

## **Project Title**

Enhancing Active Ageing Centre's Capabilities to Support Seniors with Medication Management as A Community Through Persona Creation & Resource Building

## **Project Lead and Members**

**Project members:** Yap Li Wen, Tan Yeu Shiuan, Gabriel Kwek Wu-Xin, Pek Rui En Rachel, Wong Jiahui Gracia, Lim Pei Si Beverly, Chua Shi Jia, Lau Hui Ru, Teo Zhe Yu Isabel, Cody Chew Kai Ngee, Christin Chan Qi Fang, Cheryl Pua, Yap Yeow Tiong, So Man Shan, Michelle Hew, Rayna Suan, Dr. Ong Guan Hong, Zhang Yan

## **Organisation(s) Involved**

AWWA

## **Healthcare Family Group(s) Involved in this Project**

Allied Health

## **Applicable Specialty or Discipline**

Occupational therapists

## **Aims**

1. Gain insights on the profile and needs of community-dwelling seniors with chronic diseases in the area of medication management.
2. Develop resources for AAC to identify and support seniors with medication management needs.

## **Background**

See poster appended/ below

## **Methods**

See poster appended/ below

## **Results**

See poster appended/ below

## **Conclusion**

See poster appended/ below

## **Project Category**

Care Continuum

Social Care, Palliative Care

## **Keywords**

Poor Adherence to Medications, Suboptimal Chronic Disease Management, Health Within Communities, Medication Management Capabilities

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# ENHANCING ACTIVE AGEING CENTRE'S CAPABILITIES TO SUPPORT SENIORS WITH MEDICATION MANAGEMENT AS A COMMUNITY THROUGH PERSONA CREATION & RESOURCE BUILDING

## Project Team Members:

Yap Li Wen (AWWA Outsource Service, AWWA Rehab & Day Care Centre) | Tan Yeu Shiuan (AWWA Outsource Service) | Gabriel Kwek Wu-Xin (AWWA Outsource Service, SIT) | Pek Rui En Rachel (SIT) | Wong Jiahui Gracia (SIT) | Lim Pei Si Beverly (AWWA Outsource Service) | Chua Shi Jia (AWWA Outsource Service, AWWA Dementia Day Care Centre) | Lau Hui Ru (AWWA Outsource Service) | Teo Zhe Yu Isabel (AWWA Outsource Service) | Cody Chew Kai Ngee (AWWA Outsource Service) | Christin Chan Qi Fang (AWWA Outsource Service) | Cheryl Pua (AWWA CREST) | Yap Yeow Tiong (AWWA Active Ageing Centre) | So Man Shan (AWWA Active Ageing Centre) | Michelle Hew (AWWA Active Ageing Centre) | Rayna Suan (AWWA Active Ageing Centre) | Dr. Ong Guan Hong (PanCare Medical Clinic (Ang Mo Kio)) | Zhang Yan (AWWA Centre-Based Nursing, Senior Community Home)



## Background

Significant proportion of local seniors with chronic diseases have poor adherence to medications<sup>1</sup>. This contributes to suboptimal chronic disease management, increased risk of adverse health outcomes and unnecessary healthcare utilisation and costs<sup>2</sup>. Active Ageing Centres (AACs) are well-positioned to support seniors to manage their health within their communities.

## Project Objectives

1. Gain insights on the profile and needs of community-dwelling seniors with chronic diseases in the area of medication management
2. Develop resources for AAC to identify and support seniors with medication management needs

## Project Details

This project is a collaboration between various AWWA services (i.e. AAC, Outsource Service, Community Resource, Engagement and Support Team (CREST), Centre-Based Nursing (CBN)), Singapore Institute of Technology (SIT) and PanCare Medical Clinic (Ang Mo Kio).

## Participant Recruitment

Seniors were recruited from:

- a. AWWA AAC/CREST if found with any of the following risk factors for poor medication adherence<sup>3</sup>:
  - Stays alone
  - Has issue/s with short-term memory/medication management/mobility/health
  - Has known/suspected psychiatric condition/s
  - Has unstable medical condition/s
- b. AWWA CBN

## Data Collection

The OT team (Occupational Therapists and 2 SIT Year 4 Occupational Therapy students) conducted the following for each senior:

- a. Short Portable Mental Status Questionnaire (SPMSQ)<sup>4</sup> to screen for cognitive impairment,
- b. Brief Health Literacy Screening Tool (BRIEF)<sup>5</sup> to determine health literacy level,
- c. In-Home Medication Management Performance Evaluation<sup>6</sup> to identify risk factors for medication mismanagement, consolidate medications taken, and assess one's ability to self-administer medications.

A nurse and General Practitioner were consulted for medication supply and administration.

## Data Analysis

Data were synthesised to derive key characteristics of seniors with chronic diseases and varying medication management capabilities.

## Project Outcomes

- A total of 18 seniors (12 Females, 6 Males) were assessed:

Age	Referred to Occupational Therapist	Cognitive Impairment	Health Literacy	Prescribed Medications
Mean: 80 Min: 67 Max: 93	4 (22%)	Nil: 6 (33%) Mild: 8 (45%) Moderate: 4 (22%)	Limited: 17 (94%) Marginal: 1 (6%)	Mean: 10.5 Min: 1 Max: 18
<b>Common Medication Management Issues</b>		<ul style="list-style-type: none"><li>• Naming purpose of medications</li><li>• Reading labels</li><li>• Checking expiry dates</li></ul>		

- 3 personas were built based on cognition, health beliefs, and medication management capabilities:

	Coping Chanti	Inconsistent Ibrahim	Forgetful Fang Li
Cognition	<ul style="list-style-type: none"> <li>• Normal - mild cognitive impairment</li> </ul>	<ul style="list-style-type: none"> <li>• Mild - moderate cognitive impairment</li> </ul>	<ul style="list-style-type: none"> <li>• Mild - moderate cognitive impairment</li> <li>• Fair - poor insight</li> </ul>
Health Beliefs	<i>"It is important to take medications in the correct way."</i>	<i>"It is important to take all my medications."</i>	<i>"It is okay to miss one or two doses of medication."</i>
Medication Management Capabilities	<ul style="list-style-type: none"> <li>• Independent with/without pillbox</li> </ul>	<ul style="list-style-type: none"> <li>• Manages with weekly pillbox used not in accordance to days of the week</li> <li>• Misses doses at times if routine/ medication changes</li> </ul>	<ul style="list-style-type: none"> <li>• Frequently misses doses, sometimes for days</li> <li>• Has difficulties monitoring if medication has been taken</li> </ul>

- The OT team developed:

<p>1. AAC Workflow to flag seniors with potential medication management issues</p>  <p>Scan to see the Workflow</p>	<p>2. AAC Medication Management Screener</p>  <p>Scan to see the Screener</p>	<p>3. Toolkit to support seniors with cognitive, dexterity or vision impairments limiting medication management</p>  <p>Scan to see the sample of the Toolkit</p>
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## Conclusion

- Medication management is an integral element of health management, particularly for seniors.
- AACs can provide pivotal support to seniors to age well by proactively screening for medication management difficulties and working with community partners to provide the necessary support in a timely manner.

## Future Plans

- From November 2023 to April 2024, AAC staff is piloting the workflow and Medication Management Screener with residents during routine check-ins.
- The OT team will continue to work with AAC to review the utility and feasibility of these newly developed resources.

## References

1. Chew, S. M., Lee, J. H., Lim, S. F., Liew, M. J., Xu, Y., & Towle, R. M. (2021). Prevalence and predictors of medication non-adherence among older community-dwelling people with chronic disease in Singapore. *Journal of advanced nursing*, 77(10), 4069–4080. <https://doi.org/10.1111/jan.14913>
2. Walsh, C. A., Cahir, C., Tecklenborg, S., Byrne, C., Culbertson, M. A., & Bennett, K. E. (2019). The association between medication non-adherence and adverse health outcomes in ageing populations: A systematic review and meta-analysis. *British Journal of Clinical Pharmacology*, 85(11), 2464–2478. <https://doi.org/10.1111/bcp.14075>
3. Foley, L., Larkin, J., Lombard-Vance, R., Murphy, A. W., Hynes, L., Galvin, E., & Molloy, G. J. (2021). Prevalence and predictors of medication non-adherence among people living with multimorbidity: a systematic review and meta-analysis. *BMJ open*, 11(9), e044987.
4. Malhotra, C., Chan, A., Matchar, D., Seow, D., Chuo, A., & Do, Y. K. (2013). Diagnostic performance of short portable mental status questionnaire for screening dementia among patients attending cognitive assessment clinics in Singapore. *Annals of the Academy of Medicine, Singapore*, 42(7), 315-319.
5. Haun, J., Luther, S., Dodd, V., & Donaldson, P. (2012). Measurement variation across health literacy assessments: Implications for assessment selection in research and practice. *Journal of Health Communication*, 17(sup3), 141–159. <https://doi.org/10.1080/10810730.2012.712615>
6. Somerville, E., Massey, K., Keglovits, M., Vouri, S., Hu, Y. L., Carr, D., & Stark, S. (2019). Scoring, clinical utility, and psychometric properties of the in-home medication management performance evaluation (HOME-Rx). *The American Journal of Occupational Therapy*, 73(2), 7302205060p1-7302205060p8.