REVIEW
ARTICLE

SINGAPORE ANTI-NARCOTICS ASSOCIATION

THE EMERGING CHALLENGE OF LATE-LIFE SUBSTANCE USE IN SINGAPORE

BY LIANG SUET LAY, RESEARCH EXECUTIVE, SINGAPORE ANTI-NARCOTICS ASSOCIATION

I. Introduction

Singapore is ageing rapidly. According to the data from Department of Statistics Singapore, in 2025, about one in five residents was aged 65 years and above. By 2045, this figure is expected to rise to nearly one in three (Yap et al., 2011). While longer life expectancy reflects improvements in healthcare, it also presents new challenges that extend beyond chronic disease and dementia. One emerging issue receiving relatively little attention is substance use among older adults.

Traditionally regarded as a youth-centric issue, drug interventions have largely focused on adolescents and working-age adults (Crome et al., 2009). However, global data proves that addiction does not disappear with age; older adults remain susceptible to substance misuse, a trend that is rapidly growing due to shifting demographics and evolving social norms (Crome et al., 2009). Although Singapore has not experienced the same magnitude of late-life illicit drug use reported in some Western countries, Central Narcotics Bureau (CNB) data demonstrates a sustained baseline of drug abusers aged 60 and above: registering 253 in 2021, climbing to 342 in 2022, 364 in 2023, peaking at 380 in 2024, before a slight dip to 369 in 2025.

Unlike younger adults, substance use in older persons presents differently, carries greater medical risks, and requires integrated approaches involving healthcare, social care, and community support (Lofwall et al., 2005). Preparing for this issue now enables practitioners and policymakers to intervene earlier, minimise harm, and promote healthier ageing.

II. Why Older Adults are Different: Trajectories and Vulnerabilities

Older adults do not simply represent "older versions" of younger substance users. The interaction between biological ageing, psychological changes, life-course trajectories, and evolving social circumstances creates a distinct profile of vulnerability. By exploring these distinct dimensions of vulnerability alongside the specific behavioural trajectories of older individuals, practitioners can better comprehend how substance use manifests covertly within this demographic and why standard intervention strategies often fail to address their distinct needs.

Understanding Late-Life Substance Trajectories

Defined by the timeline and context of an individual's substance use, we can categorise late-life substance abusers into **lifelong users** who are ageing with long-term addiction because of their greater acceptance of substance use in their youth (Specht et al., 2021; Choi et al., 2018; Wu et al., 2011), **late-onset users** who turn to substances for the first time in old age to cope with acute life crises, and **re-initiators** who return to substance use after decades of mid-life abstinence (Lofwall et al., 2005). Identifying a senior's specific pathway allows healthcare and social care providers to move past generic stereotypes, anticipate unique physiological risks like the "tolerance trap," and design highly personalized, effective treatment plans.

Understanding Late-Life Vulnerability

A. Biological Vulnerability and the "Tolerance Trap"

The ageing body processes substances differently from that of a younger adult. Progressive reductions in liver and kidney function slow metabolism, while decreases in lean body mass and total body water concentrate substances in the bloodstream, producing stronger physiological effects from smaller amounts (Kuerbis et al., 2014, Crome, 2013).

- **Lifelong Users vs. Ageing Physiology:** For continuous, lifelong users who have lived with dependence for decades, years of prolonged exposure accelerate biological ageing. This results in accelerated cardiovascular disease, liver dysfunction, and cognitive impairment compared to their peers (Kuerbis et al., 2014).

- **The "Tolerance Trap" for Re-initiators:** Older adults who resume substance use after many years of abstinence frequently fall into a dangerous "tolerance trap". Assuming their bodies can handle the same quantities consumed decades earlier, they return to previous consumption levels. Because physiological ageing has fundamentally altered their drug metabolism, this mistake results in severe intoxication, accidental overdose, or life-threatening complications (Ghodkhande et al., 2023).

- **Polypharmacy and Iatrogenic Risks:** This biological vulnerability is compounded by polypharmacy (the concurrent use of five or more medications). While clinically necessary for chronic illnesses, polypharmacy increases the risk of adverse drug interactions, cumulative toxicity, and accidental medication misuse. This is particularly dangerous for re-initiators, where exposure to prescribed opioids or sedatives for legitimate medical conditions can inadvertently reactivate previous addiction pathways (Mason et al., 2024).

B. Psychological Vulnerability: Coping with Later Life Crises

Later life is characterised by profound personal transitions. Rather than sensation-seeking, late-life substance use is predominantly motivated by attempts to manage psychological discomfort, chronic pain, loneliness, or sleep difficulties (Jones et al., 2023, Crome, 2013).

For **late-onset users**, the onset is often a coping strategy responding to acute life crises like bereavement, retirement, or a major medical diagnosis. This cohort views substance uses as functional self-medication such as relying heavily on prescribed opioids and sedatives to numb anxiety or unresolved grief. As they have no previous history of substance misuse or treatment, the problem may be overlooked until it becomes more severe (Kuerbis et al., 2014).

C. Social Vulnerability: Shrinking Networks and Hidden Risks

Social circumstances change considerably with age, shifting accountability structures and reducing informal monitoring.

- **Solitary Consumption:** Retirement removes workplace oversight and shrinking peer networks increase isolation. In Singapore, where the number of seniors living alone continues to rise (Ministry of Health, 2023), problematic substance can often go completely unnoticed. Unlike a younger adult whose deteriorating performance could be flagged by employers, a retired senior's use is likely to remain hidden until serious health crises emerge (Kuerbis et al., 2014; Royal College of Psychiatrists, 2015).

- **Generational Taboos:** Many older Singaporeans grew up during a period when substance use, and mental health problems were highly stigmatised. Deep feelings of shame and fear of judgement discourage them from discussing their struggles with family or healthcare professionals. Furthermore, seniors intensely value self-reliance, often choosing to manage their health problems independently before seeking professional help (Ghodkhande et al., 2023). Among vulnerable local older adults living alone, this preference for self-reliance has also been associated with delaying or avoiding formal healthcare until problems become more severe (Lee et al., 2020).

III. Why Late-Life Substance Use is Often Missed

Substance use among older adults rarely presents in stereotypical, obvious ways, making diagnostic tracking highly complex.

- **Diagnostic Overshadowing:** Older patients frequently present with non-specific clinical symptoms such as recurrent falls, poor balance, confusion, fluctuating cognition, insomnia, or uncontrolled hypertension. Clinicians routinely fall victim to diagnostic overshadowing, automatically attributing these symptoms to dementia, Parkinson's disease, frailty, or standard age-related decline rather than evaluating for substance or prescription misuse (Koechl et al., 2012, Crome, 2013).

- **The "Harmless Comfort" Fallacy:** It is not just professionals who miss the signs. Family members and caregivers frequently enable substance misuse by dismissing alcohol or sedative dependency as a "harmless comfort" in old age, operating under the ageist assumption that it is "too late" for treatment to matter (Crome, 2013).

IV. Clinical Opportunities and Barriers

Despite these systemic barriers to disclosure, older adults should not be viewed as poor candidates for treatment. Many are highly motivated to change because they wish to preserve their health, independence, cognitive abilities, and meaningful relationships with family (SAMHSA, 2020). Research also shows that, when treatment is tailored to their needs, older adults achieve outcomes comparable to - and often better than - younger adults, highlighting the value of age-sensitive, person-centred care (Moy et al., 2011).

At the same time, clinical pessimism remains an important but often overlooked barrier to effective care for older adults with substance use disorders. Some healthcare professionals may assume that older adults are unlikely to change long-established behaviours, have limited capacity to benefit from treatment, or are too frail to engage in rehabilitation. Others may mistakenly attribute symptoms of substance misuse - such as falls, cognitive impairment, sleep disturbances, or low mood - to normal ageing or chronic illness, leading to delayed identification and missed opportunities for intervention. These age-related assumptions can reduce screening, referral, and treatment efforts despite evidence that older adults respond well to appropriately tailored interventions (Moy et al., 2011; Kuerbis et al., 2014; Royal College of Psychiatrists, 2015; SAMHSA, 2020).

V. The Emerging Challenge of Health Literacy and Digital Misinformation

Modern late-life substance use also intersects with digital health literacy and the growing volume of misinformation in the online wellness space. Although Singapore seniors are becoming increasingly digitally connected, older adults with lower digital literacy are more susceptible to online false information (Institute of Policy Studies [IPS], 2021; Xie et al., 2022), including misleading health information, underscoring the need for interventions that strengthen both digital and health literacy.

- **The Wellness Paradigm Trap:** Older adults frequently seek relief from chronic pain, insomnia, and other age-related conditions through herbal supplements, cannabis-derived products, and other complementary therapies that are often marketed as "natural" wellness solutions. Because these products are commonly perceived as inherently safe, many users may be unaware that they contain pharmacologically active compounds capable of interacting with prescription medications such as anticoagulants, antihypertensives, antidepressants, and diabetes medications. Older adults, who commonly experience polypharmacy, are therefore at increased risk of clinically significant drug–supplement interactions and adverse effects (Agbabiaka et al., 2017).

- **Cognitive Vulnerabilities and Social Amplification:** Declining cognitive function and low medication literacy reduce a senior's ability to critically evaluate online claims. Furthermore, social networks act as echo chambers; health advice shared by trusted friends or family members via messaging applications is automatically perceived as credible, inadvertently spreading dangerous health misinformation and encouraging unverified self-medication remedies (Hu et al., 2024).

VI. Implications for Action

Recognising these challenges is only the first step. As Singapore prepares for a rapidly ageing population, the focus must now shift towards building systems that can identify, prevent, and respond to late-life substance use before serious health and social consequences occur. This means moving beyond youth-centred models of addiction to adopt age-sensitive approaches that acknowledge the distinct trajectories, vulnerabilities, and recovery potential of older adults. The following recommendations outline practical actions that practitioners and policymakers can take to strengthen Singapore's readiness for this emerging challenge.

A. For Practitioners

- **Enhance Screening Protocols**: Screening for alcohol, prescription medication misuse, over-the-counter products, complementary medicines and illicit substance use should become a routine component of geriatric assessments rather than being reserved for patients with obvious addiction concerns. Particular attention should be given to older adults presenting with recurrent falls, confusion, cognitive decline, sleep disturbances, depression, poorly controlled chronic disease, or repeated hospital admissions, as these symptoms may mask underlying substance misuse rather than normal ageing. Early identification allows intervention before preventable complications occur.

A. For Practitioners (continued)

- **Strengthen Medication Reviews and Polypharmacy Management:** Medication reviews should routinely include prescribed medicines, over-the-counter medications, herbal supplements, alcohol consumption, and other complementary therapies. Older adults are particularly susceptible to drug–drug and drug–supplement interactions, especially in the context of polypharmacy. Pharmacists, physicians, nurses, and social workers should work collaboratively to identify medication-related risks, monitor adverse effects, and educate older adults on the safe use of medications.

- **Create Safe Conversations that Reduce Shame and Stigma:** Many older adults hesitate to disclose substance use because of generational stigma, fear of judgement, and a strong desire to remain self-reliant. Practitioners should adopt trauma-informed, non-judgemental communication that normalises discussions about alcohol, medications, and substance use as part of routine health assessments and interventions. Building trust through empathic conversations about grief, loneliness, chronic pain, sleep difficulties, and emotional wellbeing may encourage earlier disclosure and engagement with support services.

B. For Policymakers

- **Integrate Service Infrastructure:** Integrate specialised addiction care directly with primary care, polyclinics, and existing community-based healthy ageing pathways where seniors naturally interface with the healthcare system.

- **Strengthen Workforce Capability:** Provide targeted training for social workers, healthcare professionals, and community care providers to recognise the distinct life-course trajectories (lifelong, late-onset, and re-initiators) and clinical presentations unique to older adults.

- **Expand Public Education:** Public health campaigns must move beyond youth-centric anti-drug messaging to actively address medication safety, critical health literacy, and digital wellness misinformation for seniors.

- **Invest in Local Research:** Fund domestic studies examining late-life substance trajectories, polypharmacy misuse, and health literacy specifically within Singapore's distinct multi-ethnic socio-cultural environment.

VII. Conclusion

As Singapore's population ages, the consequences of substance use in later life will increasingly extend beyond addiction into escalating healthcare utilisation, medication-related harm, and accelerated loss of independence. Older adults are a heterogeneous group whose usage is dictated by distinct life-course pathways and physical vulnerabilities rather than youthful experimentation. By systematically improving clinical recognition, enhancing critical health literacy, and embedding age-sensitive care into our national healthy ageing framework, we can support our seniors to age with true safety, independence, and dignity.

References

Agbabiaka, T. B., Wider, B., Watson, L. K., & Goodman, C. (2017). Concurrent use of prescription drugs and herbal medicinal products in older adults: A systematic review. *Drugs & Aging, 34*(12), 891–905. https://doi.org/10.1007/s40266-017-0501-7

Choi, N. G., DiNitto, D. M., & Marti, C. N. (2018). Older marijuana users' marijuana risk perceptions: associations with marijuana use patterns and marijuana and other substance use disorders. *International Psychogeriatrics, 30*(7), 979–990. https://doi.org/10.1017/S1041610217002794

Crome, I. (2013). Substance misuse in the older person: Setting higher standards. *Clinical Medicine, 13*(Suppl. 6), s46–s49. https://doi.org/10.7861/clinmedicine.13-6-s46

Crome, I., Sidhu, H., & Crome, P. (2009). No longer only a young man's disease — Illicit drugs and older people. *The Journal of Nutrition, Health and Aging, 13*(2), 141–143. https://doi.org/10.1007/s12603-009-0021-1

Ghodkhande, K. P., Choudhari, S. G., & Gaidhane, A. (2023). Self-medication practices among the geriatric population: A systematic literature review. *Cureus, 15*(7), e42282. https://doi.org/10.7759/cureus.42282

Hu, B., Liu, X., & Ju, X. (2024). Prevalence and intervention strategies of health misinformation among older adults: A meta-analysis. *Journal of Health Psychology, 30*(7). https://doi.org/10.1177/13591053241298362

Institute of Policy Studies. (2021, July). *Singaporeans' susceptibility to false information* (IPS Exchange Series No. 19). Lee Kuan Yew School of Public Policy, National University of Singapore. https://lkyspp.nus.edu.sg/docs/default-source/ips/ips-exchange-series-19.pdf

Jones, K. F., Beiting, K. J., Ari, M., Lau-Ng, R., Landi, A. J., Kelly, L., Pravodelov, V., & Han, B. H. (2023). Age-friendly care for older adults with substance use disorder. *The Lancet Healthy Longevity, 4*(10), e531–e532. https://doi.org/10.1016/S2666-7568(23)00174-5

Koechl, B., Unger, A., & Fischer, G. (2012). Age-related aspects of addiction. *Gerontology, 58*(6), 540–544. https://doi.org/10.1159/000339095

Kuerbis, A., Sacco, P., Blazer, D. G., & Moore, A. A. (2014). Substance abuse among older adults. *Clinics in Geriatric Medicine, 30*(3), 629–654. https://doi.org/10.1016/j.cger.2014.04.008

Lee, J. M. G., Chan, C. Q. H., Low, W. C., Kheng, H.L., & Low, L. L. (2020). Health-seeking behaviour of the elderly living alone in an urbanised low-income community in Singapore. *Singapore Medical Journal, 61*(5), 260–266. https://doi.org/10.11622/smedj.2019104

Lofwall, M. R., Brooner, R. K., Bigelow, G. E., Kindbom, K., & Strain, E. C. (2005). Characteristics of older opioid maintenance patients. *Journal of Substance Abuse Treatment, 28*(3), 265–272. https://doi.org/10.1016/j.jsat.2005.01.007

Mason, M., Pandya, K., & Lundberg, A. (2024). Older adult drug overdose: An application of latent class analysis to identify prevention opportunities. *Harm Reduction Journal, 21*(1), Article 61. https://doi.org/10.1186/s12954-024-00973-4

Ministry of Health. (2023, May 8). *Seniors staying alone* (Notice Paper No. 1861). Government of Singapore. https://www.moh.gov.sg/news-highlights/details/seniors-staying-alone

Moy, I., Crome, P., Crome, I. B., & Frisher, M. (2011). Systematic and narrative review of treatment for older people with substance problems. *European Geriatric Medicine, 2*(4), 212–236. https://doi.org/10.1016/j.eurger.2011.06.004

Royal College of Psychiatrists. (2015). *Substance misuse in older people: An information guide* (Faculty Report FR/OA/AP/01). https://www.researchgate.net/profile/Rahul-Rao-10/publication/339443032_Substance_misuse_in_older_people_an_information_guide_Older_Persons'_Substance_Misuse_Working_Group/links/5e52b9e4458515072db79164/Substance-misuse-in-older-people-an-information-guide-Older-Persons-Substance-Misuse-Working-Group.pdf

Specht, S., Braun-Michl, B., Schwarzkopf, L., Piontek, D., Seitz, N., Wildner, M., & Kraus, L. (2021). Substance use disorder and the baby boom generation: Does Berlin outpatient addiction care face a sustained change? *Drug and Alcohol Review, 40*(6), 979–988. https://doi.org/10.1111/dar.13245

Substance Abuse and Mental Health Services Administration. (2020). *Treatment Improvement Protocol (TIP) 26: Treating substance use disorder in older adults* (HHS Publication No. PEP20-02-01-011). U.S. Department of Health and Human Services. https://store.samhsa.gov/product/TIP-26-Treating-Substance-Use-Disorder-in-Older-Adults/PEP20-02-01-011

Wu, L., & Blazer, D. G. (2011). Illicit and nonmedical drug use among older adults: A review. *Journal of Aging and Health, 23*(3), 481–504. https://doi.org/10.1177/0898264310386224

Xie, L., Zhang, S., Xin, M., Zhu, M., Lu, W., & Mo, P. K. H. (2022). Electronic health literacy and health-related outcomes among older adults: A systematic review. *Preventive Medicine, 157*, 106997. https://doi.org/10.1016/j.ypmed.2022.106997

Yap, M. T., Kang, S. H., & Chua, C. S. (2011). *Scenarios of future population growth and change in Singapore* (IPS Update). Institute of Policy Studies, Lee Kuan Yew School of Public Policy, National University of Singapore. https://lkyspp.nus.edu.sg/docs/default-source/ips/ips-project_scenarios-of-future-population-growth-and-change-in-singapore_report.pdf