions of SPICE+ are planned to include co-created exercises, social interaction, AI-based behavioural nudging, and empowerment strategies, with the aim of expanding impact sustainably throughout Singapore.

3A-2

Clinical Effectiveness of the Multicomponent Frailty Management Program in Singapore: A Cluster-RCT Study

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Background and Objectives: In Singapore, 6.2% of older adults are frail and 37% are pre-frail. Frailty is associated with falls, disability, and hospitalisations. Guided by clinical practice guidelines, the Say No To Frailty (SNTF) program was developed as a 12-week multicomponent community-based intervention for older adults with frailty and pre-frailty. Earlier studies showed promising effects on behaviour change and community participation.

Objectives: To evaluate the effectiveness of SNTF in improving physical function, self-efficacy, community participation, quality of life, and fall reduction.

Methods: A cluster-randomized clinical trial was conducted across 11 community aged care centres assigned to healthcare professional (HCP)-led SNTF, non-HCP-led SNTF, or usual care. The program included weekly group sessions with a one-hour health talk, 15-minute networking break, and 45-minute strength and balance exercises, followed by a booster session and one follow-up call. Participants were assessed at baseline, 3, 6, and 12 months on physical function, self-efficacy, community participation, and quality of life. Outcomes were analysed using mixed ANOVA, with monthly fall data compared across groups.

Results: A total of 116 participants (HCP-led: 37; non-HCP-led: 38; control: 41) were recruited. Their mean Clinical Frailty Scale (CFS) score was 4.5, and the mean age was 76.8 years old. Ninety-seven completed the one-year study. Intervention groups showed significant improvements in physical function, self-efficacy, participation, and quality of life immediately post-intervention, with effects sustained up to 9 months ($p<.05$). No significant differences were found between HCP- and non-HCP-led groups ($p>.05$). Control groups showed improvement only in frailty levels (CFS). Significant fall reduction was observed in intervention groups, but not in controls.

Implications: SNTF is an effective and scalable community-based program for frailty management. Comparable outcomes between HCP- and non-HCP-led delivery highlight the potential role of trained volunteers, offering a sustainable approach to extend reach and reduce reliance on healthcare professionals in ageing communities.

3A-3

A Novel Allied Health-Led Falls Prevention Programme to Empower Community-Dwelling Seniors in Northeast Singapore

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Background and Objectives: The Allied Health Population Health Sub-Unit at Sengkang General Hospital identified falls as a significant health risk among seniors attending Active Aging Centres (AACs) in Northeast Singapore. In response, a comprehensive Allied Health Professionals (AHP)-led Falls Prevention Programme (FPP) was developed, comprising four sessions focusing on home safety, footwear, nutrition, and exercise through experiential learning activities. This study evaluates the programme's effectiveness in enhancing falls prevention knowledge and health literacy among participants.

Methods: FPP was piloted across two AACs in Northeast Singapore, delivered by an AHP team of Podiatrists, Occupational Therapists, Physiotherapists, and Dietitians during two periods: July-August 2024 and February-March 2025. Programme evaluation utilised pre- and post-session questionnaires, incorporating a 5-point Likert scale for health literacy and programme administration assessment, alongside topic-specific multiple-choice questions for knowledge evaluation.

Results: Analysis of data from 319 participants demonstrated significant improvements in health literacy, with "Strongly Agree" responses increasing from 13% to 30%, while "Neutral" responses decreased from 12% to 3%. Knowledge assessment revealed overall improvement from 56% to 63%, with notable increase in understanding falls risk reduction strategies (55% to 71%), falls detection tools (17% to 42%), and protein-rich nutrition for muscle strength (65% to 76%). Programme satisfaction was exceptionally high, with participants rating the content as clear and easy to understand (99%), useful and practical (100%), and engaging and effectively communicated (98%). The findings demonstrated that this AHP-led FPP effectively enhances fall prevention knowledge and health literacy among community-dwelling seniors.

Implications: Given these positive outcomes, implementation across all AACs in Singapore is recommended to promote wider community falls prevention strategies.

3A-4

Multicomponent Group Therapy to Improve Physical Function and Mobility in Nursing Home Residents

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Background and Objectives: Ageism towards older adults in nursing homes, particularly those who are frail with multiple comorbidities, often assumes limited potential for physical gains and reduced benefit from exercise. This perception is reinforced by the lack of structured exercise programmes and limited rehabilitation manpower, restricting therapy delivery to large groups. Evidence, however, supports multicomponent exercise in improving mobility, function and quality of life, suggesting that structured programmes can help mitigate functional decline while optimising resources. This study aimed to maintain or improve physical function and mobility among nursing home residents through a 10-week multicomponent group therapy programme, including aerobic, strengthening, balance and flexibility exercises conducted twice weekly.

Methods: Physiotherapists identified residents able to ambulate with moderate assistance or better, tolerate up to one hour of exercise and show no disruptive behaviours. Therapy Assistants facilitated sessions, conducted assessments and managed documentation under PT supervision, with a maximum TA-to-resident ratio of 2:8. The programme was implemented at Ren Ci @ Woodlands Nursing Home from July 2024 to June 2025, with 55 residents completing it.

Results: Participants (34.5% female; mean age 79.3 years) had RAF scores of category 2 (1.8%), 3 (90.9%) and 4 (7.3%). Baseline SPPB scores classified 9.1% as non-frail, 12.7% as pre-frail and 78.2% as frail. Post-intervention, SPPB improvements were observed in 20% of non-frail, 43% of pre-frail and 60% of frail residents, while 14.5% reversed their frailty status. For the 2-Minute Walk Test, improvements were recorded in 40%, 57% and 50% of non-frail, pre-frail and frail residents, respectively. The programme appears feasible and beneficial for pre-frail and frail residents, with exercise dosage sufficient for functional gains. Non-frail residents may require higher-intensity protocols to achieve meaningful improvements.

Implications: Future studies could explore increased exercise intensity and larger samples to optimise exercise prescriptions for different frailty levels in nursing home populations.

3B-1

Mapping the Organisation of Care for Older Adults Experiencing Loneliness in Singapore: A Qualitative Study

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Background and Objectives: Addressing loneliness in old age has become a critical focus in the global public health agenda. The Singapore government has been making significant efforts to encourage social connectedness among older adults to mitigate the harmful effects of loneliness. While current understandings of loneliness have established its risks and outcomes on older adults' health, the emphasis on loneliness as an individual problem overlooks the broader social, organizational and institutional relations tied to the assessment and management of loneliness within care systems and policies. This presentation explores how organisational, institutional, and socio-political processes shape older adults' experiences of loneliness.

Methods: Guided by the framework of Institutional Ethnography, this study explicates how older adults' everyday experiences of loneliness are connected to broader social, institutional, and organisational relations and texts. These institutional relations are central to the organisation of how loneliness is understood and experienced, its mitigation strategies, and interpersonal relations between healthcare providers and older adults. In-depth interviews and participant observations were conducted with older adults, social workers, and service providers in Singapore.

Results: Older adults' capacities to address their feelings of loneliness are influenced not only by their interpersonal relationships and age-related challenges but also by their material circumstances and the limitations of current care structures in meeting their needs. This presentation will map how older adults' everyday experiences are linked to broader care services and policies. The identification and management of loneliness is a complex and ambiguous process, contingent on providers' interpretation and use of organizational texts, the treatment of overriding health concerns, and the design of services.

Implications: Findings reveal the disjuncture between older adults' lived experiences and the ways in which policies and organisational practices address loneliness. These insights will broaden the conceptions of loneliness and contribute to the refinement of policies related to this phenomenon.

3B-2

Science Meets Stories: Using the Global Diet Quality Score to Assess Diet Quality Amongst Isolated Seniors in Singapore

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Background and Objectives: Singapore faces increasing double-burden of malnutrition amongst seniors, with one-third of low-income seniors undernourished or at risk and one-fifth overweight. Diet quality captures both forms of malnutrition. This study assesses diet quality in community-dwelling seniors living alone and facing social risk factor(s) for malnutrition. It is part of a mixed-methods study which investigates and designs solutions to address barriers to good nutrition. This study marks the first application of the Global Diet Quality Score (GDQS) in Singapore for rapid dietary assessment. It is a food group-based diet quality metric that has been validated for sensitivity to nutrient adequacy and diet-related non-communicable diseases in many populations including Asian countries. GDQS is highly suitable for community settings as it can be administered by trained laypersons.

Methods: This study aimed to purposively sample thirty seniors (aged ≥60) of mixed demographic backgrounds through community partners. In the GDQS assessment, respondents recalled foods consumed the previous day. Each ingredient is classified into one of 25 food groups. Respondents estimated quantities consumed for each food group, using measurement cubes. Points are given for higher consumption of healthy food groups, lower consumption of unhealthy food groups and moderate consumption of red meats and high-fat dairy. Foods for which health effects are inconclusive are not scored. GDQS summed points across food groups, totalling a possible range of 0-49. This study reports descriptive statistics of overall GDQS and individual food group scores, alongside associations with demographic and physical characteristics, e.g. chewing ability.

Results: Preliminary findings revealed low consumption of most vegetables, fruits, nuts and seeds. This compromises diet diversity and quality.

Implications: Results provided an overview of diet quality amongst at-risk seniors living alone. Individual food group scores, complemented by qualitative insights on reasons for consumption patterns from the wider study, highlight dietary gaps for targeted intervention.

3B-3

Uncovering Social Vulnerability: Factors Associated with Social Isolation Risk Among Seniors in Singapore

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Background and Objectives: Social isolation among seniors is linked to adverse mental and physical health outcomes. This study examines the socio-economic, functional, and frailty-related factors associated with social isolation risk among community-dwelling older adults, with the goal of informing targeted interventions and enhancing outreach efforts in Singapore's eldercare landscape.

Methods: We conducted an observational study involving 75,658 community-dwelling seniors aged 60 years and older, who were engaged by the Silver Generation Office between December 2023 and March 2024. These seniors had clinical frailty scale scores of 6 or lower. Seniors were classified as at risk of social isolation if they met any of the following criteria: (1) living alone or with someone who does not provide help, and feeling lonely daily or frequently; (2) being caregivers for individuals with high care needs; (3) lacking informal support if help is needed; or (4) experiencing limited or no social interaction. Multivariable logistic regression was used to identify factors independently associated with social isolation risk.

Results: A total of 1,620 seniors (2.1%) were identified as being at risk of social isolation. Caregiving for individuals with high care needs was a standalone criterion for 56.6% of these seniors. After adjusting for age, sex and ethnic group, living in smaller HDB flats (vs 5-room or larger units) and economic inactivity emerged as independent socio-economic factors associated with increased odds of social isolation risk. Functional and frailty-related factors include having sensory impairment or oral health issues, limitations in three or more instrumental activities of daily living (vs none), and a history of falls.

Implications: These findings highlight the need for multifaceted strategies that integrate caregiver support, health monitoring, and tailored outreach for seniors at risk of social isolation. Addressing functional impairments and physical decline may promote their well-being and enhance social inclusion.

3B-4

Social Frailty and Depression Among Older Adults: The Mediating Role of Meaningful Activities and Life Purpose

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Background and Objectives: Social frailty is associated with increased risk of depression in late life. However, it remains unclear whether engaging in meaningful activities fosters a sense of purpose that helps reduce this risk. Guided by social production theory and the meaningful activity and life meaning model, this study examined the relationships among social frailty, meaningful activity engagement, life purpose, and depression.

Methods: A cross-sectional correlational study was conducted with 330 community-dwelling older adults recruited from six senior centres in Singapore via convenience sampling. Data were collected through face-to-face surveys. Social frailty was assessed using the modified HALFE scale; meaningful activity engagement via the Engagement in Meaningful Activities Survey; life purpose using the Purpose in Life Test; and depression using the short version of the Geriatric Depression Scale. Structural equation modelling was used to test a hypothesised model positing that social frailty affects depression directly and indirectly through meaningful activity engagement and life purpose.

Results: The findings supported the hypothesised model. Social frailty negatively predicted meaningful activity engagement (β = −0.211, $p < .001$), which positively influenced life purpose (β = 0.540, $p < .001$). Life purpose was strongly associated with lower depression (β = −0.594, $p < .001$). Social frailty also had a small direct effect on depression (β = 0.117, $p = .010$) and an indirect effect via life purpose (β = −0.123, $p = .012$). These findings highlight the protective role of meaningful engagement and life purpose in mitigating depressive symptoms among socially frail older adults.

Implications: Interventions that promote meaningful activity engagement and cultivate life purpose may help reduce depressive symptoms and address social frailty in community-dwelling older adults.

3C-1

Health Coaching Attendance and mHealth Engagement in Older Adults: Preliminary Findings from an Ongoing Trial

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Background and Objectives: Sustaining user engagement remains a persistent challenge in mobile health (mHealth) interventions. Multicomponent interventions that combine digital tools with human support may help promote consistent app usage over time. This analysis examines whether attendance at health coaching (HC) sessions is associated with higher engagement with an mHealth app among participants in an ongoing randomized controlled trial (RCT).

Methods: Participants were scheduled for one HC session per month over a 6-month period. At each timepoint, they were categorized as either having Full Attendance (attended all expected sessions) or Partial Attendance (missed one or more). Intended weekly app engagement was defined as: daily medication logging (7 points), daily food tracking (7 points), and viewing one educational module (1 point), yielding a maximum of 15 points per week. Monthly adherence was calculated as the average weekly score. Group differences at each month were assessed using Mann–Whitney U tests, and overall engagement trends across the 6-month period were evaluated using a linear mixed-effects model.

Results: Among the 26 participants included in this analysis (16 [62%] male; 19 [73%] Chinese; median age = 62 years, IQR= [56.25, 66.5]), 15 (58%) had Full Attendance. While the Full Attendance group consistently achieved higher monthly engagement scores, differences at individual months were not statistically significant (e.g., Month 1: p=0.385; Month 6: p=0.058). The linear mixed-effects model indicated a significant overall decline in engagement over time, with monthly scores decreasing by 0.166 points (95%CI: −0.331 to −0.001, p=0.005). The Partial Attendance group had significantly lower engagement overall (β=−3.034, 95%CI: −5.917 to −0.151, p=0.039).

Implications: Higher HC attendance was associated with greater sustained engagement in the mHealth app. These findings underscore the importance of integrating human support with digital interventions to enhance adherence, and they highlight the synergistic role of allied health professionals in digital therapeutics.

3C-2

Improving Adoptability, Acceptability, And Effectiveness of mHealth Interventions: A Qualitative Study

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Background and Objectives: Mobile Health (mHealth) applications can complement medical treatment, enhance patient outcomes, and offer cost-effective, scalable solutions. However, designing technology that promote patients' adoption and sustained engagement remains challenging. Past research found that AI chatbots for health behaviour change are poorly received by >50% of users. This study examines patients' lived experiences in using a human-supported mHealth app for health promotion with the goal to inform future developments of AI-powered digital health coaching with greater adoptability, acceptability, and effectiveness.

Methods: Eight patients with hypercholesterolemia were recruited from the intervention arm of an ongoing randomized controlled trial evaluating the effectiveness of a digital health assistant mobile app integrated with human health coaching for improving medication adherence. One focus group discussion (n=4) and four individual semi-structured interviews were conducted to elicit insights on app usage experiences. Audio recordings were transcribed verbatim and analysed thematically using an inductive approach.

Results: Three major themes and six sub-themes emerged from the analysis, including: a) app knowledge (app literacy; app benefits), b) positive coaching experience (interaction style; holistic support), and c) healthful behaviours formation (motivation facilitators; behaviour attributes).

Implications: These findings support the Technology Acceptance Model, where perceived usefulness and ease of use enhanced attitude toward technology use. Onboarding training and promoting benefits can improve app adoption and sustained engagement. Considerations for designing effective AI-powered digital health coach include non-judgemental conversations, autonomy-focused communications, real-time coaching engagement informed by past coaching notes, timely delivery of precise and evidence-based medical information, and co-development of behavioural goals that are convenient, time-efficient, and clear.

3C-3

Effectiveness of Video Conferencing, Gamification and Self-Guided Exercise to Improve Fall Outcomes in the Elderly

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Background and Objectives: The Steps to Avoid Falls in the Elderly protocol has been reported as an effective strategy to assist the elderly in preventing falls. We evaluated three home therapy strategies for patients discharged from hospital, assessing their effectiveness in maintaining Short Physical Performance Battery (SPPB) and quality-of-life (QOL) status at home.

Methods: This three-arm randomized trial was conducted across three hospitals in Singapore in adults ≥ 60 years discharged home. Participants were allocated to video conferencing–guided exercises, gamification-based home exercise, or self-guided exercise groups. Assessments were at baseline, three months, and nine months. The primary outcome was SPPB; secondary outcomes were EQ-5D-5L index and visual analogue scale, Lawton Instrumental Activities of Daily Living Scale, modified Falls Efficacy Scale, Lubben Social Network Scale, and Exercise Self-Efficacy Scale. Analyses used repeated-measures analysis of variance and linear mixed-effects with group-by-time; inferential analyses are ongoing.

Results: Recruitment and follow-up are complete. Outcome acquisition was routine at baseline and three months, with lower participant retention at nine months. In available-case trends, SPPB scores were broadly maintained over follow-up, with small, non-significant increases in the video conferencing and self-guided exercise groups, and a score decline in the gamification group. Health-related QOL (EQ-5D visual analogue scale) rose over time across groups, while EQ-5D-5L scores were largely stable; between-group differences were not statistically significant in preliminary models. Other secondary measures showed no consistent changes. Interpretation is qualified by differences at baseline (age, sex, education, perceived health) and differential attrition at follow-up; final adjusted mixed-effects results will be reported once analyses are complete.

Implications: This study will provide comparative evidence on functional outcomes and health-related QOL in the elderly after hospital discharge and inform the design and implementation of scalable, patient-centred home therapy supports and the prioritisation of delivery modalities for future definitive trials.

3C-4

Empowering Self-Management Through Cadence D-PHA: Qualitative Insights on the Usage of a Multicomponent mHealth App

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Background and Objectives: Mobile health (mHealth) interventions are increasingly used to support chronic disease self-management and improve patient outcomes. Understanding how patients engage with such tools is critical to informing their effective design and implementation. This study presents qualitative insights from patients using a multicomponent mHealth application aimed at improving adherence to lipid-lowering medications within a primary care setting.

Methods: A focus group and four semi-structured interviews were conducted between January and June 2025 with eight participants diagnosed with hypercholesterolemia. Participants were recruited from the intervention arm of an ongoing multicentre randomised controlled trial evaluating the use of CADENCE D-PHA (Cardiovascular Disease National Collaborative Enterprise Digital Personal Health Assistant), a mobile health application incorporating educational content, self-monitoring features, and personalised human-led health coaching. Audio recordings were transcribed verbatim and analysed using thematic analysis, applying both inductive and deductive coding approaches. Coding was conducted independently by three researchers to ensure rigour and consistency.

Results: Five key themes were identified: (1) Initial User Engagement (2) Feature Use Integration, (3) Patient Health Outcomes, (4) Current Protocol Refinement, and (5) Future Protocol Enhancement. Participants described their experience adopting the app, noting how specific features such as educational content, medication reminders, and health coaching supported positive changes in behaviour, mental well-being, and physical health. The health coach was frequently mentioned as an anchor, enabling more meaningful and sustained engagement with app features. Suggestions for improving future iterations included refining existing features, offering a more comprehensive view of health status, and providing additional technical support.

Implications: These preliminary findings suggest that human support and personalized features may play a role in supporting patient engagement with digital health tools. Such insights could be useful for those developing mHealth interventions, particularly in ageing-related contexts. Further focus groups and stakeholder input will refine findings and guide future intervention improvements.

3D-1

Validation of Fall Screening Algorithms and Development of a Questionnaire-Based Fall Risk Tool for Elderly in Singapore

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Background and Objectives: Annual screening for fall risk is recommended for all adults aged over 65. However, while a number of fall risk screening tools exist, their predictive performance has not been validated in Singapore. This study evaluated the predictive validity of four existing fall risk screening tools and developed a new fall risk prediction model tailored to the Singapore older adult population.

Methods: Data from 2,291 individuals aged ≥65 years from a national prospective cohort study in Singapore—TARGET (Targeted Assessment and Recruitment of Geriatrics for Effective fall prevention Treatments)—were included. Participants were recruited between 2022 to 2024, and prospective follow-up is ongoing. We assessed the performance of four fall risk screening tools in predicting falls at 6-month follow-up: 3 Key Questions (3KQ), Fall Risk Questionnaire (FRQ), and Falls Efficacy Scale (FES), and fall history in the past 12 months. Multilevel mixed-effects logistic regression was used to assess predictive validity and identify factors associated with falls.

Results: The FRQ demonstrated the highest predictive accuracy (area under the curve; AUC=0.62), followed by fall history (AUC=0.58), and FES (AUC=0.55). Sensitivity ranged from 30.7% (fall history) to 68.9% (FRQ), while specificity ranged from 42.4% (FES) to 85.7% (fall history). The multilevel mixed-effects model identified six significant predictors of falls: vitamin D/calcium intake, diagnosed parkinsonism, elevated average heart rate, use of walking aids, drowsiness-inducing medications, and thyroid/parathyroid disorders. Bootstrap analysis confirmed strong agreement between mean and final parameter estimates. The final model achieved an AUC of 0.94 (95% CI: 0.94–0.96), indicating excellent predictive performance.

Implications: This study highlights the limited effectiveness of existing fall risk tools in the Singaporean population and underscores the need for a context-specific assessment model. The new model offers improved predictive accuracy and may be a promising alternative for routine fall risk screening in Singapore.

3D-2

Do Preventive Checkups Reach Those Most at Risk? Evidence from Japan

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Background and Objectives: In Japan, health checkup participation differs markedly by insurer. Employees in occupational health insurance are provided workplace checkups, resulting in participation rate over 80%. In contrast, the self-employed, unemployed, and retirees under age 75 years old covered by the National Health Insurance scheme must voluntarily attend community-based checkups, with participation around 36%. Despite policy efforts, little is known about the determinants and consequences of community checkups. This study investigates who voluntarily participates in community checkups and whether participation improves detection of hypertension and subsequent outpatient care. We focus on three health risk indicators: (1) subjective health status, (2) objective measures (BMI, smoking, and physical activity), and (3) a predicted risk score for hypertension, with the top 20% defined as high risk. We hypothesize that poorer health and prior attendance increase the probability of checkup participation, and that checkups lead to new hypertension diagnoses.

Methods: Using panel data from the Japanese Study of Aging and Retirement (JSTAR; 2007-2013), we estimate fixed-effects models to control for unobserved heterogeneity. We also exploit the 2008 nationwide introduction of Specific Health Checkups program for individuals aged 40-75 as quasi-experiment, in difference-in-differences framework before and after 2008. To address endogeneity of checkup, program eligibility is used as an instrument.

Results: FE results show that community checkup participation was more likely among older individuals, those with poorer subjective health, and those not attending in the previous wave, whereas workplace checkups showed no such patterns. The 2008 reform increased community checkup participation by 17 percentage points but had no effect among the top 20% hypertension risk group. IV estimates indicate no significant effects of checkup participation on new hypertension diagnoses or outpatient visits.

Implications: These results suggest that community-based checkups, while increasing overall participation, fail to effectively target those at highest risk, limiting their potential.

3D-3

Measuring What Matters in Later Life: A Multidomain Healthy Ageing Index and its Behavioral and Disease Drivers

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Background and Objectives: Healthy ageing is a naturally multidimensional concept that reflects functional ability across physical, cognitive, psychological, and social domains. We set out to (i) develop and test a multidimensional Healthy Ageing Index (HAI) developed according to WHO's (2016) guidelines and (ii) assess the relationships between healthy ageing and disease, multimorbidity patterns, and modifiable health behaviours.

Methods: Using nationally representative survey data on adults aged ≥60 years, we assembled indicators spanning mobility, cognition, psychological well-being, vitality/sensory function, ADL/IADL, social engagement, and environmental safety. We conducted survey-weighted EFA for item reduction, followed by CFA/higher-order SEM to confirm structure, and assessed reliability/validity (ω, α, AVE/CR) and measurement invariance (sex, residence, SES). The HAI was scaled 0–1. Predictors included demographics, socioeconomic position, and health behaviours (physical activity, tobacco, alcohol, sleep). We modelled HAI using fractional outcome regression (fractional logit, with beta-regression sensitivity). Multimorbidity profiles were identified via latent class analysis (LCA) using major disease groups; adjusted marginal effects contrasted HAI across classes.

Results: The overall Index value was 0.65 on a 0-1 scale and showed a coherent multidomain structure with excellent internal consistency (Cronbach's alpha 0.91), good model fit (CFI =0.96, TLI=0.97, RMSEA= 0.04), and measurement invariance. In fractional models, older age and socioeconomic disadvantage were associated with lower HAI, while favourable behaviours (greater activity, healthier diet, adequate sleep, non-use of tobacco/harmful alcohol) correlated with higher HAI. Multimorbidity displayed a graded inverse association with HAI. LCA revealed distinct disease clusters; classes characterised by combined cardiometabolic, respiratory, and musculoskeletal conditions had the largest decrements in HAI.

Implications: A validated, surveyable HAI provides a policy-relevant metric to track and intervene to enhance healthy ageing. The identification of person-centred disease clusters provides a pathway to identify high-risk clusters, and provide integrated, multidisciplinary care, while behaviour identifies modifiable levels for scale (activity, diet, sleep, tobacco/alcohol).

3D-4

Validation of the Parkinson's Disease Preliminary Risk Assessment Questionnaire in Non-Parkinson's Disease Populations

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Background and Objectives: Motor and nonmotor symptoms and functional impairments associated with Parkinson's disease (PD) are critical for early identification and management, yet tools for assessing these in non-PD populations are limited. This study aimed to validate a modified questionnaire, Parkinson's Disease Preliminary Risk Assessment Questionnaire (PDPRAQ), adapted from the Nonmotor Symptom Questionnaire and Unified Parkinson's Disease Rating Scale Part II (UPDRS II), to evaluate and assess the risks of PD-related symptoms in non-PD older adults.

Methods: The modified 43-item questionnaire was administered to 726 participants (M=68.39 years, SD=7.39; 134 males, 590 females). Items with response rates below 5% or low factor loadings were removed, resulting in a final 31-item scale. Psychometric properties were evaluated using Cronbach's alpha, item response theory (IRT), and confirmatory factor analysis (CFA). Associations were examined with constipation (measured by the Constipation Severity Scale), perceived stress (measured by the Perceived Stress Scale), self-compassion (measured by the Self-Compassion Scale), quality of life (the World Health Organization Quality of Life short form [WHOQOL-BREF]), and PD-related symptoms (assessed by the UPDRS Parts I and III, covering motor assessments). Group differences were assessed based on the presence of psychosis disorders, comorbidities, regular outpatient medical visits, and rehabilitation service use.

Results: The 31-item questionnaire demonstrated strong internal consistency (α=.89). IRT analysis confirmed adequate discrimination and difficulty parameters. CFA indicated excellent model fit (root mean square error of approximation=.034, comparative fit index=.915, Tucker-Lewis index=.905, standardized root mean square residual=.038). Significant associations were found with constipation, perceived stress, self-compassion, WHOQOL, and UPDRS (I & III) scores (all p<.05). The questionnaire effectively differentiated between groups with psychosis disorders, comorbidities, regular outpatient medical visits, and rehabilitation service use (p<.05).

Implications: The PDPRAQ is a reliable and valid tool for screening PD-related symptoms in Hong Kong older adults, with robust psychometric properties and clinical utility for research and practice.

3E-1

"Hoping for the Breeze": Older Persons' Experiences of Climate Change in Urban-Dense Singapore

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Background and Objectives: Climate change is more than an environmental issue, posing significant health risks for older persons. Particularly for vulnerable older persons, limited access to resources, existing physiological decline, and disruptions to healthcare and social support may exacerbate the effects of extreme weather events and temperature fluctuations brought about by climate change. However, little attention continues to be devoted to the lived experience of climate change on older persons, especially in urban dense Singapore.

Methods: In-depth interviews with 25 older persons living with either a) limited social support, b) in public rental housing, or c) living with multiple chronic health conditions were conducted to elicit their lived experiences of climate change, perception of communications about climate change, as well as its relation to health.

Results: We explore how older persons' lived experience and subsequent response to climate change are shaped by a combination of individual, social, and structural factors. The effects of extreme or uncomfortable weather are mitigated either by a) a series of active adaptation and mitigation strategies or b) through adaptations or tolerances which are built up and habituated over the life course. The effectiveness of these responses, however, are constrained by structural and contextual factors which older persons often have limited control over. Where structural factors compound with individual stressors, older persons' vulnerabilities are amplified and potentially render adaptations ineffective and could threaten older persons' ability to age well in place or introduce greater health and social risks.

Implications: Effective management of climate change and its effects on older person must go beyond support at the individual level. Intervention and management strategies must consider the multiplicity of stressors which shape older persons' lived realities and address these issues in a sustainable way to support older persons to age-in-place.

3E-2

Association of Air Pollution and Residential Greenness with Blood Glucose among Older Adults in India

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Background and Objectives: Type 2 diabetes (T2DM) is a growing health concern among older adults in India, influenced by ageing, obesity, and lifestyle. However, the impact of environmental factors like air pollution (PM2.5) and urban greenness on diabetes in this group is not well studied. This study examines how exposure to these environmental factors relates to T2DM prevalence among older Indians, aiming to better understand and address diabetes risk in this vulnerable population.

Methods: This study analysed data from the National Family Health Survey (NFHS-5, 2019–21), including 32,746 urban older adults (6,389 men and 26,357 women) aged 45 years and above. Diabetes status was determined by random blood glucose levels followed by diagnosis, or use of diabetes medication. PM 2.5 as air pollutant and enhanced vegetation index (EVI) as green space were selected for environmental exposure. Multivariate logistic regression was applied to estimate odds.

Results: The analysis revealed significant associations between environmental exposures and T2DM risk among older adults. Men in the 3rd and 4th quartiles of PM2.5 had 33% (OR=0.67, p=0.001) and 25% (OR=0.75, p=0.017) lower diabetes risk, respectively, compared to the lowest quartile. Women in these quartiles had 12% (OR=0.88, p<0.001) and 30% (OR=0.70, p<0.001) lower risk. Men in low greenness areas (<0.2 EVI) had 53% higher odds of diabetes (OR=1.53, p=0.003) than those in dense greenery (>0.4 EVI). Women in low and sparse greenness had lower odds (OR=0.86, p<0.001; OR=0.88, p<0.001), showing greenery's protective effect. Age strongly influenced risk; men aged 45–49 and 50–54 had nearly threefold (OR=2.76, p<0.001) and 4.31 times (OR=4.31, p<0.001) higher odds, while women aged 45–49 had twice the odds (OR=2.11, p<0.001) compared to younger adults.

Implications: Comprehensive and urgent interventions aimed at aggressively reducing air pollution, expanding urban green infrastructure, and intensive support for older adults are critical to combat diabetes.

3E-3

Understanding Health Impacts of Disasters on Older Adults in India: Findings from the Longitudinal Aging Study (LASI)

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Background and Objectives: The frequency and severity of disasters are projected to rise with climate change, posing growing threats to public health. In densely populated countries like India, understanding disaster-related health impacts is essential to guide effective risk reduction measures. This study aimed to assess the self-reported health impacts of natural and human-induced disasters among adults aged 45 years and above, and their partners, in India.

Methods: Data were drawn from Wave 1 (2017–2018) of the Longitudinal Aging Study in India (LASI). The analysis included individuals aged 45 years and above, as well as their partners irrespective of age. Descriptive statistics, chi-square tests, and relative risk estimates were used to examine associations between disaster-related health impacts and socio-demographic factors, geographic location, and type of health concern.

Results: A total of 2,301 respondents (3.5%) reported health impacts from disasters, of which 90.1% were significant. Rural residents and individuals with no formal education were more likely to be affected. Among natural disasters, droughts accounted for the largest share of reported impacts (41.7%), followed by floods (24.0%). Psychological trauma emerged as the most common health issue, affecting nearly two-thirds of the respondents, while about one in five reported chronic illness following a disaster.

Implications: The findings provide an initial overview of disaster-related health impacts among older adults in India, highlighting the role of social determinants such as education and rural residence in shaping vulnerability. Mental health emerged as a critical area of concern, suggesting the need for targeted psychosocial support in disaster response strategies. Continued analysis of future LASI waves will help track trends in disaster-related health impacts, especially in the context of climate change and an aging population.

3E-4

Elder Abuse, Neighbourhood Environment and Food Insecurity among Older Adults in India: A Cross-Sectional Study

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Background and Objectives: This study explores the association of age discrimination, elder abuse, neighbourhood environment with food insecurity among older adults using data from the Longitudinal Ageing Study in India (LASI) Wave-1. The analysis focused on 31,464 older adults aged 60 years and above. This study emphasizes the importance of household and neighbourhood environment in determining the food security among India's aging population. This study calls for targeted interventions focusing on enhancing the living conditions, safety, and social protection for vulnerable older adults to improve their food security and overall well-being.

Methods: Nationally representative data from the first wave of the Longitudinal Ageing Study in India (LASI) was analyses. Bivariate and multivariate analyses were used to study the association of elder abuse, age discrimination and neighbourhood characteristics with food insecurity.

Results: Results indicate that older adults experiencing multiple forms of age discrimination are significantly more likely to face food insecurity, with a 3.6 times higher risk among those encountering two or more instances of discrimination (OR=3.60, 95% CI 3.02, 4.29). Similarly, older adults subjected to abuse are 2.2 times more likely to experience food insecurity (OR=2.23, 95% CI 1.90, 2.62). Perceptions of safety in their neighbourhoods also play a crucial role, with those feeling less safe from crime or unsafe when walking alone being more likely to report food insecurity. Socioeconomic factors such as widowhood, lower education levels, and rural residence are also associated with higher food insecurity. In contrast, individuals with higher wealth and education tend to be more food secure.

Implications: This study highlights the need for stronger social protection measures and food security programs targeting vulnerable older adults, particularly those facing abuse, discrimination, or living in unsafe neighbourhoods. Improving community safety, reducing age discrimination, and integrating elder abuse screening into health and social services are essential.

3F-1

Interventions to Reduce Restrictive Practices in Residential Aged Care Homes: A Scoping Review

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Background and Objectives: A restraint-free environment is a human right for all people living in residential aged care (RAC)/nursing homes, although restrictive practices continue to be frequently used in these settings. To support practice change, aged care providers need access to and knowledge of effective interventions to reduce restrictive practice use. This review aimed to identify and characterise interventions that reduce restrictive practices in RAC/nursing homes.

Methods: A scoping review was conducted using the JBI methodology and PRISMA-ScR guidelines. Seven databases were searched for peer-reviewed studies reporting on interventions to reduce restrictive practices in RAC, with no date restrictions. Included studies were mapped against the Socio-Ecological Model (SEM) levels: macrosystem (e.g. policy), exosystem (e.g. organisational practices), mesosystem (e.g. interpersonal relationships), microsystem (e.g. individual attitudes or behaviours)

Results: Seventy studies were included. 52 studies addressed one level in the SEM (macrosystem, exosystem and microsystem) and 18 studies addressed two levels in the SEM (exosystem and mesosystem; exosystem and microsystem). No interventions were identified at the mesosystem level. Educational interventions were the most frequently recorded (31 studies), with these interventions situated in either the exosystem and microsystem, or microsystem only. Multi-level interventions, particularly those combining organisational and staff-level strategies, were associated with great reductions in physical and chemical restraint use. No studies addressed seclusion or environmental restraint.

Implications: Reducing restraint use in RAC/nursing homes is a complex process. However, the findings in this review indicate that targeted interventions can result in reductions in chemical and physical restraint. This review highlights the value of multi-level, system-informed interventions for reducing restrictive practices. Further research is needed to examine the benefits of interventions targeting multiple levels of the SEM and considering all forms of restraint.

3F-2

Delivering Specialist Respiratory Care to Nursing Home Residents Through Collaborative Community Outreach

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Background and Objectives: A proportion of Changi General Hospital (CGH) inpatients are from Nursing Homes (NH), often hospitalized for preventable respiratory conditions. Given Orange Valley Nursing Home (OVNH) – Simei's proximity to CGH, we formed a collaborative Respiratory Community Outreach Team (RCOT) comprising Patient Navigator-Nursing Home (PN-NH), Respiratory & Critical Care Medicine (RCCM) and OVNH-Simei staff. RCOT collaborated with EAGLECare (EC) Team to facilitate seamless transitions for residents requiring end-of-life (EOL) care. Our aim was to reduce acute hospital admissions by 20%.

Methods: A multi-disciplinary approach was implemented from August 2024 to March 2025, featuring Shortness of Breath (SOB) Pathway with standardized protocols, specialist teleconsultation support for high-risk cases, NH Care Bundle Initiatives for enhanced clinical capabilities, and integration with EAGLECare Team. Quality improvement was guided through Plan-Do-Study-Act (PDSA) cycles.

Results: Results showed 37.5% reduction in median monthly cases (24 to 15), with 5 hospital admissions prevented and cost avoidance of $55,353.85. There were 12 successful Protocol 1 utilizations. Secondary outcomes included median Length of Stay reduction from 5.75 to 4.75 days, with no adverse impact on 30-day readmission rates. The total OVNH-Simei residents (N=216) included 17 residents who received interventions, with 50 cases reviewed.The RCOT initiative demonstrated effectiveness through reduced hospital transfers, enhanced NH capabilities, and strong collaboration.

Implications: Future plans include expanding to more Eastern Singapore NHs, conducting longitudinal studies, and strengthening partnerships with CGH and Intermediate and Long-term Care (ILTC) sectors.

3F-3

Pilot Study: Evaluation of Cognitive Stimulation Therapy in Long-Term Residential Care Setting in Singapore

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Background and Objectives: Cognitive Stimulation Therapy (CST) is an evidence-based, non-pharmacological intervention for persons living with mild-to-moderate dementia, aiming to improve cognitive function, mood, and quality of life (QoL). However, CST's application in Singapore's contexts — particularly within long-term residential care (LTRC) settings — remains limited. This pilot study aims to evaluate the effects and feasibility of CST for people with dementia in an LTRC setting in Singapore.

Methods: Ten English-speaking residents (6 females, 4 males), aged 60-86, with similar cognitive levels (Cognitive Performance Scale Scores: 1-2) were recruited from a dementia-specific LTRC facility. Participants received 14 sessions of CST, administered by a clinical psychologist and two associate psychologists. Participants were assessed on cognitive performance [Mini-Mental State Examination (MMSE)], QoL [Dementia Quality of Life-Proxy (DEMQOL-Proxy)] and mood [Geriatric Depression Scale-7 (GDS-7)] pre- and post-intervention. Participants then participated in a focus-group discussion to share their experiences with the program.

Results: Findings indicated a moderate improvement in cognitive performance (t=-1.62, d =-0.57, n=8), small decline in QoL (t=0.38, d=0.14) and no effect observed for mood (t=0, d-0). No statistically significant differences were found. However, qualitative analysis suggested an upward trend in social interaction, engagement and enjoyment within the group.This pilot suggests CST may have promising effects in promoting and maintaining cognitive performance for people with mild-to-moderate dementia in Singapore's LTRC settings. Although the statistical data did not show significant results, qualitative findings suggest potential social and engagement benefits. These promising outcomes warrant broader implementation. Limitations of the study include variability in cognitive abilities, interest-dependent engagement, and hearing impairments.

Implications: Future application in Singapore may benefit from incorporating culturally relevant session materials and more stringent screening criteria. Further research with larger sample sizes, follow-up assessments, and within other settings, is warranted to more reliably establish the efficacy and inform implementation strategies in Singapore's context.

3F-4

Occupational Therapist-Led Sensory Engagement Group for High-Need Nursing Home Residents: A Feasibility Study

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Background and Objectives: A 472-bed nursing home in Singapore has identified that approximately 30% of its residents—primarily those with high care needs and cognitive impairments—were underserved by existing activity programs conducted by care staff or volunteers. Conventional activity programs often exclude this population due to functional limitations and lack of specialized facilitation. Given the limited Occupational Therapy (OT) resources and high therapist-to-resident ratios, the study aimed to evaluate the feasibility of an OT-led sensory engagement group as an alternative to traditional one-on-one interventions.

Methods: A four-week sensory-based group intervention was designed, targeting residents with high care needs (Resident Assessment Form Category 3–4) who had not engaged in activities for at least six months. Occupation-based sensory-focused activities such as grooming, aqua painting, music and movement, and a picnic in the garden were conducted. Each session lasted one hour and involved 3–4 residents, led by one OT and one Therapy Aide. Engagement was measured using the Engagement of a Person with Dementia Scale, which assesses affective, visual, verbal, behavioural, and social domains.

Results: Out of 27 recruited residents, data from 23 were analysed. All activities showed increased engagement scores compared to baseline, with the highest mean score observed during the picnic session. While affective and verbal domains showed notable improvement, social engagement remained the lowest, reflecting challenges in facilitating interaction among residents with advanced dementia. Notably, 26% of residents showed consistent improvement across all sessions, and 56% showed improvement in all subdomains compared to baseline.

Implications: Findings suggest that OT-led sensory groups offer viable and effective intervention, providing meaningful engagement opportunities for underserved residents. Future directions include refining activity protocols to enhance visual and social engagement, integrating evidence-based approaches such as Namaste Care, and expanding group sizes to improve scalability.

4A-1

Communicating a Dementia Diagnosis: Caregiver-Preferred Tools, Gaps, and a Roadmap for Standardised Evaluation

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Background and Objectives: This review focuses on tools used in dementia diagnostic disclosure, particularly from family caregivers' perspectives. With dementia affecting millions globally, caregivers face challenges needing clear information and assistance. The review aims to: (a) identify tools used, (b) assess caregivers' preferences and challenges, and (c) highlight gaps to enhance communication strategies in dementia care.

Methods: This systematic review, adhering to PRISMA guidelines and registered with PROSPERO (CRD42024557806), synthesized evidence from seven studies on tools in dementia disclosure, emphasizing family caregiver perspectives. A comprehensive search of eight databases (e.g., PubMed) from May 10 to June 18, 2024, combined AI-assisted screening (using GPT-4o) and manual review to identify qualitative, quantitative, and mixed-methods studies. Thematic synthesis analysed caregiver preferences, tool effectiveness, and practice gaps.

Results: Across five countries (UK, Australia, USA, Denmark, Netherlands), written materials were universally valued (e.g., 80-95% satisfaction), with visual aids and brain images less common but effective when used. Caregivers preferred direct, comprehensive information (e.g., 98% sought behaviour and psychological symptoms of dementia details) delivered face-to-face with written backups, though retention challenges (e.g., 61% recall) and inconsistent tool provision persisted. Gaps included limited visual aid adoption and poor post-diagnostic support, highlighting unmet needs.

Implications: Adopt a caregiver-cantered disclosure toolkit pairing face-to-face conversations with plain-language written summaries, structured checklists of core topics, and visual aids to improve comprehension and recall. Embed teach-back, follow-up, and clear signposting to post-diagnostic supports to close recall gaps and unmet needs. Co-design a Dementia Disclosure Evaluation Tool to assess completeness, clarity, emotional support, cultural/linguistic tailoring, modality mix, and service linkage; establish feasibility, responsiveness, and cross-cultural validity. Implementation should include clinician training, integration into care pathways and electronic records, and equity adaptations for low literacy/rural settings. Future trials should also compare tool bundles versus usual care on caregiver recall, distress, satisfaction, service ptake, and cost-effectiveness.

4A-2

Dementia Spousal Caregivers Maintaining Continuous Relationship with Care Recipients

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Background and Objectives: Dementia leads to great changes in daily life for spouses and corresponding relationship changes occur in marital relationship. This qualitative study aims to explore how these spousal caregivers maintain changing relationships and what strategies they use.

Methods: Purposeful sampling was in this study and 20 spousal caregivers (ten males and ten females) were included in in-depth interviews.

Results: As the cognitive abilities of care recipients decline, communication can become more challenging. However, engaging in shared activities, maintaining a positive outlook, and expressing love and blessings are crucial for nurturing a harmonious relationship between caregivers and care recipients. Family caregivers utilized a variety of strategies to strengthen their connections, such as verbal communication, participating in activities together, being physically present, and employing contextual approaches. Participants noted that their interactions with care recipients fostered a sense of security, as these relationships provided essential support during the later stages of life and contributed to a meaningful farewell.

Implications: Findings could provide implications to health care professionals to come up with effective interventions to support spousal caregivers so that they are able to better perform the caregiving role while keeping themselves healthy.

4A-3

A Phenomenological Inquiry on Informal Caregivers' Perspectives on Nursing Home Services for Older Adults with Dementia

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Background and Objectives: With aging population in Singapore, the number of individuals with dementia is expected to increase concurrently. They constituted a significant share of nursing home (NH) residents locally. The decisions of NH utilisation were mostly made by caregivers. The increased utilization of NH services warrants a greater understanding of the phenomenon from the caregivers' perspectives. This qualitative study explored informal caregivers' understanding of NH services for older adults living with dementia (OALWD) and lived experience which determining the usage.

Methods: Phenomenological research design was employed to collect data. Thematic analysis using integrated approach was used to analyse data from semi-structured, one-to-one in-depth interviews with seven informal caregivers whose average age of 57. Photo-elicitation technique was used to generate supplementary interview discussions.

Results: Informal caregivers' perceptions on the use of NH services were formed based on their own beliefs, expectations and direct experiences. Six themes were identified: (1) distress from challenging care needs, (2) caregivers' personal needs, (3) perceived low health literacy about dementia among caregivers, (4) experience of health services provided in NH, (5) relationship with NH staff, and (6) accessibility of NH services.

Implications: Findings from this exploratory study present implications across research, practice and policy. The findings enrich the existing knowledge on NH utilisation in the literature within the socio-cultural landscape of Singapore. Greater partnerships between practitioners from referral agency, public healthcare institutions and community care sector are warranted to address the associated challenges and harness the potential opportunities identified. A bespoke informal caregiving policy that caters to the distinct needs and preferences of both OALWD and their caregivers is necessary.

4A-4

Support for Family Caregivers of Older Adults with Mild Cognitive Impairment - A Qualitative Study

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Background and Objectives: Older adults with mild cognitive Impairment (MCI) who remain in community settings, as opposed to institutional care, often experience higher quality of life and stronger social relationships and connectedness. However, their family caregivers face unmet health, emotional and financial needs, with limited accessible and available support. Such challenges compromise the well-being of family caregivers and their beloved ones. This study aims to investigate the challenges faced by family caregivers of older adults with MCI, identifying gaps in existing services, and explore strategies to better support their needs.

Methods: Semi-structured focus group discussions (FGDs) and interviews were conducted with family caregivers who were main caregivers for more than 6 months (n=5), older adults (n=13), government officials (n=7), and care providers (n=18), including healthcare professionals, Active Ageing Centre (AAC) staff, and Community Outreach Teams (CREST). Data were analysed using thematic analysis using NVivo by two coders.

Results: Three key themes emerged from the preliminary data analysis. Caregivers reported knowledge gaps, including limited understanding of the onset and progression of MCI, and insufficient access to training or guidance in managing behavioural changes. Additionally, self-care was de-prioritized by caregivers resulting in lack of caregiver respite, contributing to caregiving stress and poor mental and physical health. Finally, although community resources are available to support older adults with MCI and their family caregivers, the complexity of navigation compounded with accessibility barriers creates challenges in obtaining care and support. Alongside these challenges, participants suggested potential strategies, including greater public awareness of caregiving resources, more accessible training opportunities, formation of caregiver support groups, and regular check-ins from community workers, to provide timely assistance.

Implications: Findings underscore the multidimensional challenges and highlight strategies to address them within community settings: strengthening awareness of available services, improving access to training and respite opportunities, and fostering social support networks.

4B-1

Prevalence, Correlates and Psychosocial Outcomes of Frailty, Using the Clinical Frailty Scale, Among Older Singaporeans

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Background and Objectives: Frailty is an important health indicator for older adults. The Singapore Ministry of Health's Frailty Strategy Policy Report (2023) has recommended the Clinical Frailty Scale (CFS) for frailty classification. Nevertheless, nationally representative data on the prevalence, correlates and outcomes of CFS-based frailty among older Singaporeans is lacking. We estimated the prevalence of CFS-based frailty in a nationally representative sample of older adults aged ≥70 years in Singapore and examined its demographic correlates and psychosocial outcomes.

Methods: Data was drawn from Wave 3 of THE SIGNS Study (n=1,139; 2023-2024). Participants were classified as robust (CFS 0-3) or frail (CFS ≥4), based on mapping of survey items to an established CFS classification tree. Potential demographic correlates were age, gender, ethnicity, education, living arrangement, income adequacy, and work status. Psychosocial outcomes were social support networks, loneliness, quality of life (QoL), personal mastery, and perception of neighbourhood services accessibility. Regression models identified demographic correlates (multivariable logistic regression model; dependent variable: frailty) and psychosocial outcomes (multivariate linear regression model, adjusting for multiple comparisons; primary independent variable: frailty; multiple dependent variables: psychosocial outcomes) of frailty.

Results: Almost one in two (47.2%) Singaporeans aged ≥70 years were frail. Increasing age, lower education, income inadequacy and not working were associated with higher odds of being frail. Compared with robust older adults, frail older adults had smaller social support networks, greater loneliness, lower QoL, reduced personal mastery, and poorer perceptions of their neighbourhood services accessibility.

Implications: This study provides the first nationally representative data on frailty among older Singaporeans using the CFS, directly informing national frailty-related policy efforts. Our findings support CFS's relevance by demonstrating its utility in identifying at-risk older adults. Incorporating the CFS in routine practice may strengthen providers' ability to implement trgeted interventions and mitigate adverse psychosocial outcomes linked with frailty.

4B-2

Influence of Osteo-Sarcopenia on the Hip Fracture Risk in Community-Dwelling Older Asian Adults

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Background and Objectives: Osteoporosis and sarcopenia are prevalent age-related disorders that lead to frailty, and disability in older adults. The co-occurrence of both conditions, known as osteo-sarcopenia may have a compounded effect on hip fracture (HF) risk. This study aims to explore how a new biomechanical marker, probability of HF (PFx), differs by gender and ethnicity among individuals with osteoporosis, sarcopenia, or osteo-sarcopenia.

Methods: Data from 700 older adults, including Chinese, Indian, and Malay ethnicities, were analysed. All participants had hip dual-energy X-ray absorptiometry (DXA) scans from the Population Health and Eye Disease Profile in Elderly Singaporeans (PIONEER) cohort. Osteoporosis was defined using femoral neck T-scores, and sarcopenia based on criteria from the Asian Working Group for Sarcopenia. Osteo-sarcopenia was defined as having both conditions. PFx was calculated using DXA-based finite element models. Mean PFx ratios were compared between individuals with and without each condition.

Results: Among 325 males and 375 females (mean age 71.6), osteoporosis increased HF risk by 3 times in males and 3.4 times in females; sarcopenia by 1.6 times in both; and osteo-sarcopenia by 17.1 times in males and 12.6 times in females. Indian males had the highest risk increase: 6 times (osteoporosis), 1.9 times (sarcopenia), and 36.8 times (osteo-sarcopenia). For Malay males, the increases were 3.4, 1.4, and 14.3 times; for Chinese males, 2.1, 1.54, and 12.13 times. Among females, Chinese had the greatest variation: 3.5, 1.4, and 25.6 times; followed by Malays (2.4, 1.9, 10 times) and Indians (4.5, 1.5, 5.1 times).

Implications: HF risk associated with osteoporosis, and sarcopenia varies by gender and ethnicity. Presence of osteo-sarcopenia significantly elevated risk in all groups, though to varying degrees. These findings highlight the importance of tailored, ethnicity- and gender-specific strategies for HF risk assessment and prevention among older Asian adults.

4B-3

Validating Community for Successful Ageing (ComSA) BioPsychoSocial Risk Screener Version II (BPS-RS II) with Diverse Multi-Ethnic Senior Populations in Singapore: A Mixed-Methods Study

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Background and Objectives: Accurately assessing biopsychosocial (BPS) risks is essential for tailoring interventions and care pathways for older adults. However, existing screening tools used in community settings (e.g. ICOPE, Clinical Frailty Scale, Community Screener) fall short in three areas: (1) predictive validity for hospital admissions and emergency visits, (2) comprehensive assessment of vulnerabilities beyond physical frailty, and (3) accurate risk stratification with appropriate pick-up rates. Building on the Community for Successful Ageing (ComSA) BPS Risk Screener Version I (BPS-RS I), we present a re-specified Version II (BPS-RS II), informed by interviews with older people (n=40) in Singapore.

Methods: A cross-sectional survey (n=1,107) was conducted, and factor analysis (FA) applied to refine items for BPS-RS II. Associations with health outcomes and quality of life (QoL) were tested, and results compared to BPS-RS I.

Results: Fourteen items generated from qualitative findings met the Kaiser–Meyer–Olkin (KMO) threshold (>0.5). FA retained the three-domain BPS structure. Items in the "B" domain were largely consistent with Version I, while new items emerged in the "P" and "S" domains. Multivariate regression analyses replicated the additive dose-response effects observed in Version I, with smoother gradients and narrower confidence intervals. Compared to BPS-RS I, Version II showed stronger associations with length of hospital stay and QoL, particularly among participants with "overwhelming problems." This category was strongly associated with poor QoL (OR=39.20, 95% CI: 37.73–40.66, p<0.01) relative to no BPS risk. Additional analyses confirmed the validity of each B, P, and S domain against similar measures.

Implications: BPS-RS II is recommended over Version I for community-based risk assessment and stratification of older adults. The revised tool is theory-driven, culturally sensitive to Singapore's multi-ethnic context, and demonstrates stronger associations with health outcomes and QoL. It shows promise as a national stratification tool for senior health segmentation and mapping of care pathways.

4B-4

The TARGET Study: Effects of Falls and Cognition on Resilience, Fear of Falling, And Quality of Life in Older Adults

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Background and Objectives: Falls are a leading cause of injury in older adults, affecting not only physical health but also functional and psychosocial outcomes. Understanding the pathways between falls and adverse outcomes is key to fall prevention and improving quality of life. This study examined how resilience and fear of falling (FoF) influence functional and psychosocial well-being after falls in community-dwelling older adults.

Methods: Participants aged ≥60 (n=2,291) were recruited from a nationally representative random sample. Trained interviewers conducted home-based assessments of clinical, functional, cognitive, and psychosocial status, plus gait testing with inertial sensors. Structural equation modelling (SEM) was used to test a moderated mediation path model between falls, FoF (Iconographical Falls Efficacy Scale; ICON-FES), resilience (Brief Resilience Scale; BRS) and four outcomes (EuroQol-5 Dimensions; EQ-5D, Modified Barthel Index; MBI, Instrumental Activities of Daily Living; IADL, and Patient Health Questionnaire; PHQ).

Results: Fall count in the past 12 months significantly predicted outcomes and was positively correlated with ICON-FES and negatively correlated with BRS, EQ-5D, MBI, IADL, and PHQ. ICON-FES significantly mediated the effect of falls on EQ-5D (β=0.011, p<0.001), MBI (β=-0.420, p< 0.001), IADL (β=-0.219, p<0.001), and PHQ-9 (β=0.125, p<0.001). The mediating effect of FoF was significantly moderated by BRS (β=2.464, p<0.001). The indirect effects of ICON-FES were strongest among participants with Low Resilience. FoF was associated with reductions in EQ-5D (β=-0.05, p=0.004), MBI (β=-2.397, p=0.003), IADL (β=-0.794, p=0.001), and PHQ-9 (β=-0.456, p=0.037), compared to the Normal Resilience group: EQ-5D (β=-0.015, p=0.001), MBI (β=-0.544, p=0.001), IADL (β=-0.300, p=0.001), and PHQ-9 (β=-0.158, p=0.001). Conversely, FoF did not significantly predict outcomes in the High Resilience group, highlighting resilience as a key protective factor.

Implications: This presentation will highlight the clinical implications, emphasizing the need to strengthen resilience—particularly adaptability, coping skills, and recovery capacity—through targeted interventions to reduce falls and improve post-fall outcomes.

4C-1

Sources and Measures of Singapore's Ageing in the Early 21st Century

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Background and Objectives: Nearly 30 years ago, Tan and Low (1996) ran an analysis decomposing cause-of-death contributions to the growth in Singapore's life expectancy at birth between 1980 and 1990. The cause-driven disparities in longevity between women and men were also decomposed. Since then, Singapore has gone through an accelerated epidemiological transition and fully entered the stage of low fertility and mortality conditions, denoting the era of population ageing with an increasing prevalence of old-age non-communicable diseases.

Methods: The resident population data are sourced from the Singapore Department of Statistics, and the cause-specific resident deaths by 5-year age groups are derived from the World Health Organisation. Unlike Tan and Low, who used Pollard decomposition, I employ the discrete Arriaga method for three periods: 2005-2010, 2010-2015, and 2015-2019. Both demographic methods enable the estimation of age- and sex-specific shares of causes of death contributing to progress in life expectancy over time. I compute abridged life tables by year for all major causes of death and report key differences. I then carry out the decomposition to estimate the number of years added or subtracted from the life expectancy due to the change in prevalence of various causes of death. Finally, I comment on the evolution of the disparity gap by sex over time.

Results: Preliminary results show the 2019 life expectancy at birth has increased by 3.6 years since 2005 at a rate of 2.7 months per annum. However, progressively dwindling positive contributions from the oldest age segments (80+) in recent years, especially among men, suggest that the underlying causes in older adults are slowing down the progress, offset by improvements in the 65-79 age segment.

Implications: Tracking the evolution of the cause-of-death contributions at various ages is meaningful for ongoing interventions as well as for the future of the governmental health policy agenda.

4C-2

Healthy Ageing Across Diverse Contexts: Insights from India, China, England and Brazil

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Background and Objectives: Healthy Ageing is defined by the World Health Organization (WHO) as "the process of developing and maintaining functional ability that enables wellbeing in older ages". The WHO framework centers on functional ability which combines intrinsic capacity, environmental characteristics and their interactions. The current study aims to develop a Healthy Ageing Index (HAI) based on the WHO Healthy Ageing Framework and further investigate into the factors that contribute to Healthy Ageing positively or negatively for India, China, England and Brazil.

Methods: The study utilizes data from four longitudinal surveys: India's LASI (2017-18), China's CHARLS (2018), England's ELSA (2018) and Brazil's ELSI (2019-21). Adults aged 45 and above were included in study and missing cases were excluded. A Healthy Ageing Index (HAI) has been developed based on the WHO Healthy Ageing framework and multiple linear regression was further used to investigate the contribution of various independent variables.

Results: The mean score of the Healthy Ageing Index was 82.6 for India, 81.2 for China, 85.1 and 82.5 for England and Brazil respectively. Regression analysis revealed Education, Marital Status and work status contributed positively to healthy ageing in all the countries whereas behavioural activities which included smoking was negatively associated in all the countries, but alcohol consumption showed negative relationship in India and China whereas positive association in England and Brazil.

Implications: The cross-country study underscores developing a Healthy Ageing Index grounded in the WHO framework. By Integrating multidimensional health and socio demographic indicators, the index highlights both cross country differences and shared challenges in ageing. The findings provide an evidence base for policy interventions and contribute to advancing global commitments to the Decade of Healthy Ageing and Sustainable Development Goals by promoting equitable and inclusive strategies for improving the well-being of older populations.

4C-3

Harnessing Longitudinal Health Data for Aging Populations: Insights from East and Southeast Asia

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Background and Objectives: Longitudinal data are crucial for understanding the rapid population aging in East and Southeast Asia, yet the practical challenges in establishing and managing such data are often undocumented. This study aimed to investigate the challenges and adaptations in data infrastructure establishment, study implementation, long-term maintenance and sustainability, and data utilization practices and mechanisms of data sharing for aging research in this region.

Methods: Qualitative interviews were conducted with 33 stakeholders involved in data collection and management for aging research across 13 countries/regions in East and Southeast Asia, as well as experts from other regions. Data were analysed using a combined inductive, deductive, and abductive approach to identify key themes.

Results: Four key themes emerged: (1) navigating structural and contextual barriers in establishing studies, including funding, collaboration, personnel shortages, and sampling difficulties; (2) adapting research design, instruments, and logistics to local contexts, addressing cultural and linguistic differences, data accuracy, methodological consistency, and biospecimen handling; (3) retaining funding, participants, and personnel for long-term sustainability, considering external disruptions and team turnover; and (4) managing constraints in data governance, privacy, sharing reluctance, and limited data comparability.

Implications: Building robust longitudinal aging data ecosystems in East and Southeast Asia requires context-specific strategies to overcome structural barriers, adapt research methodologies, ensure long-term sustainability, and promote effective data sharing. Aligning research with local policies, fostering multidisciplinary collaboration, harmonizing data, and including vulnerable populations are critical for generating impactful evidence to guide healthy aging policies in the region and globally.

4C-4

Win Some, Lose Some: Cohort Differences in Social Networks of Older Singaporeans Aged 60–69 In 2009 and 2016-2017

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Background and Objectives: Social networks play an important role in ageing. There is growing concern that successive generations may age with smaller and weaker networks due to demographic changes. However, population-level evidence on cohort changes in social networks among early older adults remains scarce, particularly in Asian contexts. We address this gap by examining differences in the composition and correlates of social networks between two cohorts of early older adults in Singapore.

Methods: Data from two nationally representative surveys, conducted in 2009 and 2016-2017, restricting the analysis sample to those aged 60–69, was analysed. Multi-group Latent Class Analysis identified distinct social network types in the two cohorts, based on: living with a spouse/child, marital status, contact with ≥3 relatives and/or friends monthly, and frequency of contact with closest relatives and/or friends. Multinomial regression models examined demographic and health correlates—gender, age, ethnicity, education, activities of daily living (ADLs), instrumental ADLs (IADLs), chronic conditions, and self-rated health—of network types.

Results: We identified six social network types in both cohorts: diverse and socially engaged (2009: 40%; 2016-2017: 37%), core family and friends (9%; 17%), extended family (31%; 22%), core family (9%; 7%), unmarried and diverse (5%; 9%), and restricted (6%; 8%). While the network types had relatively consistent demographic correlates (age, gender and education) in either cohort, health correlates differed between the cohorts (2009: chronic conditions and self-rated health; 2016-2017: IADL difficulties).

Implications: Between 2009 and 2016-2017, early older adults' networks largely shifted from family-focused networks to more friend-inclusive or diverse networks. Understanding changes in social network types and their correlates in successive cohorts of early older adults allows stakeholders to tailor policies and programs to support the growth and maintenance of more diverse social networks and alleviate vulnerabilities associated with weaker and less diverse social networks.

4D-1

Reciprocal Social Participation: Older Adults as Beneficiaries and Contributors to Ageing-In-Place

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Background and Objectives: Social participation is one of the eight interconnected domains in the World Health Organization (WHO) Age-friendly Cities Framework, playing a key role in creating supportive and inclusive environments for older adults. Continued participation in community activities supports older adults' integration into society, keeping them active and informed. Accordingly, the current study aims to explore older adults' perspectives on social participation within the context of ageing-in-place.

Methods: Sixteen older adults (age range: 64-91 years, 10 females) underwent one-hour semi-structured interviews to understand their ageing-in-place needs and priorities. Participants were purposively sampled based on age, ethnicity, sex, frailty status and current housing situation. All interviews were audio-recorded, transcribed verbatim and analysed using reflexive thematic analysis.

Results: Preliminary findings highlight older adults' dual roles in social participation – as beneficiaries of community-organised events and informal social interactions, and as contributors to ageing-in-place through volunteering and sharing knowledge. As beneficiaries, most social participation among older adults centred around the Active Ageing Centres (AACs), which provided a formal space to connect with peers and a platform to build relationships that later developed into organic social meetups outside the AAC. Social networks often serve as channels for information sharing. As contributors, older adults support community care through both formal roles in AACs and informal acts of neighbourly kindness, such as buying groceries for wheelchair-bound residents or checking in on friends. Nevertheless, many expressed interest in contributing more but were hindered by age-related limitations and a lack of suitable platforms.

Implications: Findings highlight that older adults are active agents of ageing-in-place. While they benefit from activities organised by community-based organisations that facilitate social participation, they also give back by engaging and supporting their peers. Expanding opportunities for knowledge-sharing and volunteering can future strengthen social bonds and build more inclusive, age-friendly neighbourhoods.

4D-2

The Current Status of Intergenerational Solidarity and its Implications for the Future of Ageing in Singapore

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Background and Objectives: Singapore is one of the fastest ageing societies in the world. By 2030, one in four citizens will be aged 65 and above. As Singapore's population becomes increasingly multi-generational, it is vital to understand intergenerational relationships, and how strengthening intergenerational solidarity can be the foundation for building a society for all ages. This study explores intergenerational relationships in Singapore and suggests ways to strengthen intergenerational solidarity.

Methods: The research focused on: intergenerational perceptions; how intergenerational bonds can support sustainable social, welfare, and care systems; and how caregiving affects intergenerational equity and solidarity.The research was based on eight focus group discussions (FGDs) with 65 participants: youth (18-40 years), mature adults (41-59 years) and older persons (60 years and over). The results were transcribed and translated and analysed using Applied Thematic Analysis (ATA).

Results: The research indicates that intergenerational relationships remain strong, but there are tensions. Older adults are concerned about their care due to perceptions of declining filial piety and increased 'Westernisation' among the youth. Mature adults, meanwhile, face ageism at work. These tensions arise primarily from misunderstandings between generations, underlining the need for better, effective communication. The family remains central to intergenerational solidarity but is under strain from societal and economic pressures.

Implications: Consequently, alternative sites for multigenerational interactions, such as community should also be nurtured. The rising cost of living was a major challenge shared by all generations, therefore, policy interventions, such as stimulant packages for younger generations are required. This would also offset the perceived policy neglect of younger generations, who feel 'sandwiched.' Despite perceptions, the ethic of caregiving remains strong among the younger generations, but providing caregiving support across generations would contribute to improving intergenerational equity. In summary, the research underscored the importance of the 5Cs for fostering intergenerational solidarity - communication, confidence, connections, commitment and community culture.

4D-3

Evaluating the Experience of Living Together: Psychometric Tools for Intergenerational Families

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Background and Objectives: In Indonesia, about 70% of older adults live with family members, often with spouses, adult children, and grandchildren. While intergenerational co-residence provides support, it can also shape the quality of parent-child relationships. Previous qualitative work identified several considerations for older adults in deciding to co-reside, including filial responsibility, relationship quality with children and other family members (e.g., in-laws, grandchildren), marital status, financial circumstances, and the suitability of housing for their mobility. Adult children considered similar factors, though they emphasised their parents' ability to adapt to new household routines, given established habits that may be difficult to change.

Methods: Building on these findings, this study developed two psychometric instruments to evaluate the co-residence experience from both perspectives: the Indonesian Intergenerational Co-Residence Scale for Older Adults (IICS-OA) and for Adult Children (IICS-AC). Item generation was conducted through a Delphi study involving 24 Indonesian family studies experts, resulting in 84 items for older adults and 82 items for adult children.

Results: Both instruments underwent validity and reliability testing, including confirmatory factor analysis (CFA).Initial CFAs did not demonstrate good model fit, but through iterative model modification, final models with acceptable fit were obtained. The IICS-OA consists of 30 items across: filial responsibility, relationship quality with family members, financial circumstances, and health-related housing suitability. The IICS-AC comprises 31 items with four factors: filial responsibility, parent-child relationships, marital status, and financial circumstances. Both scales demonstrated strong psychometric properties, with internal consistency above 0.80, composite reliability above 0.70, positive correlations with the Satisfaction with Life Scale (SwLS), and negative correlations with the Beck Depression Inventory (BDI).

Implications: These instruments provide family professionals—such as psychologists, physicians, and social workers—with tools to assess intergenerational co-residence experiences and to guide more targeted interventions for multigenerational families in Indonesia.

4D-4

Co-designing an Intergenerational Community Dance Program (ICDP) – An Exploratory Qualitative Study

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Background and Objectives: By 2030, one in six people would be above the age of 65, which greatly increases the age-related global disease burden and healthcare costs, therefore, warranting the need for more active ageing measures. Dance has been gaining traction as an active ageing programme due to its dual-task nature on cognitive and physical benefits. Additionally, the social aspect of dance has also been shown to yield psychosocial benefits for older adults. However, the benefits of dance have been inconsistent due to the heterogenous dance curriculums. Therefore, this study aims to utilise a co-design approach to analyse the needs of the stakeholders involved in the iCDP.

Methods: This qualitative study utilises a co-design approach with the integration of the generative co-design framework for healthcare innovation. Eleven older adults, six student instructors and four active ageing centre staffs were recruited via purposive sampling. A total of four co-design workshops were conducted. Focused group and case scenarios discussions were conducted to create generative ideas to solve potential challenges foreseen during the implementation phase of iCDP. Thematic analysis was used for data analysis.

Results: Analysis of the data yielded three overarching themes and eight subthemes. The themes are: 1) "Playing the balancing act" depicts their perceptions of dance and how their expectations were aligned to iCDP. 2) "Understanding the pain points" explains their concerns and reservations, 3) "Taking iCDP to the next level" describes generative ideas provided by the stakeholders to improve iCDP.

Implications: Involving the end-users in the co-design of iCDP contributed to the smooth transition of the intervention from ideation to implementation, effectively targeting the needs of the stakeholders and optimises the physical, cognitive and psychosocial benefits for the older adults. Additionally, the suggestions from the student instructors and active ageing centre staff further enhanced the sustainability of iCDP.

4E-1

Rebuild, Reconnect, Revitalize (3R) Program to Transit Older Cancer Survivors in the Community: A Mixed-Methods Study

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Background and Objectives: With significant progress in medical science, cancer has been positioned as a chronic, non-communicable disease, shifting survivorship care beyond remission to a holistic focus on biopsychosocial well-being. Older cancer survivors face distinct challenges such as comorbidities, cancer-related fatigue, and higher risk of depression. Existing survivorship programs are often fragmented and fail to address ageing-related concerns. Therefore, there is a need for tailored transitional survivorship programs to support the long-term well-being of older cancer survivors. This pilot study aimed to develop the 4-week Salutogenic-based Rebuild, Reconnect, Revitalize (3R) program to support older cancer survivors in community transition, assess its effects on well-being, evaluate feasibility and participant satisfaction.

Methods: Recruitment was conducted at National University Hospital, Singapore (August-November 2024). Of 100 screened participants, 19 were enrolled (intervention n=10; control n=9). The 3R program comprised four weekly 90-minutes group-based sessions covering exercise, nutrition, health management and emotional coping, structured around the Salutogenesis framework. Baseline and post-intervention data included validated self-reported questionnaires, physiological measurements and focus group discussions. Quantitative data were analysed using paired t-tests, and qualitative data were thematically analysed using Braun and Clarke's framework.

Results: Quantitative findings indicated positive trends: improved resilience-coping ability (12.20 to 13.80, p=0.07), significant improvements in stress reduction (9.70±2.54, p=0.02) and quality of life (100.10±5.57, p=0.03). Qualitative analysis (three main themes, nine subthemes) highlighted participants valued structured education, peer support, and reflection opportunities, enhancing their sense of coherence. Barriers included limited digital literacy, difficulty interpreting medical results, and challenges sustaining behaviour change.

Implications: The 3R program demonstrated feasibility and showed promise in enhancing self-care among older cancer survivors, though the short duration constrained long-term behavioural reinforcement. Findings underscore the need for extended scalable interventions with ongoing follow-up to sustain long-term survivorship outcomes.

4E-2

We Know What We Need: Older Adults' and Stakeholders' Perspectives on Ageing, Health, and Wellbeing in Pakistan

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Background and Objectives: The rapid increase in the older adult population worldwide, especially in low- and middle-income countries (LMICs), poses challenges for healthcare, social support, and policy planning. Older adults in LMICs, particularly in culturally diverse regions like Sindh, Pakistan, often face limited healthcare access, economic insecurity, and social isolation. These challenges highlight the need to understand ageing in context and explore potential solutions across multiple levels of the socioecological model. This study explored older adults' and stakeholders' perspectives on ageing, health, and wellbeing in Pakistan through a socioecological lens.

Methods: This qualitative descriptive study employed focus group discussions (FGDs) with 24 older adults and 24 stakeholders in urban Karachi, and 26 older adults and 26 stakeholders in rural Thatta. Each FGD was conducted with a semi-structured guide in local languages with 4–6 participants. Data were thematically analysed using the socioecological model.

Results: At the individual level, mental health concerns, including loneliness, depression, and stress, were reported, with participants emphasizing family and community support. Technological barriers were noted; urban participants particularly reported a desire to learn smartphones and social media. At the sociocultural level, participants highlighted lack of respect, weak social integration, and the need for senior care homes. While family support was central, participants also stressed socialising opportunities and recognition. At the structural level, difficulties in accessing healthcare and managing medications were major concerns. Participants also reported limited awareness of existing social security programs, which could be expanded to better support older adults.

Implications: The study findings highlight the complexity of ageing-related issues in LMICs and the need for multi-level responses to address personal, sociocultural, and structural barriers and strengthen support for older adults. By foregrounding older adult and stakeholder voices, this study contributes evidence to inform interventions that promote inclusion, dignity, and wellbeing in resource-constrained settings like Pakistan.

4E-3

A Multicomponent Intervention to Improve Functional Independence in Rural Indian Elders: A Randomised Controlled Trial

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Background and Objectives: Functional decline and malnutrition are critical public health issues for rural elderly in India, leading to loss of independence and reduced quality of life. This study's primary objective is to evaluate the effectiveness of an 8-week multicomponent intervention (physical training and nutritional counseling) on functional mobility and nutritional status in community-dwelling elderly. Secondary objectives include assessing its impact on quality of life, feasibility, and acceptability.

Methods: This randomized controlled trial will recruit 150 participants aged 60+ and allocate them to an intervention or active control group. The intervention group receives a structured 8-week group exercise program and nutritional counseling. The active control group attends group-based health education sessions of equal duration and frequency to control for social contact. Primary outcomes are functional mobility, measured by Timed Up and Go (TUG) and 30-second Sit-to-Stand tests, and nutritional status, via the Mini Nutritional Assessment (MNA). Quality of life is measured using an adapted SF-36 survey. Outcomes are assessed at baseline and post-intervention.

Results: We hypothesize the intervention group will show statistically significant and clinically meaningful improvements in functional mobility and nutritional status compared to the active control group. We also anticipate corresponding improvements in the physical functioning, general health, and vitality domains of the quality of life scale.

Implications: A successful outcome will provide an evidence-based, low-cost, scalable model to enhance functional independence in this population. Findings could inform implementation of India's National Programme for Health Care of the Elderly (NPHCE), offering a feasible intervention for delivery through existing community health infrastructure to address a critical gap in accessible geriatric care.

4E-4

Living Well After Stroke: Psychosocial Outcomes of a Community-Based Coaching Intervention for Survivors and Caregivers

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Background and Objectives: As Singapore verges on a super-aged population, stroke remains a leading cause of disability among older adults. First-time stroke survivors and their families face profound post-stroke losses due to abrupt changes in their physical, emotional, and psychosocial health. Yet, apart from formal rehabilitation services, they receive limited support upon discharge. The Aspirational Rehabilitation Coaching for Holistic Health (ARCH) programme was developed to empower stroke survivors and their families in addressing losses, fostering positive adaptation, and cultivating effective coping strategies for healthy post-stroke adjustment within the community.

Methods: Stroke survivor-family caregiver dyads participated in four standardised and structured ARCH sessions led by trained coach-researchers, comprising psychosocial support and psychoeducation on navigating post-stroke losses, promoting self-compassion, goal-setting, and dyadic coping. To evaluate ARCH's efficacy, participants' psycho-socio-emotional outcomes were assessed at baseline (T1) and post-intervention (T2) with the Short Warwick–Edinburgh Mental Wellbeing Scale (SWEMWBS; stroke survivors only), World Health Organisation Quality of Life–BREF (WHOQOL-BREF; family caregivers only), Herth Hope Index (HHI), Brief Resilience Scale (BRS), Modified Reintegration to Normal Living Index (MRNLI; stroke survivors only), and Dyadic Relationship Scale (DRS).

Results: Fifteen dyads completed both T1 and T2 assessments (N=30). Following ARCH participation, stroke survivors showed significant improvements in well-being (Z=-3.14, p=.002, r=.57), resilience (Z=-2.73, p=.006, r=.50), hope (Z=-2.08, p=.038, r=.38) and community reintegration (Z=-2.046, p=.041, r=.37). Family caregivers demonstrated significant improvements in quality of life post-intervention (z=-2.40, p=.017, r=.44). Both stroke survivors and caregivers reported significant gains in positive dyadic coping (stroke survivor: Z= -3.42, p < .001, r=.62; caregiver: Z=-2.05, p =.041, r=.37).

Implications: Interim findings indicate that a standardised and multimodal dyadic coaching intervention post-discharge effectively enhances psychosocial well-being and coping strategies amongst Singaporean stroke survivors and caregivers. Further analysis seeks to verify these findings and examine the long-term impact of ARCH.

5A-1

Causal Pathways Linking Ageing in Place, Social Connectivity, and Intrinsic Capacity

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Background and Objectives: Given Singapore's rapidly ageing population, it is essential to identify pathways that strengthen intrinsic capacity (IC) to support successful ageing. This study aims to examine how the built and social environments jointly facilitate ageing in place (AiP) and sustain IC. In particular, we investigate whether social connectivity functions as a mechanism through which AiP influences IC.

Methods: We used data from the Singapore Life Panel (SLP), a nationally representative longitudinal survey, analysing 5,139 adults aged 50 and above. Causal discovery techniques were applied with demographic and built-environment priors to identify directional relationships between AiP, social factors, and IC. Specifically, we employed BOSS with 1,000 bootstrap repetitions in TETRAD, and simulated treatment effects using causal inference methods.

Results: Our findings suggest the relationships among AiP, social factors, and IC are complex due to the multiple domains captured. Nonetheless, AiP and the social environment were broadly contributing to IC, for instance some components of AiP and social factors were either directly or indirectly associated with different domains of IC (psychological, locomotion, sensory, and vitality). Cognition however was more likely to lead toward social and built environments. Among built-environment features, shared parks and open green spaces emerged as the most influential in sustaining both AiP and IC, compared with other amenities.

Implications: This study is among the first to apply causal discovery methods to demonstrate how social and built environments support IC. The analysis reveals nuanced relationships between AiP, social factors, and IC, helping to explain the bidirectionality proposed in prior literature. These insights underscore the importance of policy measures that prioritise shared green spaces, which appear particularly critical for fostering social connectivity and sustaining IC.

5A-2

Typologies of Ageing Neighbourhoods in Singapore: A Multi-Site Mapping of Community Assets for Ageing-In-Place

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Background and Objectives: Singapore faces a critical challenge with its rapidly ageing population, provoking concerns over physical and mental wellness, community support, and financial security. Ageing-in-place can address these issues, but it requires understanding of available community assets that can be leveraged to encourage participation and promote health. Focusing on this gap, the Seniors Action for Greater Empowerment project conducted a multi-sited study to explore how community assets can facilitate ageing well in place.

Methods: This community-led study involved collaborating with community co-producers within three contexts in Singapore (Chinatown, Queenstown, and Kallang). 6 asset mapping sessions were held with n=40 community members. The sessions incorporated Participatory Learning and Action activities to facilitate discussion on what assets each community possessed that contributed to the health and wellbeing of seniors.

Results: Overall, participants elaborated on the barriers and facilitators to ageing-in-place. Barriers included increasing social isolation driven by gentrification, weakening "kampung spirit", and negative ageing mindsets. Facilitators identified potential strengths in untapped skills, intergenerational initiatives, and the use of nostalgia and storytelling for engagement. Key stakeholders were also found to be facilitators, including formal agency and institutional actors with means to "open doors", and informal ground-level community stakeholders that could help foster social inclusion. A typology was created for each neighbourhood represented in the study based on the assets they possessed. First, Chinatown is context-based, with this specific heritage location substantiating a lot of the nostalgia and place attachment. Second, Kallang is interest-based, built upon shared interests in gardening and healthy food. Thirdly, Queenstown is people-based in their emphasis on fostering empowerment and bonding among neighbours.

Implications: Mapping community assets and creating typologies will be useful for future community-led health interventions. By identifying and understanding how neighbourhood-level assets can be leveraged, communities are enabled to use their inherent strengths to support ageing-in-place.

5A-3

Momentary Associations Between Urban Green Space Exposure and Affective States Among Older Adults

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Background and Objectives: Debating theories of person-environment relationships diverge on whether human well-being is passively shaped by environments or actively co-constructed through individuals, environments, and their dynamic interactions. Yet, few studies collected ecologically valid data in real-time to examine such dynamic processes, while existing empirical evidence remains mixed. This study aimed to test the rival theories by assessing how individual differences and momentary changes in green exposure influence affective states of older adults.

Methods: We recruited 312 community-dwelling older adults aged 65-86 in Hong Kong for a seven-day ecological momentary assessment (EMA) study with concurrent GPS tracking. Participants reported momentary affect through EMA surveys five times per day, yielding 10,789 valid responses. Green exposure was quantified as the green space area ratio (GSAR) within a 50-metre buffer around each GPS location. We used linear mixed-effects models to estimate the associations between GSAR and affective states, disaggregating the between-person and within-person variations while adjusting for covariates.

Results: Within-person analyses indicated that moments with higher-than-usual green exposure were associated with lower negative affect (β=-0.090, $p<0.05$). Between-person effect was positive (β=2.047, $p<0.05$) but moderated by self-rated health (β=-0.801, $p<0.05$). For those reported poorer health in baseline survey, higher green exposure was linked to higher negative affect, whereas for those in better health, the relationship reversed, with greater green exposure associated with lower negative affect. However, no significant associations emerged between green exposure and positive affect.

Implications: Our findings highlighted the beneficial effects of urban green space in mitigating negative affect among older adults, supporting the dynamic hypothesis and underscoring the potential of context-sensitive interventions as a health promotion strategy. Furthermore, the moderating role of health provided additional empirical evidence for the competence-press hypothesis, emphasising the need for tailored urban greening strategies that accommodate the diverse capacities and needs of different populations.

5A-4

Developing A Built Environment and Health (BEH) Index to Advance Age-Friendly Urban Planning Across the Life Course

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Background and Objectives: An age-friendly city requires environments that support health and well-being across the life course, enabling older adults to age-in-place while meeting the needs of younger populations. Built environment features – such as transportation, safety, and green spaces – are determinants of physical, mental, and social health. However, existing tools often assess these domains in isolation and are not tailored to capture the diverse needs of the population. This project aims to develop a Built Environment and Health (BEH) Index that links built environment features to health outcomes, and to provide a framework for informing age-friendly and inclusive urban planning.

Methods: The initial index items were developed through a scoping review. Eleven experts from the health, built environment, urban planning, and related disciplines underwent a two-round modified Delphi process to refine the items. Following refinement, we will pilot the index with 200 community participants (aged ≥18 years) in November 2025, alongside validated measures of physical, mental, and social health.

Results: From the scoping review, 92 initial items were identified. Following the Delphi process, expert consensus was reached on a set of 14 domains capturing key intersections between the built environment and health. These domains reflect the multidimensionality of environments that enable healthy living across ages. The domains include services and amenities, roads and pedestrian infrastructure, transportation, public spaces, inclusive design, environmental and neighbourhood features, conservation of cultural sites, waste management, safety, green spaces, blue spaces, land use, population density, and food environment. Further analysis is underway, and the pilot phase will assess feasibility, reliability, and associations with health outcomes.

Implications: The BEH Index will provide an actionable framework for age-friendly urban planning. By highlighting features that promote mobility, inclusivity and social participation, it can support policymakers and planners in designing environments that foster healthy ageing in place, while meeting the needs of diverse populations.

5B-1

TARGET: A National Cohort for Assessing Geriatric Fall and Fracture Risk in the Community in Singapore

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Background and Objectives: The Targeted Assessment and Recruitment of Geriatrics for Effective fall prevention Treatments (TARGET) study is an ongoing national prospective cohort study in Singapore, aiming to develop cost-effective and scalable frameworks for early detection and prevention of falls and fractures among community-dwelling older adults.

Methods: Prospective cohort study of 2,291 community-dwelling residents aged ≥60 years enrolled 2022-204. Participants underwent a comprehensive baseline fall risk assessment (T0) comprising (i) home-based interview to capture sociodemographic, anthropometric, cognitive, physical, functional, and psychosocial measures, (ii) gait assessment using wearable inertial measurement unit motion sensors, (iii) dual-energy X-ray absorptiometry (DXA) and whole-body 3D scans, and (iv) Virtual Reality-based spatial navigation assessment. Prospective follow-up of participants for two years (T1-T8) to monitor falls, fractures and cognitive status is ongoing. Electronic medical records are being linked, providing objective longitudinal data on fall and fracture-related morbidity, mortality, healthcare utilisation and costs.

Results: Of 2,291 participants, most were female (57.9%) with a mean age of 74.6 years. 15.6% reported at least one fall within the prior 12-month period. Fallers demonstrated significantly lower functional independence and quality of life, greater depressive symptoms, number of chronic health conditions, and fear of falling compared to non-fallers. Gait analysis suggests that higher gait variability and reduced movement intensity are associated with a history of falls. Analysis of DXA data indicates that Chinese participants had the highest fracture risk scores compared to Indians and Malays.

Implications: Findings from the TARGET study will make a significant contribution to the development of personalised community-based screening and intervention frameworks for Asian populations. The innovative research design, which centres on the real-world evaluation of three novel technologies—including wearable sensors, VR game technology, and finite element modelling—represents a major scientific advancement towards identifying objective, multidimensional markers for fall and fracture risk, and developing scalable population screening solutions.

5B-2

Beyond Bone Mineral Density: Improving Hip Fracture Risk Stratification in Older Adults with Osteopenia

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Background and Objectives: Dual-energy X-ray absorptiometry (DXA)-derived bone mineral density (BMD) is the clinical gold standard for diagnosing osteoporosis, but its ability to predict hip fractures is moderate. Osteopenia is a major blind spot: nearly as many fractures occur in people with osteopenia as in those with osteoporosis. This is partly due to the larger osteopenic population but also reflects the limitations of using a T-score of –2.5 as the sole treatment threshold, leaving many high-risk individuals unidentified and untreated. This study aimed to investigate whether image-based markers can improve fracture risk stratification in older adults with osteopenia, beyond DXA-derived BMD alone.

Methods: We analysed data from 4,616 Icelandic older adults (2590 females) in the Age, Gene/Environment Susceptibility (AGES)-Reykjavik cohort. Baseline CT scans of the proximal femur were processed using automatic segmentation to generate 3D surface models, which were then used to construct finite element models simulating sideways falls to estimate femoral strength. Time-dependent AUC analysis, accounting for competing risk of mortality, was performed to compare the discriminatory performance of DXA-derived BMD and femoral strength over 16 years of follow-up.

Results: Over 16 years of follow-up, femoral strength consistently outperformed DXA-derived BMD in discriminating hip fracture risk ($p < 0.05$) for individuals classified as osteopenic (51% of the cohort) as per the baseline scan. The maximum AUC for BMD was 0.70, whereas femoral strength peaked at 0.76, both at year 8 of follow-up. During the first 8 years, femoral strength exceeded BMD performance by 6–9 AUC points, maintaining a 5-point advantage thereafter.

Implications: Relying solely on BMD misses a substantial proportion of high-risk individuals with osteopenia. Integrating biomechanical measures into screening could close this diagnostic gap, enabling earlier identification of at-risk patients and supporting evidence-based rescreening intervals for targeted, cost-effective fracture prevention, potentially at low cost in opportunistic settings.

5B-3

CXCL9 Links Accelerated Biological Age and Frailty in a Longitudinal Human Aging Cohort

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Background and Objectives: Aging is accompanied by a chronic, low-grade inflammatory state termed "inflammaging"—which is implicated in physical frailty and immunosenescence. However, inflammatory mediators that may mechanistically link systemic inflammation to age-related functional decline remain insufficiently defined. We aimed to identify inflammatory biomarkers that predict physical frailty over 2 years.

Methods: We conducted a 2-year prospective study in a deeply phenotyped cohort of younger and older adults (n=22), integrating multidimensional assessments of physical function (eg timed-up-and-go (TUG) and short physical performance battery), high-dimensional B and T cell immunophenotyping with flow cytometry, and plasma proteomic profiling using the OLINK Target 96 inflammation panel. We screened 75 baseline cytokines against five prospectively assessed frailty correlates (intrinsic capacity, 3m TUG and KLRG1+ CD57+ senescent T cells at 1 and 2 years) using Spearman rank correlation with a pooled Benjamini–Hochberg false discovery rate.

Results: Only CXCL9 survived q < 0.05. Higher CXCL9 was associated with slower TUG at 1 year (TUG: $\rho = 0.677$, $p = 5.4 \times 10^{-4}$, 95% bootstrap CI 0.283–0.883; q = 0.041). Mediation analyses suggested that CXCL9 is a candidate mediator linking accelerated pace of aging by DunedinPACE to future immunosenescence and physical frailty. CXCL9 has been previously identified as the strongest contributor in the inflammatory aging clock and has been implicated in adverse clinical outcomes including physical decline and mortality. Our longitudinal study confirms this association, and further, suggests directionality. Taken together, our findings identify CXCL9 as a biomarker and putative mechanistic node connecting inflammaging with multi-dimensional frailty in a small, intensively studied cohort.

Implications: Our preliminary findings underscore the need for further investigation of CXCL9 in larger, independent cohorts to refine its predictive value. We also highlight CXCL9 blockade as a compelling target for geroscience-informed therapeutic strategies.

5B-4

Can Intrinsic Capacity Provide Links Between Healthy Aging and Risk of Falling?

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Background and Objectives: Recent evidence emphasizes the validity and reliability of intrinsic capacity (IC) to measure healthy aging in diverse socioeconomic and cultural populations. IC is commonly conceptualized into a five-domain construct, involving locomotion, cognition, psychological, vitality, and sensory domains. In aging societies, fall risk is an increasing concern that could lead to injuries and numerous medical costs. It is essential to understand the associations between IC indicators and falls to sustain prevention. In this study, we aimed to investigate the associations between IC and retrospective and prospective falls.

Methods: The PIONEER dataset was used in this study with participants above 60 years old were recruited for data collection, completing a comprehensive clinical examination (systemic, ocular, and non-ocular) in SERI clinic. In total, data from 1103 participants were used to build the IC model via exploratory (EFA) and confirmatory factor analyses (CFA), from more than 25 IC indicators. Suitability for running EFA was checked via the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. Participants were grouped into non-faller and faller according to retrospective as well as prospective falls. Latent factors derived from CFA were compared between fallers and non-fallers using independent-samples t-tests (α=0.05). Network analysis was used to explore the interrelations among the IC indicators. Degree of centrality of nodes were studied.

Results: An IC model was built with five first-order domains: Locomotion, Vitality, Vision, Hearing, and Cognition. Network analysis showed that all first-order IC domains were significantly associated with their corresponding observed indicators. Four IC indicators were significantly different from non-faller and faller regarding retrospective falls, while only one indicator in the analysis regarding prospective falls.

Implications: Gait speed showed the highest degree of centrality among other IC indicators. IC is more sensitive to retrospective falls rather than prospective falls.

5C-2

Longitudinal Associations Between Weight-Adjusted Waist Index and Cognition in Middle-Aged and Older Adults in China

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Background and Objectives: Obesity is associated with cognitive decline, yet evidence regarding the role of different obesity indices is heterogeneous. This study aims to investigate the impact of the weight-adjusted waist index (WWI), an indicator alleviating the obesity paradox inherent in body mass index, on cognition in middle-aged and older adults.

Methods: We used data from five waves of the China Health and Retirement Longitudinal Study (2011 to 2020). Cognition was assessed by the Telephone Interview of Cognitive Status battery and divided into two dimensions: episodic memory and executive function. Restricted cubic splines assessed the nonlinear relationship between WWI and cognition. Linear mixed effects models then examined longitudinal associations between WWI and cognition and delineated the cognitive trajectories between different WWI subgroups.

Results: Totally, 7,515 individuals aged over 50 years at baseline were enrolled (mean age 61.30 ± 7.62 years), corresponding to 26,207 observations. A nonlinear, monotonically decreasing relationship between WWI and cognition was found with an inflection point at the standardized WWI value of -0.5 (P for nonlinearity = 0.0135). Each standardized WWI increment was linked to lower cognitive scores across all domains: global cognition (β = -0.101; 95% CI: -0.123, -0.078), episodic memory (β = -0.104; 95% CI: -0.127, -0.080), executive function (β = -0.064; 95% CI: -0.086, -0.043). Regarding episodic memory, baseline cognitive function was higher in the WWI Q3 group relative to the Q1 group. With advancing age, there is a pronounced decline in episodic memory; however, disparities between WWI groups remain relatively stable. In contrast, executive function declines more modestly, yet differences between WWI groups gradually diverge.

Implications: Our study substantiates a longitudinal association between WWI and cognition, highlighting the detrimental role of elevated WWI in accelerating the age-related cognitive trajectory towards decline. It is imperative to implement public health measures promoting weight control strategies, thereby mitigating the burden of dementia.

5C-3

Educational Gradients in Later-Life Cognition in India: National Estimates from LASI

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Background and Objectives: India's older population is growing rapidly, intensifying concern about cognitive health and independent functioning. Educational attainment is a major life-course determinant of cognitive reserve, yet national estimates that pair rigorous missing-data handling with clear domain-specific outcomes are limited. This study aimed to: (i) quantify education-related differences in immediate recall, delayed recall, and verbal fluency among adults aged ≥60 years; (ii) estimate adjusted associations between schooling and cognition after accounting for age and sex; (iii) examine rural–urban differences in sensitivity analysis; and (iv) characterise gradients between adjacent schooling tiers using post-estimation contrasts.

Methods: Data came from the Longitudinal Ageing Study in India (LASI) Wave 1 (2017–18) linked with Harmonized LASI A3. The analytic sample comprised 31,477 respondents aged ≥60 years. Missingness was addressed using multiple imputation (M=20). Outcomes were immediate word recall (0–10), delayed word recall (0–10), and verbal fluency (animal naming). Group differences were summarised as model-based means by education (no schooling, primary, middle/secondary, higher) and by sex. Linear regressions modelled each outcome with education (categorical), age (years), and sex; rural residence entered sensitivity models. Pairwise education gaps were tested using linear combinations.

Results: Domain means increased monotonically with education: immediate recall 4.24→5.93; delayed recall 3.19→4.71; and verbal fluency 9.95→14.02 (no schooling→higher). In adjusted models (reference: no schooling), higher education was associated with +1.59 points (95% CI 1.50–1.69) on immediate recall, +1.43 (1.32–1.54) on delayed recall, and +3.67 (3.34–4.01) on verbal fluency (all p<0.001). Primary and middle/secondary showed intermediate gains. Each additional year of age related to modest declines (≈–0.048, –0.041, and –0.077, respectively; p<0.001). Female sex predicted slightly lower scores. Rural residence was associated with lower recall but not fluency. All education contrasts were significant.

Implications: Findings underscore education's powerful, graded link to cognition and motivate life-course investments, policies, and enrichment programmes that strengthen cognitive reserves in ageing across India.

5C-4

Adverse Childhood Conditions, Cumulative Disadvantage and Gender Difference in Cognition Among Older Adults in India

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Background and Objectives: In India, gender differences in health, development and cognitive indicators are strongly evident across different stages in life. From childhood, girls face unequal malnutrition, education, child marriage, which can have lifelong implications. While the gender variations in cognitive ability and dementia are strongly evident, assessing the role of early life disadvantage, human capital and age will be crucial as the share of older population is rising rapidly. In this study, I examine the roles of age, early-life disadvantage and human capital on gender differences in cognition among older adults in India.

Methods: The data used for the study is derived from a nationally representative dataset namely the Longitudinal Ageing Study in India (LASI) (n=58,525). Bivariate and multivariate regression with interaction of sex and age, early-life conditions and human capital measures were used.

Results: The mean cognition score of the study population was 25.3. Overall, women (coff=-2.23, 95%CI -2.44, -2.02) scored lower cognition score than men. The results further suggest age-associated decline in cognition score is faster for women. The role of adverse early-life conditions such as poor childhood financial status is stronger for women than men and the interaction is significant only for women. For example, women who reported average (coff=-0.77,95% CI -1.27, -.28) and poor (coff=-1.83, 95%CI -2.48, -1.17) childhood socioeconomic status had lower cognitive ability (coff=-1.71, 95%CI -2.60, -.82) and the interaction is stronger for women. The human capital measures such as education and height (proxy measure of childhood nutrition), show a strong association for women along with significant interaction. Women outperform men at the highest education levels.

Implications: Targeted early-life interventions, including improving childhood nutritional status can help to reduce the gender differences in cognitive function and dementia. Further, targeted interventions among less educated women in middle-age will be useful to reduce the prevalence of cognitive impairment.

5D-1

Empowering Informal Caregivers with the RemindMe App for Pressure Injury Prevention

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Background and Objectives: Regular repositioning aids in reducing the risk of developing pressure injuries (PIs). Maintaining frequent repositioning remains a challenge both in the acute care and community care setting. The study aimed to evaluate the usability of RemindMe, a tablet-based application designed to assist informal caregivers in repositioning patients with or at-risk of pressure injuries during hospitalisation.

Methods: This cross-sectional study was conducted in a single acute-tertiary care hospital. Informal caregivers, including family members or foreign domestic helpers of patients with limited mobility were recruited. Caregivers received a tablet equipped with the RemindMe application, which provided two-hourly repositioning reminders from 8:00 AM to 8:00 PM for up to four days. The app featured an audible alarm to signal repositioning times and a pictorial guide highlighting high-risk pressure areas. Utilisation information was collected from the app's log report. Caregivers' feedback on the app's usefulness and ease of use on a Likert scale, and suggestions for improvements were gathered via an open-ended survey and analysed using content analysis.

Results: A total of 40 informal caregivers were recruited, with one dropout. Of the 39 remaining, 37 (93%) were foreign domestic helpers. The mean age was 38 years (SD = 9.3). The app utilisation rate was 62%. Twelve caregivers (30%) found the RemindMe app extremely useful, and 14 (35%) found it easy to use. All caregivers found the pictorial guide clear and easy to follow. Suggestions included adding educational content on bed exercises, oral suctioning, tracheostomy, catheter care, a larger screen and multilingual support.

Implications: The RemindMe app proved effective for pressure injury prevention, with caregivers finding it useful and accessible. Its success implies potential for broader digital healthcare solutions, particularly among foreign domestic workers. Future enhancements with multilingual support and expanded educational content could transform caregiver support across healthcare settings.

5D-2

Utilising Artificial Intelligence Assisted Image Recognition Technology in Virtual Stoma Care Training

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Background and Objectives: Patients with colorectal cancer, many of whom are older adults, often face challenges in learning stoma care post-operatively. These difficulties can reduce their confidence and independence in self-care, leading to greater reliance on caregivers and healthcare resources. With the ageing population and the growing demand for long-term care, technology-enabled innovations that support patient self-management are needed. This project aimed to evaluate the feasibility and usability of Stoma-I, a smart mirror integrated with a virtual stoma care trainer application that employs artificial intelligence assisted image recognition technology to guide patients step by step through stoma management procedures.

Methods: Stoma-I was co-designed by a multidisciplinary team in collaboration with a technology partner, Blue Mirror. Step-by-step stoma bag change procedures were embedded into the application, and instructions were validated by stoma care specialist nurses. The smart mirror interface enabled patients to view their stoma clearly from a supine position while receiving guidance for subsequent steps. Usability testing was conducted from September to December 2024. The System Usability Scale (SUS), a validated 10-item questionnaire, and open-ended feedback were used to evaluate acceptability among patients and nurses. Descriptive statistics (percentages, frequencies, mean and standard deviation) were used to analyse responses.

Results: To date, ten patients and ten nurses have trialled the prototype. The mean SUS score was 73 (SD = 14), reflecting acceptable usability. Participants reported that the system accurately guided them through each step, was easy to use, and integrated functions effectively. Patients expressed willingness to use Stoma-I to support independent stoma care.

Implications: Stoma-I demonstrates the potential of artificial intelligence enabled technology to improve post-operative self-care training for older adults with stomas. By providing clear, accessible and personalised guidance, such innovations may enhance confidence, reduce caregiver burden, and support ageing in place.

5D-3

An Imputation-Enabled Machine Learning Approach for Fall Risk Assessment of Older Adults in the Community

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Background and Objectives: Falls are a leading cause of injury and reduced quality of life among older adults. Conventional fall risk assessments are either subjective, relying on self-reported questionnaires or resource-intensive, with time consuming functional tests, making it challenging to implement them in community settings. The aim of this study is to predict personalised fall risk using wearables and self-reported information in the presence of missing information using a regression imputation-based machine learning approach.

Methods: Data from the Targeted Assessment and Recruitment of Geriatrics for Effective fall prevention Treatment (TARGET) cohort of 2291 older Singaporeans was used for model development and validation. A total of 317 features were derived from (a) gait data collected using six inertial measurement unit sensors during a five-minute walk, and (b) questionnaires on cognition, physical activity, comorbidities, and quality of life. Artificial masking of features in the dataset was used to simulate missing data. Labels were generated using 1-year follow-up data (callbacks on whether participants have fallen in the last 3 months). Models including K-Nearest Neighbours (KNN), tabular foundation models (TabPFN), eXtreme Gradient Boosting (XGBoost), Random Forests with Multivariate Imputation by Chained Equations (MICE), and Logistic Regression with MICE were evaluated.

Results: KNN, with F1 score of 0.43 (±0.05), sensitivity of 0.78 (±0.09) and specificity of 0.53 (±0.05), outperformed other modelling approaches and the self-reported fall history approach. Increase in masking (ranging from 5%-30% of the dataset) improved the KNN model performance due to regularization and noise reduction through imputation.

Implications: The KNN model with imputation offers a practical solution for large-scale, community-based fall-risk screening with wearables and questionnaires and ensures individuals who may have missed questions or tests are suitably assessed for inclusion in fall prevention efforts.

5D-4

Assessing Reliability & Validity of Computer Vision–Derived Metrics for Senior Baseline Fitness Testing via Digital App

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Background and Objectives: Baseline functional fitness testing is essential for older adults, as results guide personalised exercise programmes to close fitness gaps and promote preventive health. However, conducting such tests in Senior Activity Centres and Nursing Homes is manpower-intensive, requiring trained staff to observe and count repetitions. A digital platform that automates assessment using computer vision (CV) could reduce manpower reliance while enhancing accuracy and consistency. This study evaluated the reliability and validity of CV-derived metrics for five baseline fitness tests integrated into the IntelliCARE mobile application.

Methods: A total of 135 older adults completed five validated tests: 30-Second Sit-to-Stand, 30-Second Arm Curl, Four Square Step Test, Timed Up and Go, and 2-Minute Step-in-Place. Performances were scored by two human raters and the CV-based IntelliCARE system, which applied pose estimation and keypoint detection to track movement patterns, count repetitions, and analyse form. Reliability was assessed using Intraclass Correlation Coefficients (ICCs) and Bland-Altman analysis. Validity was examined through Pearson correlations (convergent validity), regression against Clinical Frailty Scale (CFS) scores (predictive validity), and group comparisons by frailty status (known-groups validity). Usability and feasibility of the app interface were also tested with seniors using industry-standard IT protocols.

Results: ICCs demonstrated excellent reliability for four tests (≥0.90) and good reliability for the Four Square Step Test (0.87). Bland-Altman plots showed minimal systematic bias with narrow limits of agreement. CV scores strongly correlated with human ratings (r =0.89-0.95, p <0.001). Regression analysis revealed significant associations between CV scores and CFS (β =-0.62, p <0.001), while frail participants (CFS≥4) scored significantly lower across all CV-assessed tests (p <0.001). Usability testing confirmed the app was feasible, acceptable, and user-friendly.

Implications: The integration of CV into a digital app enables scalable, reliable, and valid functional fitness assessment for seniors, reducing manpower needs in community care and supporting personalised preventive health interventions.

5E-1

Early Policy Engagement and Preventive Health Uptake: A Regression Discontinuity Evaluation of Singapore's Healthier SG

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Background and Objectives: Singapore's Healthier SG program, launched in 2023, promotes voluntary primary care enrolment and preventive health screenings. Initially targeting adults aged 60 and above, eligibility expanded to those aged 40 and above by January 2024. This study evaluates the causal effect of program enrolment on screening uptake using a regression discontinuity design centred at the age-40 eligibility threshold.

Methods: We applied a fuzzy regression discontinuity design using the age-40 cutoff to estimate local average treatment effects of Healthier SG enrolment on screening behaviour. The analytic sample included 522 adults aged 37 to 42 from the Singapore Population Health Studies surveyed from June 2024 to January 2025. We first estimated age-based eligibility effects on enrolment (first stage) and then used two-stage least squares to assess the impact of enrolment on screening uptake.

Results: Turning 40 increased enrolment probability by 38.6 percentage points ($p<0.001$). In the second stage, enrolment raised screening uptake by 33.5 percentage points (95% CI: 13.9–53.1; $p<0.001$). Reduced-form estimates showed that eligibility increased screening rates by 12.9 percentage points ($p<0.01$). These results indicate that while the policy increased population-level screening modestly, it induced substantial behavioural change among those who enrolled. Results remained robust across model specifications, bandwidths, and covariate adjustments.

Implications: Healthier SG enrolment substantially increases screening uptake among newly eligible adults at age 40. The age-40 threshold represents a critical juncture for health system engagement to improve aging trajectories. These findings offer robust causal evidence for life-course triggers in preventive health policy and highlight the value of early mid-life interventions.

5E-2

The Role of U.S. Value-Based Payment by Medicare Advantage Plans in Annual Wellness Visits and Risk Scores Via EHR

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Background and Objectives: Medicare Advantage (MA) plans represent a major value-based payment reform in the US, designed to improve preventive and coordinated care for older adults through risk-adjusted capitated payments. A key mechanism is the Medicare Annual Wellness Visit (AWV), a free benefit to promote early detection of disease and cognitive impairment. However, AWVs may also be used strategically through the Electronic Health Record (EHR) system to increase coding intensity, inflating risk scores that determine insurer reimbursement. This study evaluates whether MA enrolment is associated with higher AWV utilization compared with Traditional Fee-for-Service Medicare (TM) and whether AWVs reflect improved preventive care or strategic coding via EHR.

Methods: Using 2019 nationally representative Medicare claims data for over 8 million beneficiaries aged 65 and older, we examined the relationship between MA enrolment, AWV uptake, and health risk scores. We applied the Ordinary Least Squares and an instrumental variable approach using county-level MA penetration.

Results: AWV uptake was higher in MA (44.1%) than TM (36.1%). MA increased the likelihood of receiving an AWV by 4.3 percentage points ($p < 0.001$). Subgroup analyses showed higher AWV uptake across all groups ($p<0.001$), with the largest increase among adults aged 85+ (5.6 pp), dual eligibles (11.5 pp), and dementia patients (6.6 pp). Effects varied substantially across insurers. Importantly, MA enrolees with an AWV had higher health risk scores, with the largest increases linked to EHR chart review, which suggests that some MA insurers may strategically use AWVs to intensify coding.

Implications: MA increases uptake of AWVs, supporting preventive care, particularly among vulnerable groups. Yet, insurer-specific risk score inflation underscores the dual role of AWVs as both a preventive tool and strategic coding. Policy reforms should strengthen oversight of EHR chart review and align AWV reimbursement with clinical outcomes, which provide evidence for global value-based payment reforms.

5E-3

Economic Returns of Disability Reduction in Ageing Societies: Evidence from Japan and the Philippines

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Background and Objectives: As populations age globally, the economic implications of non-fatal health conditions become increasingly important for policy planning. While research has established links between mortality improvements and economic growth, the macroeconomic impact of reducing disability burden remains poorly quantified. This study examines how changes in years lived with disability (YLD) contributed to economic growth in Japan and the Philippines, representing different stages of demographic transition, and assesses the vulnerability of these gains to health system shocks.

Methods: We analysed cause-specific and all-cause YLD rates from the 2021 Global Burden of Disease Study for populations aged 15-79 years from 1990 to 2021. Temporal trends across 22 disease categories were isolated using age-period-cohort decomposition. We combined health data with National Transfer Accounts age-specific labour income estimates in an extended growth accounting framework to quantify how morbidity and mortality changes affected labour income per capita through productivity and support ratio channels.

Results: Musculoskeletal and mental disorders dominated disability burden in both countries throughout the study period. Age-adjusted YLD rates declined substantially through 2019, driven by reductions in injuries and communicable diseases, despite increased burden from diabetes, neoplasms, and maternal-neonatal conditions. Declining YLD rates increased labour productivity by 35.1% in the Philippines and 20.1% in Japan since 1990. Despite partial offsetting from reduced support ratios due to population ageing, net health improvements contributed 34.2% and 15.4% increases in labour income per capita, respectively. The COVID-19 pandemic reversed these gains, causing productivity setbacks equivalent to 10-20 years of progress.

Implications: Investments in disability reduction yield substantial economic returns beyond traditional longevity gains, with implications for health policy prioritization in ageing societies. The dramatic pandemic reversals highlight the fragility of health-dependent economic progress and emphasize the need for resilient health systems capable of managing chronic disease burdens and emerging health threats.

5E-4

Cost-Effectiveness of a Community-Based Referral Pathway for Hearing Aid Provision in Older Adults in Singapore

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Background and Objectives: Hearing loss is widespread among Singaporeans over 60 and can lead to social and health problems if untreated. While hearing aids improve quality of life for older adults, many face barriers such as long waits for assessments and fittings, causing some to drop out before receiving help. To address this, the Singapore General Hospital established Community Hearing Clinics (CHC) to make hearing care more accessible and efficient. This study examines whether the CHC referral process is a cost-effective solution, focusing on improvements in waiting times and dropout rates.

Methods: A decision tree model was used to assess the cost-effectiveness of the CHC referral process over five years. Health utilities were discounted at 3% annually, while costs were treated as a one-time expense without discounting. Model parameters were drawn from hospital data and published literature. Deterministic and probabilistic sensitivity analyses (conducted over 1,000 iterations) and value of information analyses, were performed.

Results: Deterministic analysis showed the intervention led to an incremental cost of $1,072 and a gain of 0.140 QALYs, resulting in an ICER of $7,652 per QALY. In probabilistic analysis, the ICER was $5,504, with an incremental cost of $1,105 and a utility gain of 0.201 QALYs. At willingness-to-pay thresholds of $45,000 and $75,000 per QALY, the intervention was deemed cost-effective in 72% of scenarios. The consistency between analyses increases confidence in the results. The population Expected Value of Perfect Information (EVPI) increased substantially with higher willingness-to-pay thresholds, ranging from 55,029 at $0 to over 186 million at $75,000. This indicates that the value of reducing decision uncertainty grows as the stakes of resource allocation rise.

Implications: This early-stage modelling study suggests that the CHC pathway is likely cost-effective compared to the conventional referral pathway. However, substantial EVPI highlights residual uncertainty, supporting the case for further research.

Poster Presentations

Day 1 | Monday, 2 February 2026, 13:45 – 14:45
Location: Foyer

Ageing Policy and Health Economics

Board Number	Title *Presenting Author, Institution, Country*
1	**Beyond Financial Access: Socioeconomic Determinants of Health Engagement in Singapore's Healthier SG** *Seoyeon Ahn, Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore*
2	**Charting Unlinked Data: Understanding Optimal Development and Healthy Ageing Across the Life Course in Pakistan** *Sonia Sameen, Community Health Sciences, Aga Khan University, Pakistan*
3	**Does the Law Sufficiently Protect the Rights of Persons Living with Dementia to Age with Dignity, Purpose and Care?** *Yue-En Chong, Mental Capacity & Family Law, Bethel Chambers LLC, Singapore*

Caregiving and Long-Term Care

Board Number	Title *Presenting Author, Institution, Country*
4	**Building Resilient Long-Term Care Systems in Asia: A Life-Course Approach for an Ageing Future** *Preeti Hemchandra Wasnik, International Longevity Centre - Singapore (ILC-S), Tsao Foundation, Singapore*
5	**Home and Community-Based Services: A Strategy to Decrease Nursing Home Use?** *Suchika Chopra, Economics, Krea University, India*
6	**Optimising End-Of-Life Care: Aligning Care Preferences in Nursing Homes Through Hospital-Community Collaboration** *Cecilia Bishan Fu, Care Coordination, Changi General Hospital (CGH), Singapore*
7	**Analysing the Effects of Integrated Care on Health Outcomes in Elderly Populations: A Comprehensive Review** *Yasmin Sharma, Choithram College of Nursing, India*
8	**Resilience Phenotypes Among Older Caregivers: A Latent Class Analysis of Psychosocial Profiles and Caregiver Burden** *Ruochen Feng, Alice Lee Centre for Nursing Studies (ALCNS), National University of Singapore (NUS), Singapore*
9	**Transitions of Older Adults with Cognitive Impairments to the Institutional Care from the Perspectives of Family Caregiver** *Yiqi Wangliu, School of Ethnology and Sociology, Yunnan University, China*
10	**Factors Associated with Awareness and Utilisation of Respite Care Services Among Older Informal Caregivers in Singapore** *Chong Xian Shirlyn Pang, Strategy, Research and Data Division (SRDD), Agency for Integrated Care (AIC), Singapore*

Board Number	Title
11	**Enhancing Self-Care and Reducing Stress for Caregivers of People Living with Dementia: The Implementation of Aster Guide** *Mohamed Kamil Wardah Hanim, Nursing, Changi General Hospital (CGH), Singapore*
12	**Typologies of Intergenerational and Institutional Support and Healthcare Usage Among Older Adults in China** *Junyou Chen, Department of Social Work and Social Administration (SWSA), The University of Hong Kong (HKU), Hong Kong (SAR) China*
13	**Measuring Successful Dementia Caregiving in China: Development and Validation of a Scale** *Howard Haochu Li, Department of Social Work and Social Administration (SWSA), The University of Hong Kong (HKU), Hong Kong (SAR) China*

Geriatric Care and Health Education

Board Number	Title *Presenting Author, Institution, Country*
14	**Medication Optimisation Service Pilot at SingHealth Polyclinics (SHP)** *Si Han Goh, Pharmacy, SingHealth Polyclinics (SHP), Singapore*
15	**Understanding mHealth User Profiles in Older Adults: Clustering Engagement, Coaching Attendance, and Socio-Demographics** *Ashwini Lawate, Lee Kong Chian School of Medicine (LKCMedicine), Nanyang Technological University (NTU), Singapore*
16	**Empowering Seniors and Caregivers Through Bite-Sized Health Education: A Brochure-Based Approach in Senior Day Care** *Yiting Elhannah Ho, Elderly Care, NTUC Health, Singapore*
17	**A Senior-Friendly Operations Bundle Improves Adherence in Older Adults: Single-Site Experience** *Leona Quek, Clinical Trials and Research Centre (CTRC), Singapore General Hospital (SGH), Singapore*
18	**Diabetes Treatment Cascade Among Older Adults in India: Insights from the NFHS-5, 2019-21** *Sumit Raman, Department of Geography, Banaras Hindu University (BHU), India*
19	**A New Healthy Ageing Score: How Chronic Diseases Influence Outcomes Among Older Adults in India** *Shivani Kumaria, School of Humanities and Social Sciences (SHSS), Indian Institute of Technology Mandi (IIT Mandi), India*
20	**Characteristics and Impacts of Peer Coaching Interventions for Stroke Survivors: A Scoping Review** *Yichao Chen, School of Social Sciences (SSS), Nanyang Technological University (NTU), Singapore*
21	**Unprepared For Ageing: Medical Students' Readiness for Geriatric Care in India** *Hardatt Bhatt, Narendra Modi Medical College, India*
22	**Boosting Confidence in Delirium Management: Outcomes from a Cross-Border Simulation Pilot** *Peiying Audrey Ho, Geriatric Medicine, Changi General Hospital (CGH), Singapore*
23	**Comparing Health, Functional and Psychosocial Outcomes in Older Adults Living in Their Own Homes vs. Public Rental Flats** *Yen Chai Chin, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*

Ageing and Technology

Board Number	Title *Presenting Author, Institution, Country*
24	**Optimising a Bedside Activity Device for Hospitalised Older Adults** *Darshini Devi Rajasegeran, Nursing, Singapore General Hospital (SGH), Singapore*
25	**From Digital Barriers to Bridges: Understanding Older Adults' Acceptance of "Senior Mode" of Mobile Applications** *Jingxing Song, School of Graduate Studies, Lingnan University, Hong Kong (SAR) China*
26	**Effects of Robotic Assisted Gait Rehabilitation: A Pilot Study** *Cherie Ling, Rehabilitation, Ren Ci Hospital, Singapore*
27	**Fall Risk Prediction in Seniors Using Machine Learning on Enhanced Tug with Computer Vision Derived Kinematic Features** *Sonia Lau, Information Systems (IS), Singapore Management University (SMU), Singapore*
28	**Readiness to Use Remote Monitoring Technologies to Detect Frailty in Aging Adults Living in US Urban Neighborhoods** *Hema Ramamurthi, Johns Hopkins University, University of Maryland, Baltimore (UMB), USA*
29	**Designing an Age-Friendly AI Conversational Agent for Older Adults: A Qualitative Analysis of User Feedback** *Fuxi Ouyang, Humanities, Arts, and Social Sciences (HASS), Singapore University of Technology and Design (SUTD), Singapore*

Poster Presentations

Day 2 | Tuesday, 3 February 2026, 13:00 – 14:00
Location: Foyer

Social Connectedness, Inclusion and Engagement

Board Number	Title *Presenting Author, Institution, Country*
1	**Harmony in Motion: Building Inclusive Communities for Active Ageing via Programmes Led by Media & Sports Personalities** *Aaron Chen Angus, School of Sports and Health (SSH), Republic Polytechnic (RP), Singapore*
2	**Wellbeing Coordinators Reducing Healthcare Utilisation by Seniors Through Engagement and Empowerment in the Community** *Pearline Lee, SingHealth Office of Regional Health (SORH), SingHealth, Singapore*
3	**Towards Liberated Aging: Review of Gender Affirmation Among Transgender and Gender Diverse People in Mid- and Late Life.** *Chenxi Yang, Department of Social Work and Social Administration (SWSA), The University of Hong Kong (HKU), Hong Kong (SAR) China*
4	**Effects of Hearing Loss on Social Connectedness, Mental- And Cognitive-Health Amongst Older-Adults: A Mediation-Analysis** *Ze Ling Nai, Geriatric Education & Research Institute (GERI), Singapore*
5	**Social Participation and Cognitive Function in Chinese Older Couples: Urban-Rural Variations in Partner Effects** *Anqi Chen, Sociology, Nanyang Technological University (NTU), Singapore*
6	**Multidimensional Well-Being Among Left-Behind and Non-Left-Behind Elderly in India** *Vandita Ranjan, The International Institute for Population Sciences (IIPS), India*
7	**Offering Choices for Participation: Qualitative Methodological Considerations with Socially Isolated Older Adults.** *Zoe Zon Be Lim, Geriatric Education & Research Institute (GERI), Singapore*

Cognition and Dementia

Board Number	Title *Presenting Author, Institution, Country*
8	**Transcranial Direct Current Stimulation Over the Orbitofrontal Cortex Improves Risky Decision-Making in Aging** *Ping Ren, Geriatric Psychiatry, Shenzhen Mental Health Center, China*
9	**Preliminary Findings of a Gamified Language Learning for Cognitive Improvements in Older Adults** *Kimberly M W Y Tang, Ageing Research Institute for Society and Education (ARISE), Nanyang Technological University (NTU), Singapore*

Board Number	Title *Presenting Author, Institution, Country*
10	**Community-Based Interventions for Cognitive Health in Older Adults: A Scoping Review of Effectiveness and Implementation** *Yichi Zhang, Centre for Population Health Research and Implementation (CPHRI), SingHealth, Singapore*
11	**Application of Eye-Tracking in Outcome Measure Development for Older People with Cognitive Impairment: A Scoping Review** *Thiviyah Raman, College of Nursing and Health Sciences, Flinders University, Australia*
12	**Association Between Dementia and Multimorbidity Among the Older Adults in India: Findings from Propensity Score Matching** *Ananya Kundu, Department of Geography, University of Calcutta, India*
13	**Multilingualism and Neurodegeneration: Investigating the Dose-Effect Relationship in a Singaporean Cohort** *Elaine Teo, Duke-NUS Medical School, Singapore*

Frailty and Intrinsic Capacity

Board Number	Title *Presenting Author, Institution, Country*
14	**The Influence of Frailty: How the Associations Between Modifiable Risk Factors and Dementia Vary?** *Chenkai Wu, Global Health Research Center (GHRC), Duke Kunshan University (DKU), China*
15	**Implementation of One-Repetition Maximum (1RM) Assessment for Exercise Prescription in Community Hospital Rehabilitation** *Lucille Basilio Satorre, Rehabilitation Centre, Outram Community Hospital (OCH), Singapore*
16	**Evaluating the Implementation Quality of Implementation Strategies for a Pilot Nurse-Led Frailty Management Programme** *Jia Ying Tang, Geriatric Education & Research Institute (GERI), Singapore*
17	**Intrinsic Capacity Promotion in Primary Care for the Frail (IMPACTFrail) Pilot in Polyclinics: Challenges and Enablers** *Jonathan Gao, Geriatric Education & Research Institute (GERI), Singapore*
18	**Co-Development of a Novel Healthcare Programme in Primary Care in Singapore to Manage Early Functional Decline** *Jonathan Gao, Geriatric Education & Research Institute (GERI), Singapore*
19	**Two Sides of Healthy Ageing: Intrinsic Capacity and Frailty Among Elderly in India** *Shivang Sharma, School of Health Systems Studies (SHSS), Tata Institute of Social Sciences (TISS), India*
20	**Changes in Intrinsic Capacity and Risk of Disability and Cardiovascular Disease in China and Mexico: Two Cohort Studies** *Hanting Zhang, Global Health Research Center (GHRC), Duke Kunshan University (DKU), China*

Mental Health

Board Number	Title *Presenting Author, Institution, Country*
21	**Emergency Mental Health Protocols for Elders in Long-Term Care: A Qualitative Policy and Implementation Analysis** *Aparna Raghavan, Inclusive Learning Support (ILS), Krea University, India*
22	**Financial Burden of Late-Life Depression in India: Insights from LASI Wave-1 (2017-18)** *Deepak Kumar, National Institute for Research in Digital Health and Data Science (NIRDHDS), Indian Council of Medical Research (ICMR), India*
23	**Functional Ability and Mental Wellbeing: Relationship Between ADL and Depression Among Older Adults Across Countries** *Mohammad Hammad, Department of Biochemistry, Manipal Tata Medical College (MTMC), India*
24	**The Impact of Loneliness on Sleep Disturbances in Middle-Aged and Older Adults: Findings from Longitudinal Ageing Study** *Utkarsh Shah, Community Medicine (MD), Parul Institute of Medical Sciences & Research (PIMSR), India*

Productive Ageing

Board Number	Title *Presenting Author, Institution, Country*
25	**Labour Market Outcomes of Older Adults with Hearing and Communication Disabilities in Indonesia** *Evi Nurvidya Arifin, Centre for Advanced Research (CARe), Universiti Brunei Darussalam (UBD), Brunei Darussalam*
26	**Understanding Factors Influencing Retirement Preferences Among Mature Radiation Therapists; A Mixed-Method Study** *Si Qi Evangeline Ho, Division of Radiation Oncology (DRO), National Cancer Centre Singapore (NCCS), Singapore*
27	**Deer Dialect: Promoting Chinese Dialect Heritage and Intergenerational Bonding Through a Volunteer-Powered Learning App** *Kah Howe Seah, Grow Education, Singapore*
28	**Ageing and Technology: Challenges Faced by the Aged Smallholder Farmers in Albania** *Merita Meçe, Independent Researcher, Albania*
29	**Intrinsic Capacity, Human Capital, and Productive Ageing in India** *Y Selvamani, School of Public Health, SRM Institute of Science and Technology (SRMIST), India*

1

Beyond Financial Access: Socioeconomic Determinants of Health Engagement in Singapore's Healthier SG

Seoyeon Ahn[1], Alec Morton[1], Zhi Zhen Lim[1], Shumian Yeo[1], Cynthia Chen[1], Linda Wei Lin Tan[1], Xueling Sim[1], Ian Yi Han Ang[1]

[1]Saw Swee Hock School of Public Health (SSHSPH), National University of Singapore (NUS), Singapore

Background and Objectives: Singapore's Healthier SG, launched in 2023, promotes voluntary primary care enrollment and participation in recommended screenings and vaccinations. Initially targeting adults aged sixty years and above, eligibility expanded to those aged forty years and above by 2025. This study examines how socioeconomic factors influence participation across engagement stages.

Methods: We analyzed Singapore Population Health Studies data of adults aged forty years and above (N=3,801) using multinomial logistic regression. Four Healthier SG engagement stages were examined: (1) unaware and unenrolled (reference), (2) aware but unenrolled, (3) enrolled but unscreened, and (4) enrolled and screened.

Results: Older adults aged sixty years and above, those with more chronic conditions, and never-married individuals showed higher engagement rates. Compared to Chinese participants, Indians showed lower screening completion rates. Notable socioeconomic differences emerged: university education, homeownership, and non-labor force status significantly predicted being enrolled and screened. Marginal effects analysis revealed distinct age-related patterns—being enrolled and screened increased from 10.5% in the 40-49 age group to peak at 25.6% in the 60-69 age group, while program unawareness decreased sharply with age (59% to 45.7% respectively).

Implications: Despite Singapore's comprehensive preventive healthcare framework, engagement gaps persist across educational, housing, employment, ethnic, and age-related factors. This demonstrates that removing financial barriers alone is insufficient for achieving universal health access. Results underscore the need for targeted interventions addressing age, socioeconomic, and ethnic disparities through differentiated outreach, flexible implementation strategies, and culturally responsive approaches. This research provides actionable insights for designing inclusive health service delivery in diverse aging societies.

2

Charting Unlinked Data: Understanding Optimal Development and Healthy Ageing Across the Life Course in Pakistan

Sonia Sameen[1], Tahani Zaidi[1], Bilal Ahmed Usmani[1]

[1]Community Health Sciences, Aga Khan University, Pakistan

Background and Objectives: Pakistan's ageing demographics and evolving health challenges demand a clearer understanding of its fragmented and unevenly distributed data ecosystem. Key gaps include the absence of longitudinal data, limited research on climate–health links, and underrepresentation of adolescents and older adults. This case study reviewed national data sources and literature to identify strengths, gaps, and opportunities for improving evidence on health and ageing across the life course in Pakistan.

Methods: This case study profiled Pakistan's health data ecosystem across four key life stages: children, adolescents, adults, and older adults. A desk review of national surveys, grey and peer-reviewed literature from 2000–2024 was conducted. Key data sources included the Pakistan Demographic and Health Survey (PDHS), Multiple Indicator Cluster Surveys (MICS), Pakistan Social and Living Standards Measurement Survey (PSLM), and relevant epidemiological studies. Sources were screened for relevance to demographic, health, and social indicators. Data were synthesised thematically using a life-course framework to identify evidence strengths and gaps.

Results: The review highlighted strong coverage of maternal and child health, including fertility, survival, and nutrition outcomes, reflecting national survey priorities. However, major gaps emerged. Limited longitudinal data tracks health across life stages. Mental health, disability trajectories, and environmental influences remain poorly captured. Adolescents and older adults were consistently underrepresented in surveys and publications, creating blind spots in the evidence base. These limitations restrict opportunities for life-course analysis and hinder the design of targeted interventions to promote resilience and healthy ageing.

Implications: Pakistan's demographic transition requires stronger, integrated life-course data systems. Expanding surveillance to include adolescents, older adults, and neglected domains such as mental health, disability, and environmental factors is essential for policy and program development. Linking early-life and youth investments with adult and older-age outcomes can guide preventive interventions to promote resilience, wellbeing, and healthy ageing across generations.

3

Does the Law Sufficiently Protect the Rights of Persons Living with Dementia to Age with Dignity, Purpose and Care?

Yue-En Chong[1]

[1]*Mental Capacity & Family Law, Bethel Chambers LLC, Singapore*

Background and Objectives: How does our existing legal framework safeguard the rights of persons, particularly those living with dementia? What preventive and interventionist mechanisms exist to safeguard an individual's wishes, feelings, beliefs, and values, ensuring they can age with dignity, purpose, and care, particularly in the context of familial conflict among caregivers and significant others?

Methods: A comprehensive examination was conducted on the current legislation in Singapore on individuals with dementia, encompassing the Mental Capacity Act 2008, the Vulnerable Adults Act 2018, as well as international legal frameworks such as the UNCRPD and the Yokohama Declaration. Local and international case law from England, Australia, and Canada was then analysed to assess the degree to which the wants, feelings, beliefs, and values of those living with dementia were prioritized by the courts in their rulings.

Results: The findings suggest that the legal system includes sufficient provisions for considering a person's wishes and feelings through preventive measures, even in cases of diminished mental capacity. Various documents are available, such as the Advance Care Plan and Lasting Power of Attorney, for comprehensive planning. Alternative dispute resolution procedures, such as elder mediation, help amplify the voice of individuals living with dementia to the greatest extent feasible. In the realm of interventionist mechanisms, particularly in the absence of pre-planning, the preferences and emotions of individuals with dementia are often inadequately regarded.

Implications: Individuals and caregivers need to be knowledgeable about the many legal frameworks available and how they can be utilized to develop a comprehensive plan that aligns their beliefs and values with those of caregivers who provide them care. Further research is necessary to investigate the cultural, social, and institutional impediments in Singapore that must be addressed to facilitate healthy aging within clearly defined legal perimeters.

4

Building Resilient Long-Term Care Systems in Asia: A Life-Course Approach for an Ageing Future

Preeti Hemchandra Wasnik[1], Susana Harding[1], Paul Ong[2], Amrita Kansal[3], Prakash Tyagi[4]
[1]*International Longevity Centre - Singapore (ILC-S), Tsao Foundation, Singapore, [2]Tsao Foundation, Singapore, [3]WHO South-East Asia Regional Office (SEARO), World Health Organization (WHO), India, [4]Gramin Vikas Vigyan Samiti (GRAVIS), India*

Background and Objectives: The Southeast Asia Region is ageing rapidly, with older adults expected to constitute over 20% of the population by 2050. While this demographic transition signals progress, it also presents profound challenges to health and social systems. The objective of this study was to examine the current landscape of long-term care (LTC) across the WHO SEAR, identify systemic gaps, and propose a progressive, life-course-based framework to support healthy ageing and functional ability.

Methods: Supported by WHO SEAR, the Tsao Foundation conducted a review of 97 peer-reviewed studies, regional policy analyses, and case studies from India, Sri Lanka, and Thailand. Using WHO frameworks, the study assessed LTC systems across governance, financing, services, and workforce, emphasising prevention and intergenerational solidarity as guiding principles for reform.

Results: Findings revealed significant fragmentation across LTC systems, with over-reliance on informal caregiving, underinvestment in community-based services, and weak integration between health and social care. Nonetheless, promising models such as Thailand's Community Integrated Intermediary Care and India's evolving policy commitments offer a foundation for innovation. A six-step roadmap was developed, emphasizing early definition, resource mapping, integration, stakeholder mobilization, and phase-wise implementation anchored in universal health coverage.

Implications: Transforming LTC in the region requires shifting from reactive, disease-focused models to proactive, person-centred systems that prioritise autonomy, quality of life, and prevention. Policymakers must act now to design inclusive, culturally grounded strategies that span the entire life course, recognising that today's children are tomorrow's older adults. Building equitable LTC is not only a matter of elder care, it is a long-term investment in societal resilience and intergenerational justice.

5

Home and Community-Based Services: A Strategy to Decrease Nursing Home Use?

Suchika Chopra[1]
[1]*Economics, Krea University, India*

Background and Objectives: The United States has experienced a significant reduction in the number of certified nursing homes since 2015, raising concerns about meeting the care needs of an aging population. Concurrently, there has been an emphasis on expanding home- and community-based services (HCBS), as many individuals prefer to age in place rather than move into institutional settings. States have prioritized HCBS, with Medicaid spending on these services surpassing institutional care since 2013. However, a critical question remains: does increasing the supply of HCBS providers and workforce reduce nursing home use? Existing literature offers mixed evidence on whether HCBS substitutes for nursing homes. Most studies focus on Medicaid HCBS expenditures, but spending does not always translate into increased service supply. This study instead examines whether growth in HCBS supply—measured by providers and workforce—affects nursing home utilization patterns.

Methods: To conduct this analysis, I use data from the County Business Patterns (CBP) and LTCFocus datasets, leveraging county-level variation in HCBS supply and nursing home utilization. The study documents substantial variation in the availability of formal care—some counties serve as care hubs, while others experience significant shortages. Using a two-way fixed effects (TWFE) regression model, I examine the relationship between HCBS supply and nursing home outcomes.

Results: The results indicate that increases in the number of per capita HCBS establishments are associated with both a rise in the number of per capita nursing home facilities and a reduction in average occupancy rates. Similarly, higher per capita HCBS employment levels are linked to lower nursing home occupancy rates. The analysis also explores potential heterogeneous effects by examining expansions and contractions in HCBS establishments across different county types, particularly distinguishing between rural and urban areas.

Implications: The findings will have important policy implications for structuring support for HCBS expansion and addressing unmet care needs in U.S.

6

Optimising End-Of-Life Care: Aligning Care Preferences in Nursing Homes Through Hospital-Community Collaboration

Cecilia Bishan Fu[1], Tingting Yang[2], Christopher Tsung Chien Lien[3], Leng Geok Lim[1], Caymania Lay Teng Low[4], Gek Kheng Png[5], Poh Choo Tan[5], Winnie Yi Ling Soo[5], Yoke Ping Wong[6], Karen Poh[1]

[1]Care Coordination, Changi General Hospital (CGH), Singapore, [2]Community Nursing, Changi General Hospital (CGH), Singapore, [3]Geriatric Medicine, Changi General Hospital (CGH), Singapore, [4]Orange Valley Nursing Home (Simei), Orange Valley, Singapore, [5]Department of Nursing Administration, Changi General Hospital (CGH), Singapore, [6]Specialty Nursing, Changi General Hospital (CGH), Singapore

Background and Objectives: Changi General Hospital partnered with Orange Valley Nursing Home (OVNH) - Simei to address increasing demands of end-of-life (EOL) care in nursing homes (NHs) through two key teams: Patient Navigator Nursing Home Point of Contact (PN-NH-POC) and EAGLECare (Enhancing Advance Care Planning, Geriatric Care and End of Life Care in the Nursing Home in the East). This integrated approach bridges acute and long-term care sectors, enhancing residents' quality of life while optimizing healthcare resources. The initiative aimed to develop an integrated hospital-nursing home collaboration framework that enhances EOL care quality through personalized care planning, reduces unplanned hospital admissions by 50%, strengthens NH staff capabilities, and honors residents' preferred place of care (PPOC) and preferred place of death (PPOD).

Methods: Implementation occurred over nine months (March-December 2024), utilizing a modified version of the Supportive and Palliative Care Indicators Tool and Gold Standard Framework for resident assessment.

Results: Among OVNH-Simei's 224 residents, 40 cases (17.9%) were identified, with 29 (12.9%) successfully enrolled in the programme. Results demonstrated significant achievements with 96.5% PPOC compliance (28/29) and 100% PPOD compliance (29/29). The initiative prevented hospital readmissions in 86.2% of cases (25/29), resulting in cost savings of $136,755 based on average ward charges and length of stay. This collaborative model transformed EOL care delivery through enhanced staff capabilities and strengthened inter-professional collaboration.

Implications: The successful outcomes in care quality improvement and hospital admission reduction suggest potential for wider implementation across NHs, advancing elderly care towards a more efficient, compassionate, and sustainable future.

7

Analysing the Effects of Integrated Care on Health Outcomes in Elderly Populations: A Comprehensive Review

Yasmin Sharma[1], Mamta Chauhan[2], Piyusha Majumdar[3]

[1]Choithram College of Nursing, India, [2]Center for Behavioral Sciences (CBS), Indian Institute of Health Management Research (IIHMR), India, [3]Indian Institute of Health Management Research (IIHMR), India

Background and Objectives: The rapid growth of the ageing population poses complex healthcare and social challenges. By 2050, older persons will constitute nearly 19% of India's population, underscoring the need for innovative service models. Integrated care, defined as coordinated services delivered across healthcare providers, settings, and systems, is increasingly advocated as a strategy to enhance health outcomes in elderly populations. This review aimed to assess the overall effectiveness of integrated care interventions in improving physical, mental, and social well-being among older adults.

Methods: A systematic review of English-language literature published between 2014 and 2024 was undertaken using MEDLINE, EMBASE, PubMed Core Collection, and the Cochrane Library. Inclusion criteria specified studies involving participants aged 60 years or older, interventions based on integrated care, and reported outcomes relevant to elderly health. Eleven studies were included, encompassing randomized controlled trials, quasi-experimental designs, and cohort studies. Risk of bias was evaluated using ROB2 and ROBINS-I, and findings were synthesized narratively.

Results: The review identified heterogeneous effects of integrated care. Several studies demonstrated significant reductions in hospital re-admissions and frailty, indicating benefits for acute care management and physical resilience. Improvements in self-management and satisfaction were noted in selected models, while activities of daily living and quality of life outcomes remained inconclusive. Depression outcomes were inconsistently reported, with limited evidence of improvement. Variability in interventions, populations, and outcome measures restricted comparability across studies.

Implications: Integrated care holds promise in reducing hospitalization and enhancing aspects of resilience in older adults. However, the mixed results highlight the need for standardized outcome measures, detailed reporting of intervention components, and long-term evaluation. Findings offer guidance for policymakers and practitioners to design integrated care models tailored to the complex health and social needs of ageing populations.

8

Resilience Phenotypes Among Older Caregivers: A Latent Class Analysis of Psychosocial Profiles and Caregiver Burden

Ruochen Feng[1], Vivien Xi Wu[1], Piyanee Yobas[1], Chong Chee Ng[2]

[1]*Alice Lee Centre for Nursing Studies (ALCNS), National University of Singapore (NUS), Singapore, [2]Counselling Capabilities Development, Lions Befrienders (LB), Singapore*

Background and Objectives: Singapore's rapidly ageing population has resulted in many older adults assuming informal caregiving roles despite their own age-related frailty. Heavy caregiving responsibilities may hinder them from ageing healthily in the community, yet the unique experiences of older caregivers remain poorly understood. Psychological resilience is a well-recognized mediator of caregiver well-being, but little is known about how resilience manifests in this group. This study aimed to identify distinct resilience-related phenotypes among older caregivers in Singapore and examine their association with resilience levels.

Methods: We conducted a latent class analysis on cross-sectional data from 142 caregivers aged 60–85 years. Spearman correlations were examined, and five indicators with weak correlations ($r < 0.30$) were included: family support, social isolation, caregiver burden, stress, and intrinsic capacity. Competing two- to five-class models were compared using information criteria and fit indices. Logistic regression was then performed to examine the association between class membership and resilience, defined by the Brief Resilience Coping Scale.

Results: A three-class model provided the best fit: "Well-supported but burdened" (16.2%), was characterized by strong family support, high intrinsic capacity, and low stress, but high caregiving burden; "Balanced" (12.0%), reflected moderate levels across all indicators with low burden; "Vulnerable yet resilient" (71.8%), comprised caregivers with poor support, high stress, and high social isolation. Compared with the Balanced class, the Vulnerable yet resilient class had higher odds of better resilience (OR = 3.12, p = 0.06), while the Well-supported but burdened class showed lower resilience (OR = 0.45, p = 0.24), though neither reached statistical significance. These findings suggest that caregiving burden may erode resilience even among those with supportive profiles, while adversity may stimulate resilience-building in vulnerable caregivers aligning with resilience theories.

Implications: The results highlight the need of reducing caregiving burden and more in-depth research into the mechanisms that foster resilience in older caregivers.

9

Transitions of Older Adults with Cognitive Impairments to the Institutional Care from the Perspectives of Family Caregiver

Yiqi Wangliu[1], Chi-Ho Chan[2]

[1]*School of Ethnology and Sociology, Yunnan University, China, [2]Department of Social Work, Education & Community Wellbeing, Northumbria University, England*

Background and Objectives: This study investigated the transition of cognitively impaired older adults into institutional care, focusing on the experiences and decision-making processes of family caregivers and facility administrators.

Methods: Using a qualitative approach, data were collected from 15 family caregivers who had recently sent their loved ones to care facilities and 5 administrators. Deductive content analysis was applied to understand four types of long-term care admission experiences based on Nolan and Dellasega's model.

Results: Care challenges, such as cognitive impairment, refusal of care, limited training, and caregivers' own health issues, led to the decision to move older adults to institutional care. Families and administrators engaged in constructive dialogue to address caregiving needs and resources. Establishing a harmonious relationship before the transition helped minimize resistance. Families typically chose facilities based on proximity and care quality. Post-relocation collaboration between families and administrators was essential for facilitating older adults' adjustment to their new environment.

Implications: The study highlights the importance of providing guidance to caregivers during the transition and customizing interventions to meet their individual needs.

10

Factors Associated with Awareness and Utilisation of Respite Care Services Among Older Informal Caregivers in Singapore

Chong Xian Shirlyn Pang[1], Li Wei Ang[1], Wan Chen Graham[1]
[1]*Strategy, Research and Data Division (SRDD), Agency for Integrated Care (AIC), Singapore*

Background and Objectives: Caregiving can be a fulfilling experience, but it often places physical and emotional demands on caregivers. Formal respite care is primarily used when usual care arrangements are disrupted. This study examined the level of awareness of formal respite care services among older informal caregivers in Singapore and identified factors associated with this awareness and utilisation.

Methods: We utilised data from Wave 112 of the Singapore Life Panel, an internet-based panel survey of older Singapore residents and their spouses conducted in November 2024. Our analyses focused on responses from 1,041 panelists aged 48 to 79 years who reported providing care to a relative or friend due to the recipients' physical or mental health conditions. Multivariable logistic regression was used to elucidate socio-demographic, health, and caregiving-related factors associated with awareness and service utilisation.

Results: About half of the caregivers were aware of respite care services. Among those aware, 17.4% indicated that they had used these services at some point. Awareness was significantly associated with providing care to two or more persons, caring for someone with dementia, and having someone to confide in or discuss their personal issues with at least some of the time. Service utilisation was significantly associated with being male and feeling depressed at least "a good bit of the time".

Implications: We found that some caregivers do not use respite care services despite knowing that they are available. This highlights the need for caregivers to recognise the value of taking breaks for their own mental health. In addition to lowering barriers to respite care service utilisation, more work could be done to reframe respite as an integral part of self-care and a sustainable caregiving journey.

11

Enhancing Self-Care and Reducing Stress for Caregivers of People Living with Dementia: The Implementation of Aster Guide

Mohamed Kamil Wardah Hanim[1], Faizurah Mohd Jambari[1], Nurazlina Tugi[1], Lee Ann Tng[1], Jing Cheng[1], Fuyin Li[1], Chi Ng Chia[1], Huiru Lim[1], Yi Ling Winnie Soo[1], Frank Miranda[2]
[1]*Nursing, Changi General Hospital (CGH), Singapore,* [2]*Caregiver Support & Education (CSE), Mindfull Community, Singapore and Data Division (SRDD), Agency for Integrated Care (AIC), Singapore*

Background and Objectives: Singapore anticipates over 152,000 people living with dementia by 2030, creating significant challenges for caregivers. Data shows approximately 1 in 11 individuals aged 60 and above lives with dementia, rising dramatically to 1 in 2 people aged 85 and above. As Singapore transitions to "super-aged" status by 2026, the growing prevalence of dementia places mounting pressures on caregivers, with more than 7 in 10 caregivers (74%) expressing feeling overwhelmed by their responsibilities. This highlights the need for caregiver support interventions. This project aimed to reduce reported stress levels by 10% and increase self-reported time for self-care by 10% within three weeks among caregivers from Changi General Hospital Memory Clinic and Mindfull Community.

Methods: The project used cause-and-effect analysis to identify root causes of caregiver stress and self-care deficit. A driver diagram guided intervention development, focusing on emotional support and education. The Advocating Self-care Through Empowerment & Resources (ASTER) Guide was developed and implemented using Plan-Do-Study-Act cycles. Thirty-two caregivers participated in the improvement project. Outcomes were measured using the Zarit Burden (ZB) scale and self-reported time for self-care.

Results: Following ASTER Guide implementation, mean ZB scores decreased from 8.84 to 7.96, representing an 11% reduction in reported stress levels. The percentage of caregivers experiencing high care burden (ZB ≥ 8) decreased from 69% to 58%. The proportion of caregivers reporting ability to find time for self-care increased from 75% to 87%, a 12% improvement. All participants expressed satisfaction and would recommend it to others. The ASTER Guide demonstrated effectiveness in reducing caregiver stress and improving self-care practices, exceeding initial targets.

Implications: The unanimous positive feedback suggests potential for wider implementation across healthcare providers and community partners. This intervention addresses a critical gap in caregiver support and could contribute to a more sustainable healthcare system in Singapore through enhanced caregiver resilience and improved care quality.

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Typologies of Intergenerational and Institutional Support and Healthcare Usage Among Older Adults in China

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Background and Objectives: Intergenerational support and institutional support are two major factors influencing older adults' healthcare utilization. While previous studies have examined the intergenerational support and institutional support separately, limited research has investigated their configuration patterns. This study examines distinct patterns of dual support systems—intergenerational support (economic, instrumental, associational, and emotional support) and institutional support (social health insurance and pension)—and their associations with healthcare utilization among Chinese older adults.

Methods: Using data from the 2020 China Family Panel Studies (CFPS), we conducted latent profile analysis to identify typologies of support patterns among older adults, followed by logistic regression analyses to examine associations with healthcare utilization outcomes.

Results: Three distinct support typologies were identified: resource-advantaged (36.0%), family care-oriented (35.6%), and dual-disadvantaged (28.4%). For healthcare utilization when ill, dual-disadvantaged older adults were significantly more likely to forgo care compared to family care-oriented groups, while resource-advantaged adults showed no significant difference. For facility choice, resource-advantaged older adults were more likely to utilize hospitals, while dual-disadvantaged groups predominantly used primary care facilities.

Implications: This study demonstrates complementarity between intergenerational and institutional support in facilitating older adults' healthcare seeking behavior. The dual disadvantage creates significant barriers to healthcare access. These findings confirmed the critical importance of family caregiving and suggest that institutional reforms should increase the welfare benefits for those with limited family support.

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Measuring Successful Dementia Caregiving in China: Development and Validation of a Scale

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Background and Objectives: Existing measures of dementia caregiving often focus on burden or isolated positive aspects, overlooking holistic, adaptive processes. Building on a prior Delphi-derived construct of "successful caregiving" encompassing person-environment fit, role competency and harmony, and self-identity resilience, this study aimed to develop and validate the Successful Caregiving Scale (SCS) for family caregivers of people with dementia (PwD) in China.

Methods: A two-phase psychometric validation was conducted. The pilot phase (N=212 caregivers) used exploratory structural equation modeling (ESEM) to refine 21 items to 18 via parallel analysis and item reduction criteria. The main phase (N=300 caregivers) evaluated the refined scale through confirmatory factor analysis (CFA), internal consistency (McDonald's ω), test-retest reliability, convergent validity (e.g., Multidimensional Scale of Perceived Social Support, social media use, and Guangxi network), known-group validity (financial satisfaction), and associations with health-related quality of life (EQ-5D) via regressions. Mplus and SPSS were used for data analyses.

Results: ESEM and CFA confirmed a three-factor structure (Resource Utilization and Support Seeking, Patient-Centered Caregiving Competence, Caregiver Self-Care and Adaptive Well-Being) with good fit (RMSEA=0.065, CFI=0.967, TLI = 0.962; SRMR = 0.045). Reliability was strong (ω=0.83–0.95 total=0.95). Correlations with related constructs ranged from r = 0.367 to 0.537, supporting convergent validity. Higher SCS scores predicted better EQ-5D (B=0.004, p<0.001).

Implications: The SCS is a reliable, valid tool for assessing successful caregiving, pinpointing actionable targets across resource utilization, patient-centered competence, and caregiver self-care. Clinically and in community services, it can be used to screen needs, tailor and monitor interventions, and evaluate program outcomes; its association with EQ-5D suggests utility for predicting caregiver well-being and care sustainability. Implementation could inform targeted resource allocation within dementia care pathways. Future work should establish responsiveness and minimal clinically important change, develop norms and brief/digital versions, and test cross-cultural and longitudinal validity.

14

Medication Optimisation Service Pilot at SingHealth Polyclinics (SHP)

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Background and Objectives: Falls need to be prevented in frail elderly patients as it can lead to significant morbidity and mortality. While falls can result from many factors, medication use is one of the most modifiable risk factors. High-risk medication classes e.g. psychotropic drugs and drugs that can cause orthostatic hypotension or hypoglycaemia may lead to dizziness or sedation, increasing falls risk. The objective of this pilot is to evaluate the implementation and effectiveness of a Medication Optimization Service (MOS) to complement existing falls and frailty management services at SHP's Geriatric Service Hub (GSH).

Methods: The MOS comprises of medication reconciliation, medication review and through shared decision-making, reducing unnecessary medications and simplifying patient's medication regimen. Phase 1 of the pilot offered MOS to all new GSH patients. As Phase 1 data showed patients who obtained the most benefit from MOS were those taking $\geq$ 5 medications, the team decided to target patients on $\geq$ 5 medications in the ongoing phase 2 pilot.

Results: In Phase 1 (n=48), drug-related problems were identified in approximately half of the patients, the most common issue being medication non-adherence. Twenty-five interventions were performed, leading to prescription changes for 16 patients, including renal dose adjustments and stopping unnecessary supplements, laxatives, and sleeping aids. Overall, patients were appreciative of the MOS. Doctors appreciated the time and effort saved during consultation and the pharmacists' role in enhancing safe medication use. Learning points included the importance of co-locating the pharmacist, doctor and nurse for patients' seamless journey and the need for regular multi-disciplinary team meetings to discuss issues that may not be addressed on the day of patient's visit.

Implications: The MOS demonstrated effectiveness in identifying and addressing medication-related issues in frail elderly patients. The service shows promise for expansion to other clinics, with improvements suggested through integrated care delivery and regular multi-disciplinary collaboration.

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Understanding mHealth User Profiles in Older Adults: Clustering Engagement, Coaching Attendance, and Socio-Demographics

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Background and Objectives: mHealth interventions with human support can significantly improve user engagement and health outcomes. However, user behaviour in such interventions is often heterogeneous, especially among the ageing population who may face unique barriers to using technology. This study aims to identify user profiles in a human-coach-supported mHealth intervention, informing strategies for enhancing user retention and personalization.

Methods: Data from participants with complete records in an ongoing multicentre RCT of a coach-supported mHealth intervention for hyperlipidaemia were analysed. Variables included health coaching (HC) attendance rate, average HC session length, and app engagement metrics based on the FITT framework: logins (Frequency), features accessed (Intensity), and total time (Time). Weekly action scores (max 15) were determined based on daily medication logging (7), daily food logging (7), and viewing at least one educational module (1). Socio-demographics, including age, gender, ethnicity, education, and income, were also considered. Participants were grouped using k-means clustering (k = 4, determined by the elbow method).

Results: Among 61 participants included (62% [n=38] male, 66% [n=40] Chinese, median age=61 [IQR:57–65]), the majority were in the older adult age range. Four clusters were identified: (1) High attendance & engagement(n=12): (92%[n=11]) attended all sessions; median WS was 7.01(IQR:4.46–10.52), significantly higher than the overall median=0.1(IQR:0–3.63); (2) Moderate attendance & engagement(n=15): 87% had a monthly income below SGD 4,000, and an equal proportion (87% [n=13]) were female; (3) High attendance & low engagement(n=22): group had higher education levels (Polytechnic Diploma-Bachelor's Degree) and income, with only 27% of participants earning below SGD 4,000 monthly; (4) Low attendance & engagement(n=12): (92%[n=11]) were male with minimal activity across all metrics.

Implications: Distinct clusters showed varying app engagement and HC attendance, from highly engaged to largely disengaged. These insights underscore the need for tailored strategies to improve retention and personalize support within mHealth interventions.

16

Empowering Seniors and Caregivers Through Bite-Sized Health Education: A Brochure-Based Approach in Senior Day Care

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Background and Objectives: Health education is an essential part in promoting healthy ageing, yet traditional methods may not be effective for our seniors who face challenges such as cognitive decline, sensory impairments, and language barriers. In our centres, health education was traditionally done via presentation slides resulting in low engagement and retention from the clients. To address this, we implemented a one-paged-brochure approach to deliver precise health information where it can be easily reiterated back home by their caregivers as well.

Methods: Brochures were designed around specific health topics relevant to our seniors (e.g. "foot care", "safe ambulation", "medication compliance and safety", etc.) featuring simplified text and visual aids for easy understanding. Each topic was conducted by the community nurse within the centres, facilitated by care staff who guided discussions. Soft copies of the brochures were disseminated to the client's families and caregivers for them to reinforce what has been taught. Feedback was gathered via a survey form after the session was conducted.

Results: On a scale of 1 (very dissatisfied) to 5 (very satisfied), 72% of clients who were surveyed from March - August 2025 rated the sessions 5, while 24% rated 4 with suggestions for improvement. They have expressed satisfaction with the format, verbalising ease of understanding and appreciation of visual cues. The brochures fostered greater participation during the sessions where seniors were given a chance to express their opinions and suggestions for future topics that they would like to learn more about.

Implications: This initiative has demonstrated that brochure-based health education is a practical and effective tool in engaging older adults. The approach is low cost and adaptable (with the possibility of translating into different languages), aligning with the goals of aging well in the community by empowering seniors to take on an active role in managing their health.

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A Senior-Friendly Operations Bundle Improves Adherence in Older Adults: Single-Site Experience

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Background and Objectives: Older adults may find trial instructions complex and burdensome, risking missed tasks and visits. Senior-friendly operational supports may reduce this burden and protect study integrity.

Objective: To evaluate whether a multifaceted, senior-friendly operations bundle supports adherence in older adults from trial initiation.

Methods: Single-site, year-long implementation of four elements: (1) a 15–20-minute multilingual pre-enrolment call with a plain-language overview and Q&A; (2) a rapport-building consent visit to set communication preferences, use teach-back for 3-day first-morning-void (FMV) urine collection (handling, storage, date/time documentation), and provide pictorial instructions and direct coordinator contact; (3) multimodal follow-up with symptom check-ins and blood pressure check-ins only when required per investigator discretion, plus pre-visit reminders (date/time, procedures, preparation) and escalation to next of kin if needed; and (4) logistical supports (dual-coordinator group chat, post-visit action summaries requiring acknowledgment, and date-labelled investigational product (IP) packs and specimen containers). Patient-facing process measures were assessed in all screened participants (n=11), including the first screening visit of one screen-failed participant; IP adherence was assessed only in enrolled participants.

Results: Of 11 screened, 10 enrolled and completed all scheduled visits within protocol windows (0 missed). IP adherence was assessed at 49 IP-evaluable visits; 47/49 (95.9%) met the ≥80% threshold and 2/49 (4.1%) were <80%. At the participant level, mean adherence was 97.0% (median 98.0%; range 89.7%–100%), with all ≥80%. Across applicable/evaluable visits, 92.4% met the composite of patient-facing items (3-day FMV collection, FMV date/time documentation, correct IP use, return of used IP). Component pass rates were 100.0%, 98.7%, 98.7%, and 93.7%, respectively. The screen-failed participant contributed only screening-visit items; composites included only items applicable to each visit.

Implications: A senior-friendly operational workflow implemented from trial initiation was feasible at a single site and associated with high adherence across multiple process measures in older adults.

18

Diabetes Treatment Cascade Among Older Adults in India: Insights from the NFHS-5, 2019-21

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Background and Objectives: Diabetes has emerged as one of the leading causes of mortality in India, presenting a rapidly escalating public health concern. However, there is a notable scarcity of research that highlights the treatment and control of diabetes in the elderly population of India. Therefore, this study attempted to estimate the prevalence of various stages of the diabetes treatment cascade, encompassing screening, awareness, treatment, and control (SATC) among older adults aged 60 years and above.

Methods: Drawing data from the National Family Health Survey-5 (2019-21), this study analysed a sample of 323110 older men and women. The prevalence of SATC by socio-demographic characteristics was estimated by cross-tabulation and Chi-squared test. Further, binary logistic regression was employed to examine the determinants of SATC diabetes.

Results: The prevalence of diabetes among older adults was found to be 28.5% [95% CI: 27.85%, 29.11%]. Among those diagnosed with diabetes, 64.24% [95% CI: 63.55%, 64.91%] had undergone screening, 34.93% [95% CI: 34.31%, 35.55%] were aware, 28.98% [95% CI: 28.40%, 29.56%] were receiving medication, and only 11.89% [95% CI: 11.54%, 12.24%] reported having diabetes under control. Older adults with no formal education, who hailed from poor households and 'Kachha' houses, belonged to Scheduled Castes and Tribes and rural areas, and consumed alcohol were less likely to receive SATC for diabetes and have uncontrolled diabetes. Furthermore, diabetes treatment prevalence ranged from 9.2% in Arunachal Pradesh to 57.4% in Kerala, with control estimates spanning from 5.3% in Nagaland to 18% in Jammu and Kashmir.

Implications: These findings underscore the need for targeted health interventions and monitoring of health system performance to ensure comprehensive diabetes care across the country. States with a high prevalence of uncontrolled diabetes may be given emphasis while framing health policies.

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A New Healthy Ageing Score: How Chronic Diseases Influence Outcomes Among Older Adults in India

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Background and Objectives: Recent times have seen a dramatic increase in life expectancy. However, merely increasing years to life is not sufficient. Emphasis should also be put towards living a healthy life in older ages. This argument has led to the concept of Healthy Ageing. Among the many definitions of Healthy ageing, one is given by WHO, which focuses on functional ability of older adults. Keeping this viewpoint, this paper has made an index of healthy ageing, the dimensions being, functional ability, intrinsic capacity and social participation of people above 60. These factors are recognized as key contributors to an individual's overall health and functional ability. Furthermore, this paper examines how specific chronic diseases impact our index.

Methods: Longitudinal Ageing Study in India (LASI), wave 1 has been used to create the index using composite index methodology. We used 49 variables divided into the three domains and the final scores were divided into three categories, with the lower category indicating poorer outcomes. The Cronbach's alpha was 0.88. We used multinomial logistic regression to examine how 10 chronic conditions influence the likelihood of achieving different levels of healthy ageing. The analysis controlled for various socio-economic factors.

Results: Chronic conditions such as COPD, stroke, bone diseases, and angina significantly increase the odds of being in lowest healthy ageing category, with stroke and psychological disorders having the strongest impacts. Diabetes, hypertension, and COPD significantly decrease the odds of being in higher category, while urban residence, higher education, and currently working increase the likelihood. Females are more likely to score higher.

Implications: Chronic conditions like psychological disorders, hypertension, and COPD decrease healthy ageing scores, while higher education, urban residence, and being female enhance scores. This highlight critical role of socio-demographic factors and the need to focus on diseases that significantly impact healthy ageing.

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Characteristics and Impacts of Peer Coaching Interventions for Stroke Survivors: A Scoping Review

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Background and Objectives: Post-stroke peer-led interventions show potential in supporting stroke survivors' recovery but are described with inconsistent terms and definitions in the current literature. Adopting "post-stroke peer coaching intervention" as the overarching term, this scoping review aims to synthesize the characteristics and outcomes of existing peer coaching interventions for stroke survivors to develop a standardised definition and a consolidated summary of findings.

Methods: This review adhered to the five-step scoping review approach to identify, select, and analyse relevant peer-reviewed journal articles published between January 1993 and December 2024. Six major databases were searched, including Medline, PubMed, Embase, CINAHL, Cochrane Library, and PsycINFO.

Results: Eight articles were included in the analysis following screening, which involved seven post-stroke peer coaching interventions. Based on common intervention elements and characteristics, an integrated definition was developed, describing post-stroke peer coaching interventions as a time-limited, patient-centred type of psychosocial and psycho-educational intervention ideally developed through participatory action research (PAR) approaches, delivering informational, emotional, and appraisal support with application of experiential expertise under the guidance of healthcare professionals. Inconsistency was observed across the interventions in outcomes, as well as characteristics such as intervention curriculum, coach recruitment and training, and mode of delivery.

Implications: This review established a definition for "post-stroke peer coaching interventions" that outlined the foundational conceptual parameters for the development process, internal relationship, intervention content, delivery, and treatment window. Given the overall inconsistency in existing interventions, the proposed standardized definition can inform future research at intervention development and evaluation, to enable rigorous investigation into the impacts of peer coaching on stroke survivors.

21

Unprepared For Ageing: Medical Students' Readiness for Geriatric Care in India

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Background and Objectives: The global elderly population is projected to exceed 16% by 2050, with India expected to have nearly 319 million older adults. This demographic shift presents a critical need for specialized geriatric care. However, geriatrics remains underdeveloped in India, and medical students receive limited structured exposure. This study aimed to evaluate the awareness, perceptions, and practical experience of medical students regarding geriatric care and to explore their interest in pursuing elderly healthcare as a career pathway.

Methods: A cross-sectional observational study was conducted among 186 medical students from different medical colleges in India. A structured questionnaire containing multiple-choice and Likert-scale items comprehensively assessed awareness, perceptions, and clinical experience related to geriatric care. Data were analyzed using SPSS with descriptive statistics and chi-square tests.

Results: Among participants (67.2% female, 32.3% male; mean age 19.96 ± 1.31 years), only 31.7% correctly identified the age threshold for geriatrics. While 53.5% demonstrated basic awareness and 70.5% expressed positive perceptions, just 16.1% reported clinical experience. Furthermore, 53.4% felt geriatric care was inadequately addressed in their curriculum, and only 21% expressed interest in specialization. Over half had never interacted with elderly patients, and just 33.4% felt confident in managing geriatric syndromes. Notably, most students highlighted the lack of structured training opportunities as a major barrier.

Implications: Findings reveal a disconnect between favorable perceptions of geriatric care and the preparedness of future physicians in India. Although theoretical awareness is moderate, limited practical exposure leads to low confidence and minimal career interest. Integrating interactive, clinically oriented training in undergraduate curricula is urgently needed. Strengthening geriatric education is vital for improving elderly care in India and carries significant global relevance as healthcare systems adapt to rapidly aging populations.

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Boosting Confidence in Delirium Management: Outcomes from a Cross-Border Simulation Pilot

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Background and Objectives: Delirium is common in older adults but remains under-recognised, and training healthcare professionals to manage it effectively is a global challenge. Simulation-based education provides an interactive method to improve clinical reasoning and confidence while identifying learning gaps. We developed a collaborative delirium simulation project between Singapore and Thailand to strengthen regional geriatric education.

Methods: A text-based delirium simulation was implemented for medical learners in Thailand. The simulation guided learners through recognition, investigation, and management steps in delirium care. Nine participants completed the exercise. Chat transcripts were coded for coverage of key domains (recognition, investigations, non-pharmacological strategies, medication review, antipsychotics, safety, and capacity/ethics). Pre- and post-simulation confidence levels (0–10 scale) were recorded, and free-text feedback underwent thematic analysis.

Results: Nine learners provided complete confidence data. Mean confidence improved from 3.3 to 5.6 (+2.2 points; $p < 0.01$, Wilcoxon signed-rank test), with all learners showing gains, particularly those starting with lower baseline confidence. Transcript analysis demonstrated that most participants had strong performance in recognition, investigations, and non-pharmacological management. However, gaps were noted in medication review, safety planning, caregiver involvement, and capacity/ethics. Thematic analysis of feedback (n = 6) revealed three themes: practical learning value ("helps me to think through cases"), knowledge consolidation ("step by step corrections and personalised"), and perceived usefulness ("useful, did 4 scenarios"). Learners valued corrective feedback and iterative practice. Implications: This cross-border collaboration showed that a text-based simulation can significantly improve confidence and reinforce delirium management principles in Thai learners. At the same time, it identified gaps in safety, ethics, and deprescribing that inform future curriculum design.

Implications: A Singapore–Thailand collaboration successfully piloted a delirium simulation that enhanced confidence and engagement in delirium care while surfacing key educational gaps. Such regional partnerships can strengthen geriatric medicine training in low- and middle-resource contexts.

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Comparing Health, Functional and Psychosocial Outcomes in Older Adults Living in Their Own Homes vs. Public Rental Flats

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Background and Objectives: Social economic status (SES) is a recognised determinant of health, with low SES being linked to adverse health, functional, and psychosocial outcomes. In Singapore, under the Public Rental Scheme (PRS), public rental flats are made available to low SES individuals and families (monthly household income of ≤$1,500). In contrast, Singapore's home ownership rate stands at 90.8%. This study compared the health, functional, and psychosocial indicators between older adults (aged 60 and above) who lived in their own homes and those who lived in PRS flats.

Methods: 308 community-dwelling older adults were recruited from a Marine Parade neighbourhood. Frailty was assessed using Fried's Phenotype. Function was assessed using the Barthel Index for Activities of Daily Living, Lawton Instrumental Activities of Daily Living Scale, and Life-Space Assessment. Psychosocial outcomes were assessed using the EQ-5D-5L questionnaire and Resilience Scale for Older Adults. Appropriate regression models were used to analyse all outcomes, adjusting for age, sex, ethnicity, occupation status, living arrangements, and comorbidities.

Results: Older adults living in PRS flats were more likely to be frailer (OR: 2.83, 95%CI [1.24,6.47], p<0.05), marginally more likely to have poorer basic (OR: 1.98, 95%CI [0.87,4.51], p=0.05) and instrumental (β: -0.29, 95%CI [-0.63,0.05], p=0.09) activities of daily living function, and more likely to have reduced life-space mobility (β: -13.30, 95%CI [-20.60,-5.99], p<0.01). They were also more likely to have a lower quality of life (β: -0.08, 95%CI [-0.15, -0.02], p<0.05) and lower resilience (β: -5.14, 95%CI [-7.78, -2.51], p<0.01). Older adults living in PBS presented with worse health, functional, and psychosocial outcomes than their counterparts who lived in their own homes, after adjusting for various demographic variables.

Implications: These findings suggest that there are fundamental differences in health, functional, and psychosocial outcomes attributable to differences in SES, or putative differences in their living conditions (past or present) which need to be unpacked further.

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Optimising a Bedside Activity Device for Hospitalised Older Adults

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Background and Objectives: Only 50% of older adults recover from functional decline 3 months post hospitalisation. As there is no commercially available gamification specifically catered for older adults, we developed a bedside activity device. While the preliminary randomised control trial showed proof of concept, there were certain limitations regarding its infrastructure and game software.

Aim: To develop an improved device to (1) optimise the size of the bedside activity device for placing by the patient's bedside and for storage (2) improve the user-interface of the video game to make it more intuitive, interactive, and user-friendly.

Methods: We developed one improved bedside activity device with three technology partners. The final design was a customized game and geriatric chair with sensor module. User testing and evaluation was performed with 10 healthy volunteers and 50 hospitalized older adults between July 2023 to March 2025.

Results: The mean total playing time was 1 minute 56 seconds. The participants had played the game for a total of 69 times; 43 times on easy mode, 22 times on medium mode, 4 times on hard mode. The majority reported feeling safe when using the device (n=45, 90%), size to be appropriate (n=46, 92%) and provide adequate support to play the game (n=45, 90%). This was related to the ability to adjust seat and arm rest height. The device was easy to manoeuvre, and compact size allowed it to fit in between patient beds easily without adjusting the neighbouring bed. Most found the game to be easy (n=47, 94%), interesting and interactive (n= 47, 94%) and were generally keen to continue using the device (n=38, 76%).

Implications: The simplicity to play a technology enabled game was unexpected by the participants. Most participants feedback that it is apt for older adults as there is minimal instruction to follow to play.

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From Digital Barriers to Bridges: Understanding Older Adults' Acceptance of "Senior Mode" of Mobile Applications

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Background and Objectives: Despite the existence of "senior modes" in many Apps designed to enhance accessibility, older adults still face significant barriers and only moderate satisfaction when using these features. This study aims to understand older adults' experiences of using the "senior modes" and identify factors influencing the acceptance of the "senior mode".

Methods: This study employed a qualitative approach using the Decomposed Theory of Planned Behaviour (DTPB) as its theoretical framework. Semi-structured telephone interviews were conducted with 22 participants aged 50 and above, recruited through snowball sampling. The sample included a mix of non-users, short-term users, and long-term users of the "senior mode" in three most popular applications, i.e., WeChat, Taobao, and Douyin, allowing for a comparative analysis of their experiences.

Results: The study reveals that most respondents hold negative views towards the "senior mode," particularly regarding perceived usefulness, ease of use, and compatibility. Many older adults feel the "senior mode" offers no significant advantages over the standard version, failing to demonstrate its practical value. Operational complexity and setup barriers contribute to frustrations, as seniors prefer designs that are intuitive and user-friendly. Additionally, the mode lacks essential features such as junk cleaning and scam blocking, which do not align with their daily needs. Acceptance is further hindered by physical limitations, low self-efficacy, and insufficient social support, along with concerns about safety and privacy, ultimately discouraging older adults from adopting the "senior mode".

Implications: Findings highlight significant barriers to "senior mode" adoption among older adults. A lack of perceived usefulness and operational complexity suggest a disconnect between design intentions and actual needs. To improve adoption, developers should create intuitive, secure, and genuinely useful features beyond simple interface changes. A dual approach is essential: enhancing family and community support to build trust, and avoiding stigmatizing designs, empowering older adults' digital engagement.

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Effects of Robotic Assisted Gait Rehabilitation: A Pilot Study

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Background and Objectives: Conventional rehabilitation therapy may be limited for patients with significant physical impairments – such as reduced muscle strength, poor balance, or coordination difficulties - particularly in the early stages of rehabilitation. Robotic exoskeleton supports multisystem body integration, and enable optimal patient positioning, facilitating movement against gravity with improved stability. This study aimed to evaluate the feasibility and preliminary outcomes of an ExoMotus-assisted gait rehabilitation programme as an adjunct to conventional therapy for older adults with various geriatric conditions.

Methods: Participants underwent an 8-session gait rehabilitation programme using the ExoMotus M4, delivered at least twice weekly alongside conventional rehabilitation. The program was tailored to geriatric population, primarily post-stroke, with a focus on improving function. Each one-hour session was led by a Physiotherapist, with assistance from a Therapy Assistant as needed (TA). Outcomes were evaluated pre- and post- intervention using the Berg Balance Scale (BBS), Elderly Mobility Scale (EMS) and a Mood Scale to assess emotional well-being.

Results: A total of 32 participants were recruited (14 female and 18 male; mean age 72 years), but 50% did not complete the programme. Common reasons for non-completion included early discharge from the rehabilitation facility and intolerance to the training sessions due to severe postural hypotension, pain, or fear. Amongst the 16 participants who completed the programme, 50% demonstrated improved balance, 62.5% improved in functional mobility, and 33% reported improved mood.

Implications: These preliminary findings suggest that the Exomotus programme is a feasible and effective adjunct to conventional rehabilitation, offering adequate training intensity while reducing physical demands on therapists. Notably, functional gains were observed within just 8 sessions – fewer than the 12 sessions typically reported in similar studies. Future studies could explore having a control group as comparison.

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Fall Risk Prediction in Seniors Using Machine Learning on Enhanced Tug with Computer Vision Derived Kinematic Features

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Background and Objectives: Falls are a leading cause of morbidity in older adults, yet clinic-friendly tools for proactive risk stratification remain limited. We developed an artificial intelligence/machine learning (AI/ML) fall-risk assessment that augments the Timed Up and Go (TUG) test by capturing computer vision–derived kinematic features during a Modified TUG. Objectives were to (i) evaluate the predictive performance of ML models using pose-estimation features and (ii) validate predictions against HUR SmartBalance® stability metrics as a reference standard.

Methods: Adults aged ≥60 years (n =140) from community and institutional settings completed a Modified TUG recorded with a monocular camera. A two-dimensional (2D) pose-estimation pipeline extracted joint keypoints, from which temporal and spatiotemporal features were derived, including sit-to-stand and turn durations, step-time variability, trunk sway, angular velocities, and center-of-mass surrogates. Ground-truth outcomes were obtained from HUR SmartBalance, including Static Stability (Eyes Open Stable Surface C90) and Dynamic Stability (Eyes Closed Unstable Surface C90). Classifiers tested were logistic regression, random forest and gradient boosting, trained with nested cross-validation and class-imbalance handling. Model explainability used permutation importance and Shapley additive explanations (SHAP).

Results: The Random Forest model achieved the best performance with area under the receiver operating characteristic curve (AUC) = 0.88 (95% CI 0.82–0.93), sensitivity 82% and specificity 79% at the Youden-optimal threshold, and the lowest root mean square error (RMSE =0.29). Predicted risk scores showed strong validity against Static Stability (Pearson r =–0.68, p <0.001) and Dynamic Stability (r =–0.72, p <0.001), with good agreement for categorical stratification (Cohen's κ =0.64). Key predictors were turn duration, trunk sway, sit-to-stand tempo, and gait velocity. An AI/ML model leveraging pose-estimation kinematics from a Modified TUG enables accurate fall-risk screening with only a standard camera.

Implications: This low-cost, scalable approach could support community screening, monitoring, and targeted referrals. Future work will extend validation, integrate multimodal sensors, and assess impact on prevention pathways.

28

Readiness to Use Remote Monitoring Technologies to Detect Frailty in Aging Adults Living in US Urban Neighborhoods

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Background and Objectives: Frailty affects a significant portion of older adults and is associated with adverse health outcomes. Remote Monitoring Technologies (RMTs) offer opportunities to detect small but meaningful changes that may signal the onset of frailty. However, little is known about RMT use among aging adults in urban inner-city communities in the United States. This study aimed to assess readiness and use of RMTs among 30 individuals aged ≥50 during a 2-week monitoring period.

Methods: Participants were provided with three devices: 1) an app-based handgrip measurement device, 2) a digital weighing scale, and 3) an accelerometer-based wristwatch. Surveys included items from the Technology Readiness Index (TRI) to assess attitudes toward new technology.

Results: Data from the first 12 participants showed an average age of 61 ± 6 years; 25% were female and 33% lived alone. Most (92%) had high-speed internet access and all used smartphones. Only 3 participants reported prior use of health-related apps, and 4 (25%) used wearable devices. Optimism was notable, with 83% reporting that technology gave them greater mobility and 75% saying it improved productivity. Six participants reported keeping up with technological developments, though none actively sought new devices. Concerns about technology were also reported: 92% felt people are too dependent on technology and 50% believed technology is not designed for ordinary users. Despite these reservations, adherence was high, with 100% completion of home-based frailty measurements. Further analyses will expand findings across the full sample and compare RMT-based measurements with clinic observations and self-reported usability.

Implications: Older adults in urban inner-city settings demonstrate both openness and adherence to RMTs, though active pursuit of technology adoption remains limited. To enhance impact, future interventions should prioritize simple, user-friendly designs, provide tailored support, and integrate RMTs into routine care to improve early frailty detection and management.

29

Designing an Age-Friendly AI Conversational Agent for Older Adults: A Qualitative Analysis of User Feedback

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Background and Objectives: Due to recent technological advances in large language models (LLMs), artificial intelligent (AI) chatbots are now capable of providing natural and socially supportive interactions. While AI usage among older adults (OAs) is rising, little research has explored the AI factors and characteristics that influence OAs' adoption of these technologies. In this study, we aimed to address this gap by analysing feedback obtained from interviews with OAs who interacted with AMI-Go, an age-friendly chatbot developed by our lab.

Methods: One-hundred and forty-three OAs (mean age=72.63, range age=60–89; 112F) in Singapore were recruited to interact with the chatbot for 20 minutes before participating in semi-structured interviews. We conducted an inductive thematic analysis to identify themes from the interview data. The themes were subsequently interpreted through the lens of the theoretical framework of the Senior Technology Acceptance Model and AI-related constructs including anthropomorphism, authenticity, and perceived empathy, which have been identified as important factors affecting chatbot adoption in the general population.

Results: Preliminary LLM-based thematic analysis of 31 participants revealed that OAs valued the chatbot's abilities to provide empathy and emotional support the most (n=9), followed by responsive and prompt replies (n=8), friendly interaction (n=8), and accurate and reliable information (n=6). On the other hand, results revealed that OAs were less satisfied with the chatbot's interaction flow and responsiveness (n=8), authenticity and human-like quality (n=5), emotional depth and empathy (n=5), and user confidence and learning curve (n=5). In summary, these results demonstrated that perceived empathy, authentic and human-like social interaction, perceived ease of use, and perceived usefulness are the key factors and characteristics that influence OAs' adoption of chatbots. Interestingly, we also observed emergent factors, such as response promptness and friendliness of the chatbot, contributing to OAs' chatbot adoption.

Implications: These insights provide a foundation for building a framework to understand AI adoption among OAs.

1

Harmony in Motion: Building Inclusive Communities for Active Ageing via Programmes Led by Media & Sports Personalities

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Background and Objectives: Social isolation and frailty are growing concerns among older adults in Singapore, with significant impact on physical, emotional, and social wellbeing. Engaging seniors meaningfully in intergenerational programmes can help promote sustainable outcomes across multiple dimensions of wellness, while also strengthening community bonds. This study describes the development and evaluation of Harmony in Motion, a community initiative that mobilised youth media and sports personalities to create inclusive and intergenerational health-promoting experiences for seniors.

Methods: Twenty youth media creators and sports leaders, including Singapore cheerleaders (n≈300 athletes), partnered with 500 seniors from Senior Activity Centres in the North-East region. Together, they co-designed and delivered programmes across exercise, falls prevention and rehabilitation, art therapy, music therapy, movement/dance therapy, and mindfulness filmmaking/photography. Large-scale showcase events—such as a record-breaking mass exercise-to-music session, drone soccer festival, and senior filmmaking awards—were integrated to maximise visibility and participation. Seniors also took active roles in the filming of several award-winning short films and music videos. Programme evaluation combined quantitative surveys (pre–post measures of self-reported wellbeing, social connectedness, and physical activity levels) and qualitative data (focus group discussions, in-depth interviews, and thematic analysis of participant narratives).

Results: Quantitative findings indicated significant improvements in senior participants' self-reported social engagement, physical activity confidence, and motivation to adopt healthy ageing practices. Over 85% expressed satisfaction with programme quality and inclusivity. Qualitative interviews revealed that seniors felt energised, valued, and inspired by their intergenerational interactions, with many noting reduced feelings of isolation. Media and sports personalities reported personal growth through focus group reflections, highlighting enhanced awareness of senior health issues and a stronger sense of social responsibility in applying their skills for community good.

Implications: The Harmony in Motion model aligns with Singapore's HealthierSG framework and demonstrates strong potential for scale-up as a sustainable, intergenerational strategy to promote active ageing and community wellness.

2

Wellbeing Coordinators Reducing Healthcare Utilisation by Seniors Through Engagement and Empowerment in the Community

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Background & Objectives: SingHealth envisions a population where seniors are empowered and actively involved in their health. This involves providing person-centred care and addressing the Social Determinants of Health of residents, which are fundamental to reduce health disparities and improve health outcomes. To achieve this vision and objective, SingHealth developed and deployed Wellbeing Coordinators (WBCs), who act as health and social care integrators to journey closely with residents in the community.

Methods: SingHealth WBCs deployed as part of place-based community care teams screen residents for their health and social needs, co-develop health goals with residents, help ensure their adherence to health plans and appointments, conduct health coaching, and connect them with community partners and resources based on their identified health and social needs. These residents include those who are well, at-risk, with chronic conditions, and those recently discharged from the hospital requiring care transition support back into the community. A retrospective study was conducted to evaluate the impact by WBCs under Changi General Hospital's (CGH) Neighbours For Active Living programme on healthcare utilisation of 2,794 clients enrolled from 2021 to 2023. 90% of the enrolled clients are seniors aged 60 years and above.

Results: Clients supported by CGH WBCs showed a significant reduction in ED visits (mean decreased from 1.59 to 0.82), inpatient admissions (mean decreased from 1.36 to 0.58), and Length of Stay (mean decreased from 10.5 to 4.9 days) across two 6-months periods after enrolment as compared with baseline.

Implications: The study highlighted the value of WBCs in empowering residents to live and age well in the community. They play a key role in being the "eyes" to timely escalate residents who need further health and social support. SingHealth will continue to develop and deploy WBCs as part of our place-based community care teams to support our residents.

3

Towards Liberated Aging: Review of Gender Affirmation Among Transgender and Gender Diverse People in Mid- and Late Life

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Background and Objectives: Although gender affirmation is a social determinant of health for transgender and gender diverse (TGD) people, little research has been conducted on this subject, particularly among mid- and late-life TGD people. This scoping review addresses this gap by synthesizing peer-reviewed literature on gender affirmation experiences and health-related outcomes among TGD people in mid and late life.

Methods: We conducted a literature search in April 2025 on MEDLINE, Social Work Abstracts, and CINAHL PLUS from EBSCOhost, APA PsycINFO, ASSIA, and Sociological Abstracts from ProQuest, and SCOPUS. From 1,338 studies retrieved, 57 were included in this review.

Results: Participants reported a range of gender-affirming experiences and challenges related to their TGD identities across four domains: 1) Psychologically, many experienced gender dysphoria and internalized stigma; however, some described achieving self-acceptance and actualization of their identities, with aging often serving as a catalyst for embracing their gender identity. 2) Interpersonally, participants shared experiences of concealing TGD identities, while others chose to come out, encountering rejection, acceptance, or support. Some also described engagement in community building and advocacy. 3) Medically, participants shared their desires and experiences with accessing gender-affirming care. Many reported service gaps and discrimination within social and healthcare settings. 4) Legally, participants described completing end-of-life or advance care planning documents to safeguard their gender identities while some encountered structural barriers to changing their names and gender markers on documents. This review proposes an alternative framework for TGD aging— "liberated aging," defined as the access to desired aspect(s) of gender affirmation and the freedom to embrace one's authentic self in the process of aging. This notion is embodied by many participants who described profound fulfilment and wholeness in coming out or undergoing gender affirmation later in life.

Implications: This review can inform the design of tailored gender affirmation needs for TGD people in mid- and late life.

4

Effects of Hearing Loss on Social Connectedness, Mental- And Cognitive-Health Amongst Older-Adults: A Mediation-Analysis

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Background and Objectives: A national screening exercise suggested that about 65% of older adults in Singapore have hearing issues. Older adults with poor hearing usually have more difficulties with communication and might be at higher risk of social isolation and loneliness, which might lead to negative health outcomes (e.g. depression, cognitive failure). The current study examines the associations between hearing loss, social isolation and loneliness amongst older adults in Singapore, and their associations with mental- and cognitive-health.

Methods: Cross-sectional survey data for 5,797 older adults (>= 55 years) from the Singapore Life Panel, a nationally representative panel dataset, was analysed as a 2-mediator (social network size and loneliness) 2-outcome model (mental- and cognitive-health), with hearing loss as the main predictor. Measures include the degree of hearing loss, social network size, loneliness, mental-health (Centre for Epidemiologic Studies Depression Scale), cognitive-health (10-item Cognitive Failure Questionnaire) and demographic variables (e.g. age, gender, ethnicity, etc). Higher scores represented better health/psychosocial outcomes. Linear regression and mediation analyses were used.

Results: Participants with better hearing reported larger network sizes ($\beta=0.095$, $p<0.001$), were less lonely ($\beta=0.203$, $p<0.001$), and had better mental- ($\beta=0.060$, $p<0.001$) and cognitive-health ($\beta=0.190$, $p<0.001$). Feeling less lonely was associated with better mental-($\beta=0.624$, $p<0.001$) and cognitive-health ($\beta=0.144$, $p<0.001$), while larger network sizes was associated with better mental-health ($\beta=0.038$, $p<0.001$), but not cognitive-health ($\beta=0.004$, $p=0.764$). Feeling less lonely mediated the associations between hearing loss and mental-health (indirect effect=0.129, $p<0.001$), and cognitive-health (indirect effect=0.032, $p<0.001$). Having larger network sizes significantly mediated the association between hearing loss and mental health (indirect effect=0.004, $p<0.001$), but not between hearing loss and cognitive health (indirect effect=0.001, $p=0.764$).

Implications: Hearing loss may be associated with smaller social network size and higher loneliness, which in turn are associated with an individual's mental- and cognitive-health. In addition, the direct effects of hearing loss on mental- and cognitive-health suggests that additional pathways remain to be identified.

5

Social Participation and Cognitive Function in Chinese Older Couples: Urban-Rural Variations in Partner Effects

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Background and Objectives: Past research has established gender differences in the way spouses affect each other's health but tends to overlook the role of contextual factors such as urban-rural residence. Differences in social relationships and gender roles between urban and rural environments may moderate dyadic health dynamics. This study examines whether the dyadic relationship between social participation and cognitive function among married couples varies across urban-rural contexts in China.

Methods: The analytical sample comprised of couples where both spouses were 45 years of age and above (N=3,048) from the China Health and Retirement Longitudinal Study (CHARLS). We rely on dyadic data from 2011 and 2020 to estimate an actor-partner interdependence model exploring the dyadic relationship between social participation and cognitive function within couples, as well as whether observed actor and partner effects differed by urban-rural residence.

Results: At the between-person level, individuals with higher average levels of informal social participation showed higher cognitive functioning for both husbands and wives across urban and rural settings. These between-person associations for formal participation were stronger in urban areas, particularly for wives. Significant partner effects emerged exclusively at the within-person level with urban-rural contrasts: urban wives' increased formal participation was positively associated with husbands' cognitive functioning ($\beta = 0.296$, $p < .01$), while rural husbands' increased informal participation was negatively associated with wives' cognitive functioning ($\beta = -0.062$, $p < .05$).

Implications: These findings demonstrate that dyadic interdependence patterns in couples' cognitive function vary significantly across contextual environments. Future research should examine the mechanisms underlying these variations and consider contextual factors when developing cognitive health interventions for older couples.

6

Multidimensional Well-Being Among Left-Behind and Non-Left-Behind Elderly in India

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Background and Objectives: India is experiencing rapid population ageing alongside large-scale internal and international migration of adult children. This has important implications for the health and well-being of elderly parents who may be left behind. While remittances can improve household income, the absence of children may reduce physical care, social connectedness, and emotional support. The objective of this study is to assess the multidimensional well-being of left behind by all children's migration with those living with at least one child.

Methods: The study uses data from the nationally representative Longitudinal Ageing Study in India (LASI) Wave 1, 2017–18, focusing on adults aged 60 years and above (n=30,374). Multidimensional well-being was assessed across four domains: physical (activities of daily living and self-rated health), economic (monthly per capita consumption expenditure quintiles), social (friendship networks and visits to relatives), and emotional (depression and life satisfaction). Each dimension was categorized as well-off or not well-off, and a composite multidimensional well-being index was created. Descriptive statistics and logistic regression were applied using STATA 17.

Results: Findings show that 26.8% of elderly were left behind due to all children migrating, while 73.2% lived with at least one child. Left-behind elderly had higher economic well-being (66.7% vs. 52.5%) but lower physical well-being (58.6% vs. 62.2%) and social well-being (13.5% vs. 15.1%) compared to non-left-behind. Emotional well-being was low overall, with minimal differences between the groups. Multivariate analysis indicated that advanced age, being female, widowhood, lower education, rural residence, and disadvantaged caste or minority religion were associated with poorer multidimensional well-being, while co-residence with children and higher education were protective factors.

Implications: The study highlights a trade-off: migration improves elderly economic security but weakens physical and social support. Policy should strengthen community-based health and social care, while ensuring economic benefits of migration are complemented.

7

Offering Choices for Participation: Qualitative Methodological Considerations with Socially Isolated Older Adults

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Background and Objectives: Social isolation increases risk for malnutrition in older adults. There is limited research about dietary habits and unmet needs in socially isolated seniors. This paper discusses methodological considerations in accessing, engaging and conducting research with community-dwelling adults aged 60+ living alone who have social risk factor(s) for malnutrition.

Methods: About thirty older adults were purposively sampled, considering issues of representation, relevance and resources. Inclusion criteria were co-defined with community partner by asking "who falls through the cracks (of formal services)?". The study leveraged on the older adults' trust in the community partners for access but sought to build its own trusting relationship through prolonged engagement. Fieldwork was team-based to allow investigator triangulation. Depending on participants' capabilities and preference, they met researchers twice and chose to participate in the following method(s): Photovoice for collaborative meaning-making through participant-generated images; Go-Along Interviews (GAI) for researchers to enter their natural environment as they eat, cook or shop; and/or semi-structured In-Depth Interviews (IDIs) for open, reflective discussion. Rapid qualitative analysis and reflexivity practice were conducted immediately after fieldwork.

Results: Participants responded positively to having methodological choice, especially valuing GAI for its contextual relevance and enjoyment from doing activity with researchers. Interacting with older adults in their natural environment revealed complex barriers to food access otherwise difficult to understand from only IDIs. However, participants' physical limitations might limit GAIs to home-based activities. Photovoice showed alternative pictorial insights that were not surfaced through verbal communication. Rapid analysis after the first visit allowed for more insightful questions during the second visit.

Implications: Choice and common activities are key in engaging the harder-to-reach. Through enhanced representation and agency, the study promotes equity in participation. Findings will inform the design of a community-based intervention to improve diet quality in isolated older adults.

8

Transcranial Direct Current Stimulation Over the Orbitofrontal Cortex Improves Risky Decision-Making in Aging

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Background and Objectives: Compared with young adults, older adults often have difficulty in making decisions under risk, leading to high risk of financial exploitation/abuse in their daily lives. However, the extent to which cognitive decline influences risky decision-making is still unclear, and early intervention for cognitive impairment is scarce. The current study focused on the fronto-subcortical pathway in abnormal risky decision-making in older adults and examined transcranial direct current stimulation (tDCS) over the orbitofrontal cortex (OFC) in modulating risk-taking behaviours.

Methods: Fifty young adults and 150 older adults were recruited. Risky decision-making was assessed by the Iowa gambling task (IGT) and balloon analogue risk task (BART). In the tDCS intervention, participants were required to complete a customized training task during the OFC-tDCS (Fp1/Fp2, 1.5 mA, 30 min). Combining anatomical and functional MRI, we examined cognitive integrity and its relationship with the fronto-subcortical connectivity before and after tDCS intervention.

Results: The results showed that older adults have significant changes of risk-taking behaviours in both IGT and BART, relative to young adults. Age-effect on risk-taking behaviours was remarkably different depending on cognitive integrity. Consistently, the computational modelling analysis in the IGT confirm behavioural alterations in aging. In the resting-state MRI analysis, the interactions between frontal cortex and subcortical regions, such as striatum, amygdala and claustrum, were closely related to altered decision-making in older people. In the tDCS intervention, the orbitofrontal stimulation significantly changed risk-taking behaviours in the IGT. Notably, the OFC network was remarkably changed after tDCS, showing opposite trends of connectivity change in the frontal and subcortical regions.

Implications: These findings indicate that the disrupted fronto-subcortical neural circuitry is critical for understanding altered risk-taking behaviour in aging. tDCS is an effective interventional tool in alleviating cognitive deficits and improving brain network efficiency via regulating fronto-subcortical connectivity.

9

Preliminary Findings of a Gamified Language Learning for Cognitive Improvements in Older Adults

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Background and Objectives: Ageing is often linked to cognitive decline, which can decrease the quality of life for older adults. Alzheimer's Disease (AD), a form of dementia that primarily affects older adults, leads to decline in memory, thinking, behaviour, and social skills. Although there is presently no cure for dementia, interventions are being conducted to prevent or delay its onset, particularly during early stages like subjective memory complaints and mild cognitive impairment, as well as in normal aging. This study explores the impact of integrating language learning with a gamified platform to enhance engagement and improve the cognitive functioning (specifically working memory, inhibition, and cognitive flexibility) in older adults.

Methods: Preliminary findings have been obtained from the data of 12 (out of an intended 80) older adult participants aged 50-80 years. In this study, a commercially available gamified Spanish vocabulary learning tool is used as a form of cognitive training over 12 weeks. Within each week, participants engaged in 3 sessions, each lasting 30 minutes.

Results: Results indicate significant improvements in some aspects of executive functioning: (i) working memory (2-back total hits: $p = .006$; 2-back proportion of accurate hits per block: $p = .046$); (ii) inhibition (Stroop total proportion correct: $p = .007$; Stroop proportion correct for incongruent trials: $p = .008$); (iii) cognitive flexibility (Arrow Flanker mean reaction time: $p = .021$; Arrow Flanker mean reaction time for congruent trials: $p = .030$; Arrow Flanker mean reaction time for incongruent trials: $p = .025$; Trail Making Test B completion time: $p = .005$) of older adults who have undergone the gamified language learning intervention.

Implications: Despite the limitations of preliminary data from only the intervention group and a small sample, the findings are promising to proceed with the full intervention study with the control group.

10

Community-Based Interventions for Cognitive Health in Older Adults: A Scoping Review of Effectiveness and Implementation

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Background and Objectives: Cognitive impairment is a growing public health concern in ageing populations, highlighting the importance of preventive strategies. Community-based interventions are promising as they reach older adults in real-world settings and integrate social, behavioural, and health components. However, evidence on their effectiveness and implementation remains fragmented. This scoping review aimed to (1) summarise community-based interventions for cognitive health in older adults, (2) assess their effectiveness in improving cognition, and (3) map identified barriers using the Practical, Robust Implementation and Sustainability Model (PRISM) and strategies using the Expert Recommendations for Implementing Change (ERIC).

Methods: Five major electronic databases and grey literature were searched. Eligible studies included community-based interventions designed to detect and/or delay cognitive declines among adults aged ≥60 years who had no or mild cognitive impairment. Data were charted on intervention characteristics, effectiveness, barriers, and implementation strategies.

Results: Eighty-two studies from 15 countries were included. Interventions ranged from single to multiple domains, covering physical activity, cognitive training, nutrition, psychosocial support, health education, and vascular risk management. Evidence suggested their potential effectiveness in improving cognition. Twenty barriers were identified across PRISM domains, such as lack of consumer centeredness (intervention-organisational perspective), lack of consumer centeredness (intervention-participant perspective), limited organisational capacity (recipients-organisational characteristics), low education level (recipient-participant characteristics), inadequate dedicated space (implementation & sustainability infrastructure) and transport challenges (external environment). Twenty-nine unique ERIC strategies were adopted at pre- and during implementation phases, with top cited ones including tailoring strategies, intervening with consumers to enhance uptake and adherence, and promoting adaptability.

Implications: Community-based interventions show promise in promoting cognitive health among older adults, but scale-up and sustainability require systematic implementation. Embedding implementation science approaches into future studies will be critical for addressing barriers, tailoring interventions to diverse needs, and ensuring sustainability, ultimately improving health outcomes and reducing the burden of cognitive declines.

11

Application of Eye-Tracking in Outcome Measure Development for Older People with Cognitive Impairment: A Scoping Review

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Background and Objectives: Quality of life and care experience assessments are essential in aged care and health services but often exclude older people with cognitive impairment due to uncertainty about their ability to self-report. This leads to reliance on proxy reports, which may not accurately represent the older care recipient's own views and experiences. Eye-tracking technologies offer an innovative, non-invasive way of understanding how individuals engage with surveys and in determining the cognitive level needed for reliable self-reporting, though its broader use remains unclear. This scoping review evaluated how eye-tracking has been used to develop and test outcome measures for older people, focusing on methodological approaches and relevance to those with cognitive impairment, where verbal approaches may be less effective.

Methods: This review followed PRISMA-ScR guidelines. The protocol was registered on the Open Science Framework (OSF). Databases searched included MEDLINE (Ovid), PsycINFO (Ovid), Scopus, Web of Science and CINAHL. Studies using eye-tracking in development or testing of outcome measures or related tools for older people in health settings were included.

Results: Nineteen studies met the inclusion criteria. Seven (37%) involving older people with cognitive impairment, showed that while gaze patterns were often similar to cognitively healthy peers, more time and support were required to complete tasks. Six studies (32%) reported age-related differences in processing text, illustrations and framed messages. Six (32%) using eye-tracking for usability testing of digital tools identified navigation issues and distracting elements.

Implications: Eye-tracking is valuable for understanding how older people, including those with cognitive impairment, engage with health information and digital tools. This review informs an ongoing doctoral research project investigating cognitive impairment's impact on self-reported quality of life and interventions to support reliable reporting. Integrating eye-tracking and think-aloud techniques can enhance inclusivity in outcome measurements, ensuring older people's perspectives inform research, policy and economic evaluation.

12

Association Between Dementia and Multimorbidity Among the Older Adults in India: Findings from Propensity Score Matching

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Background and Objectives: Dementia, a progressive syndrome impairing memory, reasoning, and daily functioning, largely stems from neurodegenerative disorders in later life. Multimorbidity is the coexistence of multiple chronic conditions contributing to poor health and higher mortality. This study aims to assess whether dementia significantly increases the risk of multimorbidity among older adults in India. Data and

Methods: The analysis draws on data from the Longitudinal Aging Study in India (LASI, 2017–18), comprising a nationally representative sample of 72,250 individuals aged 45 years and above. Descriptive and bivariate analyses were used to examine the prevalence of multimorbidity. Binary logistic regression assessed the association between dementia and multimorbidity, while Propensity Score Matching (PSM) was employed to establish the effect of dementia on multimorbidity.

Results: The prevalence of dementia was found to be 0.56%. Among individuals with dementia, 93.27% experienced multimorbidity. Logistic regression revealed that dementia increased the odds of multimorbidity by 19.42%. Lifestyle and health-related factors showed strong associations: obesity more than doubled the risk of multimorbidity (OR: 2.28; 95% CI: 2.20–2.37), alcohol consumption raised the risk by 12%, and high salt intake was linked to more than a threefold increase (OR: 3.01; 95% CI: 2.88–3.14). Older adults living alone also had a 15% higher (OR: 1.15; 95% CI: 1.11–1.19) likelihood of being multimorbid. Results from PSM confirmed dementia increased multimorbidity risk by 116%.

Implications: The study highlights a strong and significant association between dementia and multimorbidity among older adults in India. These findings suggest that dementia can serve as an important clinical marker for identifying individuals at high risk of multimorbidity. Targeted screening and integrated care interventions focusing on dementia patients may therefore play a critical role in reducing the burden of multimorbidity and improving health outcomes in aging populations.

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Multilingualism and Neurodegeneration: Investigating the Dose-Effect Relationship in a Singaporean Cohort

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Background and Objectives: Identifying modifiable risk factors for dementia is crucial for prevention. Bilingualism has been shown to protect against neurodegeneration; however, the impact of speaking more than two languages remains unclear (Costumero., 2020; Voits, 2020). Furthermore, the effect of multilingualism on regional atrophy in the brain is underexplored. Singapore's multilingual population presents a unique opportunity to investigate multilingualism, given its high prevalence of individuals fluent in multiple languages. This study explores the relationship between multilingualism and neurodegeneration, specifically assessing whether there is a dose-effect relationship between speaking more languages and brain atrophy.

Methods: We recruited 112 patients from the National Neuroscience Institute's memory clinic, with a mean age of 67.26 years (SD=7.66). We categorized participants by the number of languages spoken: 25 spoke one, 25 spoke two, 32 spoke three, and 30 spoke four or more languages. The most commonly spoken languages were English, Mandarin Chinese and other Chinese dialects. Data on the age of language acquisition and literacy in each language were not available. Structural brain images were acquired using a 3T Philips MRI scanner and voxel-based morphometry was used to investigate differences in grey matter density between language groups in language relevant brain regions.

Results: Speakers of three languages had significantly higher grey matter density in left occipital fusiform gyrus, left precentral gyrus and left inferior frontal gyrus pars triangularis compared to speakers of one language. Further inspection of parameters revealed increased grey matter density with each additional language up to three languages. Speaking four or more languages did not appear to benefit grey matter density further. Speaking multiple languages had positive effects on grey matter density up to three languages. Regions with increased grey matter density have previously been linked to language formation and production and recognition of written language.

Implications: Multilingualism has potential protective effects against neurodegeneration.

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The Influence of Frailty: How the Associations Between Modifiable Risk Factors and Dementia Vary?

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Background and Objectives: The Lancet Commission has highlighted 12 modifiable risk factors for dementia. However, the effects of addressing these risk factors among the heterogeneous older adult population is not fully understood. We compared the association between risk factors and dementia by frailty, conceptualized as an explanation for the underlying health heterogeneity in old age.

Methods: Data were from the UK Biobank, a cohort study with over 500,000 participants aged 37–73 between 2006 and 2010. Frailty was measured by five criteria: slowness, weakness, exhaustion, inactivity, and shrinking. Participants meeting 0, 1–2, and 3–5 criteria were considered non-frail, prefrail, and frail, respectively. We included 13 modifiable risk factors. We used logistic regression to determine the associations of risk factors with 10-year dementia among non-frail, pre-frail, and frail individuals, respectively. Additionally, we adopted a g-computation method to estimate the individual and combined population intervention effects (PIE) of the risk factors for dementia.

Results: Of 381,419 participants, 58.4 %, 38.2 %, and 3.4 % were classified as non-frail, pre-frail, and frail, respectively. Except for smoking, depression, and excessive alcohol use, the other 10 risk factors had a stronger association with dementia among frailer individuals. We observed the highest PIEs among frail individuals when considering hypothetical interventions targeting low education, physical inactivity, central obesity, social isolation, hearing impairment, hypertension, diabetes, high nitrogen dioxide (NO2) exposure, high exposure of particulate matter with a diameter less than or equal to 2.5 micrometres (PM2.5), and traumatic brain injury individually. For the hypothetical interventions targeting all 13 risk factors together, we found a graded increase in the PIE across frailty status.

Implications: The associations between modifiable risk factors and dementia were stronger among the frail. We advocate for incorporating frailty assessments to pinpoint those most likely to benefit from targeted risk factor interventions.

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Implementation of One-Repetition Maximum (1RM) Assessment for Exercise Prescription in Community Hospital Rehabilitation

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Background and Objectives: Exercise prescription in community hospitals traditionally relies on Manual Muscle Testing (MMT) outcomes, with progression based on symptomatic presentation. This approach may lead to suboptimal loading in rehabilitation programmes.

Objective: To evaluate the effectiveness of implementing 1RM assessment for exercise prescription in community hospital rehabilitation patients.

Methods: A prospective pilot study was conducted at Outram Community Hospital from April to June 2025, involving 15 patients classified under Rehabilitation Diagnosis Group (RDG) 6.2 and 6.3 requiring supervision to minimal assistance. Exercise prescription was based on 1RM assessment, with progressive loading of 10% body weight for lower limbs and 5% for upper limbs, adjusted according to Rate of Perceived Exertion (RPE). Outcomes were compared with retrospective data from conventional MMT-based prescription.

Results: Patients in the 1RM assessment group demonstrated capacity for higher loading compared to the conventional group. Exercise prescription guided by 1RM assessment enabled higher training loads with 10% of own body weight as baseline weight for training for lower limbs and 5% weight for upper limbs while conventional practice MMT-based prescription received average of 3 pounds of weight prescribed for usual strengthening. The findings suggest potential under prescription in conventional practice for RDG 6.2 and 6.3 patients.

Implications: Implementation of 1RM assessment in community hospital rehabilitation may optimize exercise prescription and standardize practice. Further research with larger sample sizes is warranted to validate these preliminary findings.

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Evaluating the Implementation Quality of Implementation Strategies for a Pilot Nurse-Led Frailty Management Programme

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Background and Objectives: The pilot Inpatient Nursing Frailty Assessment (INFA) programme involves nurses managing geriatric syndromes in frail older patients admitted to non-geriatric medicine wards to prevent frailty progression when they get discharged into the community. Majority of the literature evaluates programme effectiveness, with a dearth in studies examining implementation strategies that support delivery. Implementation strategies are activities that promote the adoption and implementation of complex interventions. This study aims to evaluate their implementation quality.

Methods: INFA operationalised evidence-based implementation strategies to mitigate expected barriers to successful piloting. This includes staff training, developing and distributing educational materials for staff on geriatric-syndrome screening and management, appointing nurse champions, systematic collection of feedback from frontline providers, implementation-team meetings to guide programme refinement, and integration of INFA's data capture within hospital information technology (IT) systems. Methodology was guided by implementation science concepts and frameworks. Implementation quality was assessed using indicators under domains: reach, participant response, dosage, temporality, and fidelity to intended actors, recipients, and actions. Each domain was assessed using a set of quantitative criteria and narratively. Data were systematically triangulated from interviews with senior nurses and self-reported documentation using structured templates by the lead geriatrician and researchers.

Results: There was strong reach and participation for staff training, which improved the nurses' capability in geriatric syndrome screening and management. Educational materials were distributed with high fidelity to intended recipients and frequency. Appointing nurses as programme champions supported the adoption of INFA, with potential for increased intensity of engagement activities as implementation progresses. Feedback mechanisms and team meetings generated useful actions, but greater granularity of documenting adaptations will be needed to support scaling. Integration of IT systems had high fidelity and minimal workflow disruption.

Implications: Applying implementation research to systematically evaluate the implementation quality of implementation strategies during the pilot optimises their effectiveness, feasibility, and adaptations.

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Intrinsic Capacity Promotion in Primary Care for the Frail (IMPACTFrail) Pilot in Polyclinics: Challenges and Enablers

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Background and Objectives: IMPACTFrail addresses early functional decline among mildly frail older adults and is piloted at five polyclinics across three healthcare clusters. IMPACTFrail screens for intrinsic capacity deficits (vision, hearing, mobility, vitality, cognition, psychological well-being), provides clinical assessments, and personalised referral pathways. Barriers and facilitators to novel programmes are often examined at the end of implementation, limiting timely adaptation. Our study aims to identify challenges and enablers during the pilot's initial six months to inform ongoing adaptations.

Methods: We purposively sampled and interviewed family medicine specialists leading implementation (n = 4), and frontline nurses (n = 8) or care coordinators (n = 4). A pragmatic analytic approach was adopted. Two researchers independently coded verbatim transcripts deductively using implementation science frameworks, with outcomes such as acceptability (implementers' satisfaction with programme), implementation (ability to deliver programme as intended), and practicality (ability to sustain the programme with current resources). Outcomes were based on implementation science literature on feasibility progression. New codes were developed inductively, and findings were synthesised using Framework Method.

Results: The programme's alignment with the National Frailty Strategy was a key facilitator that promoted acceptability. Regarding implementation, the co-development of the programme with implementation science researchers at the outset was a key enabler to being able to integrate the new care services with existing clinical workflows. However, operational and physical infrastructural challenges impeded volume of patients screened. Perceived challenges that affected practicality were competing priorities with other primary care programmes for chronic disease and mental health management. Findings informed adaptations that improved patient reach, clarity of roles among providers, and resource management.

Implications: This study provides insights into factors influencing real-world implementation of IC-based care in primary care in Singapore and findings will inform both ongoing adaptations and implementation strategies for a further large-scale study.

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Co-Development of a Novel Healthcare Programme in Primary Care in Singapore to Manage Early Functional Decline

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Background and Objectives: Functional disability among older adults is associated with adverse health outcomes, and strains health systems. While managing functional disability is key to enabling healthy and independent lives, primary care lacks a structured approach to addressing early-stage functional disability. Our study describes the co-development of an intrinsic capacity (IC) identification and management programme in primary care conducted between the research team and stakeholders from Singapore's three Regional Health Systems cluster (clinic leadership, allied health, operational staff, research directors, and older adults). Co-development of complex interventions promotes contextual fit, and enhances likelihood of adoption, sustainment, and scaling.

Methods: First, core functions of the programme were based on international frameworks and local health policies. Second, we conducted activities guided by the Framework of Actions for Intervention Development. These included identifying stakeholders, formation of implementation core teams, literature reviews, primary data collection, creation of a programme logic model, and refinement prior to piloting. Programme description was done using TIDIER checklist.

Results: An implementation intervention to screen and manage IC in primary care was co-developed based on guidance from the World Health Organization Integrated Care for Older People framework and Singapore's National Frailty Strategy. Logic models and programme descriptions of core functions and adaptations were co-developed with each cluster, comprising IC screening for mildly frail older adults, confirmatory clinical assessment, and establishment of referral pathways. Interviews, focus groups, and consensus-building exercises guided by implementation science frameworks and tools, informed the tailoring of programme delivery to each cluster's contextual constraints and enablers, while maintaining core function fidelity across sites. For instance, operational constraints influenced tailoring of delivery sequencing into single and two-visit models. Staffing and resource considerations also influenced whether care coordinators or care managers conducted IC screening.

Implications: Documenting the steps of programme co-development and programme description promote transparency and replicability.

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Two Sides of Healthy Ageing: Intrinsic Capacity and Frailty Among Elderly in India

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Background and Objectives: India's longevity is rising rapidly, with 104 million people aged 60+ years (Census 2011). Healthy ageing emphasizes building reserves before the onset of disease. Ageing can be understood through two perspectives: intrinsic capacity—the everyday abilities to think, move, see/hear, feel, and nourish oneself—and frailty—the progression toward vulnerability when these reserves diminish. Both are central to the World Health Organization's healthy-ageing agenda, yet their interrelationship in India remains underexplored at scale. This study examines whether higher intrinsic capacity is associated with lower frailty, and whether this association varies by sex, age, education, residence, and household wealth. The objective is to generate evidence for prevention, equity-focused interventions, and palliative responses.

Methods: Data are drawn from the Longitudinal Ageing Study in India (LASI Wave 1, 2017–18), restricted to individuals aged 60 years and above (N=28,500). Intrinsic capacity is constructed across five domains: cognition, locomotion, vitality (BMI), sensory function (vision and hearing), and psychological health. Frailty is assessed using the Fried phenotype, encompassing weakness, slowness, shrinking, exhaustion, and low activity. Survey-weighted ordered logistic regression was applied to assess associations.

Results: Intrinsic capacity was strongly and inversely related to frailty: each 1-standard deviation increase was associated with 72% lower odds of being in a higher frailty category (OR=0.28; 95% CI: 0.21–0.36). The prevalence of frailty was 15.6% (pre-frail 59.7%; robust 24.7%). Compared with ages 60–64, odds of frailty increased at 70–74 (OR=1.87; 95% CI: 1.42–2.45), 75–79 (OR=2.47; 95% CI: 1.91–3.21), and 80+ (OR=4.40; 95% CI: 3.08–6.30). Education of 6–10 years was protective (OR=0.82; 95% CI: 0.67–0.99), while women showed slightly lower odds (OR=0.85; p=0.062).

Implications: Findings highlight the centrality of intrinsic capacity and life-course determinants. Strengthening nutrition, promoting physical activity, early screening, and targeted support for disadvantaged groups can delay frailty and reduce inequalities in India's ageing population.

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Changes in Intrinsic Capacity and Risk of Disability and Cardiovascular Disease in China and Mexico: Two Cohort Studies

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Background and Objectives: Intrinsic capacity (IC), defined by the World Health Organization as the five-domain composite of physical and mental capacities, supports functional ability and healthy ageing. We examined whether changes in IC could predict later disability and cardiovascular disease (CVD) in China and Mexico.

Methods: We analysed data from the China Health and Retirement Longitudinal Study (CHARLS) and Mexican Health and Aging Study (MHAS). Participants aged ≥50 were free of ADL, IADL, and CVD disability at baseline. IC was measured in five domains (cognition, psychological well-being, locomotion, sensory, vitality) and classified as low (0–4), medium (5–8), or high (9–10). We examined four IC transitions (high to medium/low, low to medium/high, medium to high, medium to low) over 2-year intervals (Mexico: 2001–2003; China: 2011–2013), with stable groups as references. Associations with incident ADL, IADL, and CVD (to 2018) were estimated using Cox models adjusted for demographics and behaviours.

Results: In MHAS (N=6,561), improvement from low to medium/high IC was linked to lower risks of ADL limitation (95%CI 0.58–0.84, p<0.001), IADL limitation (95%CI 0.44–0.70, p<0.001), and CVD (95%CI 0.49–0.91, p=0.011). Medium to high IC also reduced IADL risk (95%CI 0.20–0.81, p=0.010), while medium to low increased IADL risk (95%CI 1.07–1.70, p=0.010). In CHARLS (N=1,175), patterns were consistent though less precise: medium to high lowered IADL risk (p=0.046), with similar but nonsignificant trends for ADL and CVD; medium to low suggested higher risk (HR=1.70), though confidence intervals were wide.

Implications: Across two national cohorts, IC improvement was linked to lower disability risks and CVD, whereas IC decline signalled vulnerability. Monitoring IC trajectories may reveal early warning of decline. If corroborated, integrating IC assessment into routine care with multidomain interventions may help preserve capacity and delay adverse outcomes.

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Emergency Mental Health Protocols for Elders in Long-Term Care: A Qualitative Policy and Implementation Analysis

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Background and Objectives: Mental Health Emergencies in long-term care(LTC) encompassing suicidality, agitation, and delirium, place elders and the care staff at significant risk. These protocols exist but they fail at the point of care due to unclear escalation pathways and confusion and inconsistency in implementation. This study examines and analyses how emergency mental health (MH) protocols are framed in policy and presented in practice with the aim of developing an implementation-ready user manual for LTC facilities in Singapore and India. This qualitative study explores how mental health emergencies are currently managed in Indian LTC facilities and it aims to develop a field-ready user manual to bridge any gap between policy and practice.

Methods: Data sources include policy document reviews, semi-structured interviews (n ≈ 35) and observations of emergency drills, analysed using the Framework Method and guided by the Policy Triangle and CFIR.

Results: The findings will highlight the gaps in escalation pathways and necessary training while offering solutions that are context-sensitive and scalable.

Implications: By situating India's experience alongside Singapore's integrated LTC model, the study aims to generate transferable insights for Asia. Outputs include a protocol checklist, a 90-minute drill script, and a practical user manual to enhance safety and dignity in elder care.

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Financial Burden of Late-Life Depression in India: Insights from LASI Wave-1 (2017-18)

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Background and Objectives: Depression is a leading contributor to the global disease burden and is projected to rank first in disability-adjusted life years (DALYs) by 2030. With India's rapidly aging population, late-life depression has become a critical public health issue. This study examined the prevalence and financial burden of late-life depression in India and explored socioeconomic factors influencing vulnerability.

Methods: Data were drawn from Wave 1 (2017–2018) of the Longitudinal Aging Study in India (LASI). The analysis included adults aged ≥ 45 years and their partners. Descriptive statistics, chi-square tests, and relative risk models were used to assess the associations between depressive symptoms, education, and financial outcomes, particularly out-of-pocket expenditures (OOPE).

Results: Nearly one in five respondents (19.7%) reported feeling sad, blue, or depressed for two or more weeks in the previous year. Education showed a protective effect: individuals with primary education were 12.3% less likely (RR = 0.877) to report depressive symptoms than those with no education, while those with graduate and above education were 28.3% less likely (RR = 0.717) than those with primary education. Depression was also associated with higher OOPE, indicating a considerable financial burden on affected households.

Implications: The findings highlight the dual challenges of mental health and financial vulnerability among India's elderly population. Education emerged as a protective factor, while higher OOPE reflected the economic strain of untreated or prolonged depression. Policies should prioritize mental health screening, financial protection, and community-based geriatric care to reduce psychological distress and economic hardship in later life.

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Functional Ability and Mental Wellbeing: Relationship Between ADL and Depression Among Older Adults Across Countries

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Background and Objectives: Depression is a significant global health challenge, affecting 5% of adults, with a higher prevalence among females. It is a leading cause of disability, contributing to 97.5% of global disability. Among older adults, depression is driven by factors like chronic diseases, loss of income, isolation, and limited mobility. The impact of limited functional ability on the mental health of the elderly is understudied. The current study aims to assess the association of how limited functional ability affects the mental well-being of older adults with a primary focus on depression in developed and developing countries.

Methods: This study uses data from four longitudinal ageing surveys: India's LASI (2017-18), China's CHARLS (2018), England's ELSA (2018), and Brazil's ELSI (2019-21). Adults aged 45 and over were included after excluding cases with missing values. Centre for Epidemiological Studies Depression (CESD)-8 scale was utilized to measure the prevalence of depression.

Results: There is a huge variation in depression among older adults across different countries, with India at nearly 59% and Brazil at close to 25%. Around 17% of older adults in India and England have difficulty in performing Activities of Daily Living (ADL), 10% in Brazil, and 4% in China. Higher depression with ADL difficulty were observed, peaking in China at 73%. Increased odds of depression were observed among adults with ADL difficulty in all four countries under study.

Implications: The study underscores the importance of functional ability for mental well-being in later life, emphasizing the need for integrated elderly care that addresses both physical and mental health. Cross-national variations stress culturally sensitive approaches to mental health promotion, which are crucial for healthy aging and quality of life as global populations age.

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The Impact of Loneliness on Sleep Disturbances in Middle-Aged and Older Adults: Findings from Longitudinal Ageing Study

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Background and Objectives: Findings from Longitudinal Ageing Study in India (LASI Wave 1) Abstract Background Loneliness is increasingly recognized as a psychosocial determinant of health, with strong links to sleep disturbances among older adults. In India, evidence on this relationship remains limited.

Methods: This study explores the association between loneliness and sleep problems among middle-aged and older adults using nationally representative data from the Longitudinal Ageing Study in India (LASI). We used cross-sectional data from Wave 1 of LASI (2017–18), covering 72,250 individuals aged ≥45 years. Loneliness was measured using self-reported frequency of feeling lonely in the past week. Sleep problems were assessed based on difficulties in initiating or maintaining sleep. Multivariable logistic regression models were applied to examine the association between loneliness and sleep problems, adjusting for socio-demographic factors, health behaviours, and chronic conditions.

Results: Overall, 13% of respondents reported sleep problems, and 20.5% reported feeling lonely, with 13.3% reporting severe loneliness at least occasionally. Loneliness was significantly associated with higher odds of reporting sleep problems. Compared to those who rarely or never felt lonely, participants who felt lonely often had more than twice the odds of experiencing sleep disturbances (adjusted OR: 1.45; 95% CI: 1.42–1.59). The association persisted after adjusting for depressive symptoms, social support, and physical health conditions.

Implications: Loneliness is a significant psychosocial correlate of sleep problems among older Indian adults. Addressing loneliness through community engagement, social support interventions, and mental health integration into geriatric care may help improve sleep and overall well-being in India's ageing population. Keywords: loneliness, sleep problems, ageing, LASI, India

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Labour Market Outcomes of Older Adults with Hearing and Communication Disabilities in Indonesia

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Background and Objectives: While previous studies have examined older adults' employment, the intersection of multiple disabilities and employment remains understudied. This paper examines the prevalence of single and dual disabilities in hearing and communication, employment status and disability employment gap among Indonesians aged 60 and above. It also examines the relationship between this multidimensional disability and employment status.

Methods: Using the 2018 Indonesia Social-Economic National Survey data, disability is defined as having at least some difficulty in the hearing and communication domains, with five categories: dual severe disabilities, dual disabilities with at least some difficulty in one domain, hearing-only disability, communication-only disability, and no disability. Employment status is a binary outcome. Logistic regression assesses the associations, controlling for socio-demographic variables. Gender-specific barriers are examined using sex-disaggregated models.

Results: Disability prevalence in hearing and/or communication was 24.9% with a higher prevalence among females in all disability degrees. Employment rate was 56.8% for those without disability. The disability employment gap (DEG) was the smallest for hearing-only disability (16.6 percentage points) and the largest for those with dual severe disabilities (45.4 percentage points). Controlling for other variables, those without disability were most likely to be employed (OR=6.9), with males showing higher employment odds (OR=9.18), highlighting both the advantage of being disability-free and persistent gender inequality. Those with hearing-only disability had higher odds (OR=4.17), compared to those with communication-only disability (OR=1.41). Those with dual severe disabilities faced the lowest employment likelihood. Age shows a negative pattern in employment. Urban, higher education, divorced/widowed, and not household head were all associated with lower employment.

Implications: It demonstrates that hearing disability poses fewer barriers to employment than communication disability, while dual severe disabilities significantly limit employment opportunities. Targeted employment support services, gender-sensitive employment programs, and disability-inclusive social protection schemes are essential for enhancing employment outcomes.

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Understanding Factors Influencing Retirement Preferences Among Mature Radiation Therapists; A Mixed-Method Study

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Background and Objectives: Singapore revised its retirement policy to encourage older workers to stay in the workforce. Retaining mature Radiation Therapists (RTTs) can address the shortage of skilled staff and rising cancer treatment demand associated with population aging. This study aims to explore mature RTTs' perspectives on retirement.

Methods: 25 RTTs, aged 40 to 63, from two restructured hospitals in Singapore participated in a quantitative survey to understand how age, financial and workplace-related factors influence mature RTTs' retirement preference. Focus group discussion was conducted with 5 RTTs to further explore these challenges. Cross tabulation analysis to quantitative data and content analysis of qualitative data was applied.

Results: 44% of mature RTTs surveyed want to work beyond age 65. Positive intergenerational workplace relationships were significantly associated with delaying retirement (p=0.01). Ability to adapt to technological advancement (p=0.072), job satisfaction (p=0.097) and need to financially support one's family (p=0.089) showed marginal significance in delaying retirement. Consistent with existing literature, qualitative findings revealed age-related challenges such as physiological decline, and workplace-related factors – high physical work demand, poor psychosocial support and unclear career development plans, ageism – acting as facilitators to premature retirement. However, this study found that achieving financial adequacy and being emotionally unprepared can deter early retirement. Qualitative analysis offered deepened understanding of job satisfaction, revealing that feeling valued and making meaningful contributions were important motivators for continued workforce participation.

Implications: This study highlighted that workplace-related factors affecting the work environment have major influence in retirement intentions among mature RTTs. should foster positive intergenerational relationships and inclusive environments to address ageism and psychosocial needs. Providing skill development opportunities will help mature RTTs adapt to evolving work practices. Encouraging recognition and opportunities for meaningful contributions (e.g. mentorship) can motivate RTTs to extend their careers, benefiting both employees and health services.

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Deer Dialect: Promoting Chinese Dialect Heritage and Intergenerational Bonding Through a Volunteer-Powered Learning App

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Background and Objectives: Chinese dialects such as Hokkien, Teochew, and Cantonese are an integral part of Singapore's linguistic and cultural heritage, yet they face rapid decline among younger generations. The Deer Dialect initiative by Grow Education was designed to preserve this intangible heritage while promoting intergenerational bonding and productive aging. The project empowers seniors to become active volunteers, positioning them not only as cultural bearers but also as educators who guide younger learners in rediscovering dialects.

Methods: The initiative is centred on a mobile app that combines structured video-based lessons with interactive features. Learners progress through pre-made lesson videos and submit audio quizzes to practice pronunciation and usage. Seniors are engaged as volunteer mentors who review these submissions, provide feedback, and offer encouragement. A "SharePlay" function within the app allows seniors to connect with learners through real-time video calls for guided practice. Additionally, seniors facilitate in-person dialect sharing sessions using the app's resources, extending the learning experience beyond digital boundaries.

Results: Initial pilot runs demonstrated strong engagement across both seniors and younger participants. Seniors reported increased confidence, digital literacy, and fulfilment from contributing meaningfully as teachers. Younger learners expressed heightened appreciation for dialects and cultural stories shared by older volunteers. Early usage data indicates consistent learner participation and high retention when paired with active senior support.

Implications: Deer Dialect highlights a sustainable model for cultural preservation that simultaneously advances social objectives. By integrating seniors into the digital ecosystem as mentors, the project fosters intergenerational connections and combats social isolation among older adults. The initiative demonstrates how educational technology can be leveraged to preserve heritage languages while empowering seniors as active contributors to society. This dual impact on productive aging and aging with technology positions Deer Dialect as a replicable model for other minority or endangered languages.

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Ageing and Technology: Challenges Faced by the Aged Smallholder Farmers in Albania

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Background and Objectives: Fast ageing of the population in Albania after 1991 (when it changed its political system from a centralized economy to an open market one) has disproportionately affected rural and remote areas of the country exposing them to significant population loss, human capital deficit, and under-investment. Mass exodus of the rural youth to urban areas and abroad has negatively impacted agricultural sector's growth, agri-food system sustainability, labour productivity, and smallholder farmers' well-being. Literature suggests that application of innovative and digitalized tools provides a range of opportunities for them to move from labour-intensive to labour-saving technologies to maximize their returns and diversify their incomes. The main purpose of this paper is to examine the challenges faced by the aged smallholder farmers in Albania to adopt technology in their day-to-day farm activities.

Methods: This study employs primary and secondary data. Primary data are collected through semi-structured interviews held with 12 focus groups from 12 villages located in various parts of the country targeting a total of 85 smallholder farmers aged 65 – 80 years and in-depth face-to-face interviews with 7 representatives of the agricultural extension services (at local and national levels), private sector and civil society organizations during May – December 2024. Secondary data were collected from national statistics, studies, reports and other policy documents. Data collected were analysed through Atlas.ti version 5.

Results: Findings of this study show that aged smallholder farmers face a range of challenges to adopt technology in their day-to-day farming practices. These challenges differ by sex, ethnicity and location of their villages.

Implications: Findings of this study have some implications for Albania's digital agenda and the 'leave no-one behind' main principle of the 2030 Sustainable Development Agenda. Among others, the need for age-friendly digital tools is necessary to ensure inclusive engagement of the aged smallholder.

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Intrinsic Capacity, Human Capital, and Productive Ageing in India

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Background and Objectives: WHO defines healthy ageing as "the process of developing and maintaining the functional ability that enables wellbeing in older age. Participating in productive activity is key and it is linked with better wellbeing outcomes. Productive ageing refers to the contribution of the elderly to social and economic activities, including economic activities, formal and non-formal lifelong learning and volunteering, and different types of caregiving. In this study, we examine the association of human capital and intrinsic capacity on productive activities.

Methods: We used the data from the Longitudinal Ageing Study in India (LASI) Wave 1 for older adults age 60 and above. Measures of productive ageing include grand parenting, participating in household financial matters, taking care of household chores, cooking, shopping for the household and social engagement. Intrinsic capacity measures include handgrip strength and cognitive functioning. Measures of human capital include height (proxy measure of childhood nutrition), educational attainment and health measures. Bivariate and multivariate regression analysis were used to examine the association between intrinsic capacity, human capital and productive ageing among older adults in India.

Results: Around 14 percent of older adults aged 60 and above reported not participating in any of the productive activities. Further, human capital measures are such as educational attainment and height are closely and significantly associated with productive activities. The older adults in the secondary education category had better involvement in all productive activities. The association between intrinsic capacity measures such as handgrip strength and cognitive ability are closely associated with all productive activities and health measures such as multimorbidity, 1+ADL, 1+IADL and poor self-rated health are significantly associated with productive activities.

Implications: The findings suggest the significant role of human capital and intrinsic capacity in determining later life productive activities.

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