

## **MEDIA RELEASE**

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### **IMH & TAGGLE DEVELOP NEW MOBILE APP TO HELP CAREGIVERS IMPROVE COMMUNICATION IN DEMENTIA CARE THROUGH INTERACTIVE GAMEPLAY**

*Game imparts IMH's T.A.N.G.O communication strategy in managing communication challenges commonly encountered in dementia caregiving*

1. Most people associate dementia with memory loss, but individuals living with dementia may also display behavioural changes as the condition progresses. These behaviours can exacerbate caregiver stress and burnout, especially when caregivers do not understand why their loved ones are behaving in a particular manner or find it difficult to communicate with them. A new mobile app by the Institute of Mental Health (IMH) and Taggle aims to help caregivers better understand common challenging behaviours associated with dementia and manage them by communicating more effectively with their loved ones.
2. “Apart from memory problems, dementia can sometimes manifest as behavioural problems which can be related to the decline in the patients’ ability to communicate. What we see as a “behavioural” problem is actually an attempt to communicate their unmet needs with their remaining cognitive abilities,” says Dr Yao Fengyuan, Senior Consultant and Chief, Department of Geriatric Psychiatry, IMH.
3. Memory loss can result in individuals with dementia not remembering that they have just had a meal and repeatedly asking for food. Diminished executive function can also pose a challenge in problem-solving and frustrate them. For instance, they can become agitated when asked to choose dishes at an economical rice stall because they face difficulty in choosing, recalling and verbalising the right word. This is due to cognitive decline in the region of the brain that processes language, which leads to difficulty in expressing oneself when speaking.
4. “When they try to speak, they may use an incorrect word that starts with the same letter of the desired word like “floor” instead of “flower” or instead of saying “clock”, they may describe it as “the thing on the wall with the numbers”. When they are unable to verbalise their needs or find the right word, it frustrates them and affects their confidence. Caregivers may also find it difficult to communicate with them when such situations arise,” explains Dr Yao.
5. From their clinical observations, Dr Yao and his team identified five common behavioural issues that caregivers struggle to cope with. They are:
  - reversed sleep-wake patterns, where individuals are awake at night and sleepy in the day
  - refusal to shower
  - repeated requests for food and insisting that they are hungry when they have already eaten
  - growing suspicious of people around them and accusing them of things, such as theft, and mistreatment
  - agitation due to discomfort
6. “This knowledge gap of how to communicate effectively with persons with dementia often stems from a lack of understanding of these behaviours and that a different set of communication techniques is required. While we can offer medical advice and treatment, there

has to be a more creative way to impart communication techniques that caregivers can apply in their day-to-day routines to alleviate stress. This is why we initiated this app,” adds Dr Yao.

7. Mr Lee Seng Beo, Chief Executive Officer of Taggle, a health tech provider says, “In the Play2Care app, Taggle used technology to recreate interactive scenarios for caregivers to practice T.A.N.G.O, so that it becomes a natural way for caregivers to react when faced with the real situation. Understanding the reasons for the behaviour of their loved ones and how to cope with it will bring much needed relief to both caregiver and care receiver.”

### **T.A.N.G.O Communication Strategy**

8. T.A.N.G.O is a communication strategy developed by IMH’s clinicians based on their clinical experience. It involves:
  - **Tender approach:** Offer comfort and reassurance by being patient and supportive through expression and body language.
  - **Acknowledge:** Validate their emotions and unmet needs.
  - **No challenging:** Instead of challenging their views, do listen and orientate them to reality by providing cues and prompts about the current date, time and location.
  - **Get into simple conversation:** Accommodate their abilities by using familiar phrases and expressions, short and simple sentences, and give clear choices.
  - **Optimise environment:** Make environment adaptations to promote meaningful engagement, comfort and independence. For example, having large contrasting-coloured visual reminders in familiar places in the house such as clocks and calendar helps them stay connected with the present and be orientated to reality.
9. The Play2Care app is designed with Singapore’s context in mind with scenarios (e.g. HDB flat) and features (e.g. local cuisine) that caregivers will be familiar with. It uses gamification and a series of explanatory videos to help caregivers learn the T.A.N.G.O approach and apply the techniques in five scenarios that are commonly encountered in dementia caregiving. These scenarios were crafted based on the clinical team’s experience working with patients with dementia and their caregivers. The app also features mini games (e.g. “Spot the Difference”, “Find the Hidden Purse”) which caregivers can play with their loved ones and in the process, stimulate their cognitive skills.

### **Caregiver Involvement in App Development**

10. The app was developed with input from caregivers in its development stage. Taking into consideration that most caregivers are also older adults themselves, Play2Care incorporates elderly-friendly designs such as large font size, high contrast coloured buttons, and reduced speed in voiceover and animations.

Prior to the app launch, a small-scale pilot test was conducted with five caregivers. These caregivers took a Dementia Attitude Scale (DAS) survey that measures their dementia knowledge and comfort level in interacting with persons with dementia, before and after playing the game. The survey found that:

- a. 100% of participants saw an improvement in overall DAS scores
- b. 80% of participants felt more comfortable and at ease in their interactions with persons with dementia
- c. 60% of participants saw an improvement in their knowledge of the condition

11. "Increasingly, communication training requires a more interactive and dynamic teaching approach, where traditional modes of psychoeducation such as attending lectures are no longer sufficient," says Ms Ong Xin Ling, Senior Occupational Therapist, IMH. "We need a supplemental platform beyond the classroom setting for caregivers to practise and implement those communication strategies learnt. Play2Care helps to bridge this gap and allow caregivers to practise communication strategies in a safe and stimulated environment at their own pace and in the convenience of their own home."
12. Ms Ong adds, "The results from the pilot findings have been very encouraging and it signal the possibilities of integrating gamification in adult clinical education learning. We are excited for more caregivers to try the app and use it as a resource in dementia caregiving."
13. Play2Care app is now available for download on Google Play Store and Apple Store.



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**About the Institute of Mental Health (IMH)**

The Institute of Mental Health (IMH), a member of the National Healthcare Group, is the only tertiary psychiatric care institution in Singapore. Located on the sprawling 23-hectare campus of Buangkok Green Medical Park in the north-eastern part of Singapore, IMH offers a multidisciplinary and comprehensive range of psychiatric, rehabilitative and therapy services in hospital-based and community-based settings. The 2,000-bedded hospital aims to meet the needs of three groups of patients – children and adolescents (aged below 19 years), adults and the elderly. Besides providing clinical services, IMH dedicates resources to carry out mental health promotion and raising mental health literacy. IMH also leads in mental health research and training the next generation of mental health professionals in Singapore. For more information, please visit [www.imh.com.sg](http://www.imh.com.sg).

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**About Taggle Pte Ltd**

Taggle provides healthcare providers with the infrastructure and digital health services needed to automate the engagement, monitoring and management of their clients. Making care delivery easier and more effective for clinicians and patients alike. Working with clinicians from public healthcare institutions, together with researchers and collaborators, we have implemented the platform in Singapore and are now implementing it for various healthcare partners and governments. The TDHP (Taggle Digital Health Platform) facilitates communication and collaboration among healthcare providers, patients, and caregivers to ensure that everyone is on the same page and working towards common health goals.

<https://tagglehealth.com/>

## ANNEX

T.A.N.G.O is a communication strategy that can help caregivers improve communication in dementia caregiving. It stands for:

- **Tender approach:**
  - Offer comfort and reassurance by being patient and supportive through expression and body language.
- **Acknowledge:**
  - Validate their emotions and unmet needs.
- **No challenging:**
  - Instead of challenging their views, do listen, and orientate them to reality by providing cues and prompts about the current date, time and location.
- **Get into simple conversation:**
  - Make sure the person with dementia knows you are attempting to communicate with them
  - Adjust to accommodate abilities
  - Repeat and revise
  - Give the most important information at the end of the sentence
  - Use familiar phrases and expressions
  - Support choice making
    - The choice making continuum
      - Open ended question (eg. What do you want for lunch?)
      - Choice of two (verbal) (eg. Do you want to eat noodles or rice?)
      - Choice of two (visual cues) (eg. Do you want this or that?)
    - Observe behavioural indicators of choice
      - Move towards or away?
      - Accept or push away?
      - Positive or negative facial expressions?
      - Positive or negative vocalisations?
- **Optimise environment:**
  - Make environment adaptations to promote meaningful engagement, comfort and independence. For example, having large contrasting-coloured visual reminders in familiar places in the house such as clocks and calendar helps them stay connected with the present and be orientated to reality.