VIGNETTE DEVELOPMENT FOR MULTI-COUNTRY COMPARISONS OF LONG-TERM CARE FOR OLDER PERSONS

February 2023
Vignette development for multi-country comparisons of long-term care for older persons

Part of the ILC GA project “An international framework for multi-country comparisons of long-term care for older people”

February 2023
This page is intentionally left blank.
VIGNETTE TOOL DEVELOPED BY THIS STUDY

for the collection of standardised qualitative data on the ability of LTC systems to meet the needs of older persons across countries.

Stage 1

I'd now like to tell you the story of Mrs Tan, an older woman who is starting to have declines in her physical and cognitive functions. Then I will ask you some questions. Please answer these questions based on Mrs Tan’s perspectives and your understanding of the country’s long-term care system.

Mrs Tan (1) is 72 years old (2). She lives with family (3) in a 2-bedroom flat (4) she owns, located in Hougang (5), Singapore (6). Her husband passed away five years ago. She has some savings and financial support from her children (7). She has been living in the same home for about 40 years and has good relationships in the community. She can manage her daily tasks independently and attend social activities with her friends and family. She has high blood pressure and pain in the joints in the past two years. Currently, she is unable to walk for long, requiring a walking stick for longer distances. She is also getting more forgetful, taking more time to recall important events and frequently misplacing her valuables. Mrs Tan is feeling anxious about losing her ability to manage her tasks on her own. She is eager to maintain her current lifestyle.

Stage 2

OK, now we fast forward to see what happens to Mrs Tan in another three years. The same questions from Stage 1 apply here.

Mrs Tan’s health has become worse. She has fallen three times at home in the last one year. It has become much more difficult to get up from the chair, bed and toilet. She is still able to walk around but moves slowly and feels unsteady. She frequently has to be reminded to take her meals and showers. She also forgets important personal details like her own address and sometimes gets the days wrong. She has since stopped going out for her daily tasks and social activities. Mrs Tan’s children are uncertain about her care arrangement and worried about the cost. Thus far, they have been relying on CPF schemes (8) for health expenses. Mrs Tan prefers to stay home and does not wish to burden her children.

Stage 3

I will now tell you the last part of the story. Again, the same questions apply.

It has been eight years and Mrs Tan’s functions and memory have further deteriorated. She needs help in most of her daily activities including bathing, toileting, and dressing. She is starting to have difficulty eating as she constantly needs reminders on when to eat and she spills food and drinks. She is also occasionally quarrelsome and agitated in the evenings and refuses to bathe. Her children are stressed out and in need of more help.

Aspects in orange represent substitutable elements that allow tailoring of vignettes to different countries, cultures and settings. Descriptions used here are tailored to Singapore.

1 A common surname of ethnic majority persons in the country
2 Life expectancy of women at 60 in the country minus 15 (Appendix 4)
3 The most common living arrangement for this profile in the country
4 The most common housing type for the median income group in the country
5 The most common state / town / neighbourhood for the median income group in the country
The most common form of financial support for older persons. In Singapore, it is financial transfers from family members under the Many Helping Hands policy. Another example is the state providing pension/social security.

Public health financing schemes which are available to the median income group in the country

**INTERVIEW TOPIC GUIDE**

Same questions and prompts are applied across three stages of the vignette, with stage-specific prompts in italics.

**AVAILABILITY – Does long-term care (LTC) Exist?**

- What care, if any, is availability to support Mrs Tan's needs? This care could include formal services and informal care (family and friends, community).
  - Stage 1 / 2: What community-based services can Mrs Tan tap into?
  - Stage 3: What care might support Mrs Tan to still live at home? What residential institutional care is available to Mrs Tan?

- What care encourage prevention, reablement or rehabilitation?
  - Stage 1: What care can Mrs Tan get for her declining mobility/memory issues?
  - Stage 2: What care can Mrs Tan get to prevent falls or other adverse events?
  - Stage 3: What end-of-life and/or palliative care services are available and how are these provided? In what ways would care address nutritional needs and continence needs?

- What assistance, aids, devices, home modification, technologies or transport might Mrs Tan receive?

- What education and support programs are available for Mrs Tan or her caregivers?

  - Stage 2 / 3: What support or respite care is available and how is this provided?

**APPROACHABILITY – Can people get access to the care they need?**

- How would Mrs Tan and/or her caregivers become aware of the LTC options available to meet her needs?

- What is the process to request LTC services that meet Mrs Tan's needs?

- How is Mrs Tan's eligibility for the service assessed?

  - Stage 1 / 2 / 3: If Mrs Tan's needs change, can this service accommodate her changing needs or does she need to reapply for a new service?

- How long would Mrs Tan wait for the services she needs?

- How would these services differ across urban/rural areas?

**ADEQUACY – Does the LTC meet the person's needs?**

- How would Mrs Tan be assessed for whether her needs are met by services?

  - Stage 1 / 2: How are changes in Mrs Tan's care needs monitored?
  - Stage 3: What are the indicators that Mrs Tan might need institutional care?

- In what ways are the care strategies Mrs Tan would receive person-centred and goal-oriented?

  - Stage 3: How is Mrs Tan's quality of life assessed?

- How are Mrs Tan's needs for mental, emotional, social and spiritual wellbeing taken care of?

  - Stage 1 / 2: How will advanced care planning be discussed and documented? Who will introduce this discussion? How is guardianship determined?
• What opportunities are there to increase Mrs Tan’s social interactions?

• What is the level of family involvement in Mrs Tan’s LTC and the decisions about her care? How does family communicate with the care providers?

• What support would Mrs Tan’s caregiver receive? Is there emotional support for caregivers?

• How is Mrs Tan’s care integrated and coordinated with medical and health care?

ACCEPTABILITY – Is care appropriate, safe and non-judgmental?

• What guidelines/systems are in place to prevent and detect the possibility of Mrs Tan experiencing elder abuse?
  » Stage 1/2: What assessments would be made of the home environment?
  » Stage 3: What assessments would be made of the institutional environment? Is it safe? Is it dementia-friendly? When and how are chemical and/or physical restraints used and are there guidelines for their use?

• Are there protections for Mrs Tan against prejudice and discrimination on the basis of race/ethnicity, religion, gender, sexual orientation, or physical traits?
  » Stage 3: How is Mrs Tan’s satisfaction with services assessed?

• Do staff undergo cultural training and is care provided to Mrs Tan in a way that is culturally appropriate?
  » Stage 3: What range of professionals would be involved in Mrs Tan’s care? How are they trained?

• How much privacy, agency and autonomy are afforded to Mrs Tan?
  » Stage 1/2: Who makes the decision about care?
  » Stage 3: How are Mrs Tan’s privacy and dignity protected?

• Can Mrs Tan refuse services, or request something other than what has been offered (including change of service providers)? Does she have a say?

• How are Mrs Tan’s preferences regarding her care considered and accounted for? Can she/caregivers visit the service providers before deciding on using them?

AFFORDABILITY – How much does care cost / who pays?

• How would Mrs Tan afford her care?

• Please consider:
  (i) What the cost is;
  (ii) How the bill is broken down;
  (iii) How Mrs Tan will be paying for it;
  (iv) If there is any LTC scheme or subsidies apply

• What proportion (if any) is paid by government? Is it means tested?

• Is there financial support for Mrs Tan’s caregivers?

• Can Mrs Tan have the services if she can’t afford them?

ACCOUNTABILITY – What checks are in place?

• What are the mechanisms for inspections and compliance checks?
  » Stage 3: What signs would indicate that the care Mrs Tan is receiving is not meeting her needs in an acceptable way?

• What would Mrs Tan or her caregiver do if they were not happy with the care?

• Is there a complaint procedure / arbitrator / ombudsman?
Additional Questions

• What if this person is of a minority race?
• What if this person is a LGBTIQ?
• What if this person lives alone / lives with family (the opposite living arrangement from substitutable element (3))?

RECOMMENDATIONS ON HOW TO USE THE VIGNETTE TOOL

Sampling of key informants:

• Purposely sample experienced long-term care (LTC) experts who have BOTH the experience overseeing ground operations AND system perspective to the LTC sector in the country.

• Select key informants representing different settings in the LTC sector: community care, hospital care, residential care, policy making, etc. Prioritise those who have worked across / interacted with various organisations and services.

Format of data collection:

• Consider using a combination of semi-structured in-depth interviews (IDIs) and focus group discussions (FGDs).

• IDIs allow participants more time to reflect more deeply. FGDs stimulate discussion between participants with different disciplinary backgrounds.

• Interviewers may first conduct a few exploratory IDIs to map out Mrs Tan’s journey in a diagram, then conduct 1–2 confirmatory FGDs by inviting comments to the diagram.

Interviewers:

• Have two interviewers. One for scribing and one for leading the interview.

• Interviewers should have some basic understanding about health and social care in the country.

• Both interviewers to familiarise themselves with the interview guide.

Time management:

• Aim to keep the interview between 1.5–2 hours.

• For more effective time management, prioritise the conversation based on participant’s area of expertise.

• Allow participant(s) to take as much time as they need for the first questions (on care needs and available types of care), before asking other questions.

During the interview:

• For ice breaking, interviewers to self-introduce, explain the purpose of the interview and how the data will be used. Also invite participant(s) to self-introduce and briefly introduce the organisation(s) they are representing, if any.

• Show the vignette story stage-by-stage, one stage to a page.

• Let the participant(s) have the vignette on paper, for easy reference when answering questions.

• Record the interview if possible, and with consent.

• Create a relaxed and reflective atmosphere to the interview, by encouraging participant(s) to take time to reflect on what would happen (rather than should) happen to Mrs Tan.

• If participant(s) represent(s) certain organisation(s), clarify that the answers should be "based on the Mrs Tan’s perspectives and your understanding of the country’s LTC system" (as per instruction for Stage 1), not based on organisational perspective.

• When “should” answers are given, gently bring the conversation back to “would”, and acknowledge the gap.

• If the participant(s) ask for more information for the story, lead them into thinking about possible scenarios (“if this happens...”) and the ensuing consequences (“then that will most likely happen...”).
vignette development

- Discuss real-life examples when they provide insight into LTC context. Bring the conversation back to the case of Mrs Tan when sufficient understanding has been established.

- If participant(s) is/are going on a roll critiquing the system, acknowledge their frustration then clarify what most commonly does / does not happen in a case like Mrs Tan’s.

BEFORE USE OF THE VIGNETTE TOOL

- Fill in the adjustable, country-specific descriptions in the vignette.

- Forward-backwards translation of the vignette tool to local language(s).

- Train the interviewers for data collection.

- The vignette tool is an intellectual property jointly developed and owned by International Longevity Centre Global Alliance (ILC GA), Geriatric Education and Research Institute (GERI) and Tsao Foundation (TF). It may be used, reproduced, and distributed in its original form without permission.

- All modifications to the tool must be requested from the tool developers at julie.byles@newcastle.edu.au.

- We invite you to share your findings through the ILC GA at julie.byles@newcastle.edu.au.
AUTHORS AND ACKNOWLEDGEMENTS

Zoe Zon Be Lim
Mumtaz Mohamed Kadir
Julie Byles
Susana Conordo Harding
Chek Hooi Wong

We would like to thank ILC GA (International Longevity Centre Global Alliance) for supporting this study. We also thank all participants who have spent their precious time to participate in our surveys and interviews. Finally, we thank Tsao Foundation, GERI (Geriatric Education and Research Institute) and the University of Newcastle for funding this study.

SUGGESTED CITATION

# CONTENT

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIGNETTE TOOL DEVELOPED BY THIS STUDY</td>
<td>2</td>
</tr>
<tr>
<td>AUTHORS AND ACKNOWLEDGEMENTS</td>
<td>7</td>
</tr>
<tr>
<td>SUGGESTED CITATION</td>
<td>7</td>
</tr>
<tr>
<td>CONTENT</td>
<td>8</td>
</tr>
<tr>
<td>LIST OF TABLES, FIGURES, BOXES, AND APPENDICES</td>
<td>9</td>
</tr>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>10</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>12</td>
</tr>
<tr>
<td>1.1. Demand for long-term care is increasing globally, but care looks different locally</td>
<td>12</td>
</tr>
<tr>
<td>1.2. Current LTC classification systems</td>
<td>14</td>
</tr>
<tr>
<td>1.3. Comparisons of LTC systems based on the perspective of older persons: introducing the 6A framework.</td>
<td>15</td>
</tr>
<tr>
<td>1.4. Using vignettes to talk about long-term care</td>
<td>16</td>
</tr>
<tr>
<td>1.5. Study aim</td>
<td>17</td>
</tr>
<tr>
<td>2. METHODOLOGICAL CONSIDERATIONS</td>
<td>18</td>
</tr>
<tr>
<td>2.1. General principles for constructing vignettes</td>
<td>18</td>
</tr>
<tr>
<td>2.2. Validation of vignettes</td>
<td>18</td>
</tr>
<tr>
<td>2.3. Four-step methodology</td>
<td>20</td>
</tr>
<tr>
<td>2.4. Ethical Approval</td>
<td>21</td>
</tr>
<tr>
<td>3. IDENTIFICATION OF PROFILES FOR ARCHETYPAL OLDER PERSONS (STEP 1)</td>
<td>22</td>
</tr>
<tr>
<td>4. DESIGN OF THE VIGNETTE TOOL (STEP 2)</td>
<td>28</td>
</tr>
<tr>
<td>5. REVIEW &amp; REFINEMENT (STEP 3)</td>
<td>30</td>
</tr>
<tr>
<td>6. PILOT AND CRITICAL ANALYSIS (STEP 4)</td>
<td>35</td>
</tr>
<tr>
<td>7. DISCUSSION &amp; CONCLUSION</td>
<td>48</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>51</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>55</td>
</tr>
</tbody>
</table>
LIST OF TABLES, FIGURES, BOXES, AND APPENDICES

TABLES
Table 1 Percentage of populations aged 65 years or above ................................................................. 12
Table 2 The 6As Framework .................................................................................................................. 16
Table 3 General principles for conceptualising, designing, and using vignettes .................................. 19
Table 4 Selected factors and constructs to be used in the vignette and their rationale ......................... 26
Table 5 Descriptions to be used in the vignette across three stages ..................................................... 28
Table 6 Countries and representatives who had responded to the review rounds ................................. 31
Table 7 Respondents’ comments grouped into themes ........................................................................ 34
Table 8 Profiles of participants for Step 4 (pilot of the vignette tool) ................................................. 35
Table 9 Time taken by participants to answer questions in each stage ............................................... 37

FIGURES
Figure 1 Interaction between intrinsic capacity, environments, and functional ability .......................... 13
Figure 2 Framework for countries to achieve an integrated continuum of long-term care .................. 14
Figure 3 Functional disability profile 1: difficulty in mobility only ..................................................... 23
Figure 4 Functional disability profile 2: difficulty in mobility and transfers ......................................... 23
Figure 5 Functional disability profile 3: difficulty in all activities ........................................................ 24
Figure 6 The initial Andersen’s Behavioural Model of Health Services Use ....................................... 25
Figure 7 The Andersen’s Behavioural Model of Long-term Care Use .................................................. 25
Figure 8 World Health Organisation’s Public Health Framework for Healthy Ageing ............................ 27
Figure 9 Overview of long-term care trajectory for a typical older person in Singapore ....................... 39

BOXES
Box 1 Key questions for expert review ................................................................................................. 30
Box 2 Key themes on Facilitators (F) and Barriers (B) to 6As in Singapore’s LTC system .................. 40
Box 3 List of recommendations for using the vignette tool ................................................................ 46

APPENDICES
Appendix 1 The Global Deterioration Scale .......................................................................................... 55
Appendix 2 Symptoms of Mild Cognitive Impairment ......................................................................... 56
Appendix 3 Staging of dementia and time course of functional and cognitive disabilities for each stage of dementia ........................................................................................................... 57
Appendix 4 Life expectancy at 60 for females in sixteen ILC GA countries, as well as their corresponding age to be used in the vignette. ................................................................. 58
Appendix 5 Expert review survey form (full version for Review Round One) ........................................ 59
EXECUTIVE SUMMARY

Introduction

- Demand for long-term care (LTC) is increasing globally, but care needs and care services vary across different countries.
- Descriptions and comparisons between LTC systems usually focus on system characteristics, and rarely on their ability to meet the needs of older persons. Such analysis of the match between care and need requires appropriate tools to collect person-centred data across countries.
- Six person-centred domains (i.e., availability, approachability, adequacy, acceptability, affordability, accountability, known as “6As”) were identified. These domains were adapted from Levesque (2013) and assessed for face validity and relevance for LTC in different settings through Delphi surveys across the International Longevity Centre Global Alliance (ILC GA) countries.
- Vignettes can be a useful tool in collecting standardised person-centred data that is based on the 6As and for comparisons across countries, by setting a standard set of needs and assessing LTC access and use relating to those needs.

Study aim

- This study aimed to develop a vignette tool for collecting standardised qualitative data on the ability of LTC systems to meet the needs of older persons across countries.
- The study is part of a larger effort led by the ILC GA, which aims to develop an international framework for comparing LTC systems across countries based on older persons’ needs and perspectives.

Methods and findings

- Four steps have been employed by this study. Throughout all steps, we applied methodological considerations (Table 3) to align the vignette tool with our research aims.
- In Step 1, epidemiologically valid functional disability profiles were generated based on latent class analysis (LCA) of the World Health Organization Global Study on Ageing and Health (WHO SAGE, Wave 1) data for China, South Africa, and India. The three physical disability profiles were: “difficulty in mobility only”, “difficulty in mobility and transfers”, and “difficulty in all activities”. Two conceptual models were then selected, though literature search, to anchor the vignette story: WHO’s Public Health Framework on Healthy Ageing (2015) and Andersen’s Behavioural Model for Health Services.
- Three stages of functional decline were identified: “starting to deteriorate from high and stable capacity” (Stage 1), “declining capacity” (Stage 2) and “significant loss of capacity” (Stage 3). Corresponding to this, three stages of cognitive disability were added based on clinical staging of dementia: “mild cognitive impairment”, “moderate dementia” and “severe dementia”.
- In Step 2, a three-staged vignette of a typical older person based on the conceptual models and constructs identified in Step 1 (Table 4, Table 5) were developed. Descriptions to each construct was then assessed on standardisation (i.e., same wording used for all countries) or customisable to be country-specific (i.e., wording can be adjustable by individual countries), to strike a balance between the need for standardisation (i.e., to enable multi-country comparisons) and the need for authenticity (i.e., so that the story appears real and relatable to individual countries). Twelve descriptors were standardised, including six for disabilities (types, degree and duration of both physical and cognitive disabilities), two for
demographics (gender and marital status), two for social participation (across two stages) and two for preferred care arrangements (across two stages). Eight descriptors were country-specific including six for demographic profiles (surname, age, living arrangement, housing type, area of residences, name of country) and two for finances (personal financial resources and public health financing schemes) of the vignette character. We also developed questions and stage-specific prompts based on the 6As.

- In Step 3, representatives from 16 ILC GA countries were invited to review the authenticity, credibility, and relevance of the vignette tool. In total, nine countries (excluding study team from Singapore and Australia) responded to two rounds of review. Majority of the countries thought the vignette to be authentic, the factors and descriptions used to be credible and the questions relevant. Comments from country representatives were also used to refine the vignette tool. We concluded that the refined vignette tool was likely to be applicable to most countries, but not to a small number of countries with very different sets of challenges and understanding of LTC.

- In Step 4, pilot testing was done using semi-structured, in-depth interviews on a sample of target participants in Singapore. The tool was able to provide an overview of the LTC care trajectory of an older person, as well as data on the facilitators and barriers to 6As which may influence the care trajectory. The vignette was perceived as realistic and interesting by the participants. In cases where it was thought to be “incomplete”, the vignette could be completed by the participants with some guidance from the interviewers. On average, interviews lasting 1.5–2 hours could adequately engage participants for taking interest and reflect on the vignette. We produced a set of recommendations to time manage and provide good facilitation when using the vignette tool (Box 3).

**Conclusion**

- This is, to the best of our knowledge, the first vignette developed for the purpose of collecting qualitative data on LTC systems across countries. The vignette tool was able to get informants (i) interested in giving inputs on a country’s LTC system, (ii) respond to the standardised context, and (iii) reflect on what matters most to the older persons (person-centredness).

- The person-centred qualitative data could enable cross-country comparisons of LTC systems, based on the 6As which complements the more conventional, quantitative comparative approaches.

- The tool can be used for the next steps in ILC GA’s larger effort to develop an international LTC framework. However, further work may be needed to improve its applicability in countries with very different sets of challenges and understanding of LTC.


1. INTRODUCTION

1.1. Demand for long-term care is increasing globally, but care looks different locally

As the world’s population crossed the 8th billion mark on 15 November 2022, its continual growth is driven by longevity rather than fertility. According to the United Nations, the proportion of older persons aged 65 years or above is projected to increase from 10% in 2022 to 16% in 2050. By 2050, all regions in the world apart from Sub-Saharan Africa would be either ageing, aged or super aged (Table 1) [1].

Table 1 Percentage of populations aged 65 years or above. Yellow: “ageing” societies (proportion of older persons aged 65 years or above between 7%–14%). Orange: “aged” societies (15%–20%). Red: “super aged” societies (≥21%). Percentages extracted from [1] and definitions of ageing / aged / super aged derived from [2].

<table>
<thead>
<tr>
<th>Region</th>
<th>2022</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>9.7</td>
<td>11.7</td>
<td>16.4</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>3.0</td>
<td>3.3</td>
<td>4.7</td>
</tr>
<tr>
<td>Northern Africa and Western Asia</td>
<td>5.5</td>
<td>7.0</td>
<td>12.5</td>
</tr>
<tr>
<td>Central and Southern Asia</td>
<td>6.4</td>
<td>8.1</td>
<td>13.4</td>
</tr>
<tr>
<td>Eastern and South-Eastern Asia</td>
<td>12.7</td>
<td>16.3</td>
<td>25.7</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>9.1</td>
<td>11.5</td>
<td>18.8</td>
</tr>
<tr>
<td>Australia and New Zealand</td>
<td>16.6</td>
<td>19.4</td>
<td>23.7</td>
</tr>
<tr>
<td>Oceania excluding Australia and New Zealand</td>
<td>3.9</td>
<td>5.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Europe and Northern America</td>
<td>18.7</td>
<td>22.0</td>
<td>26.9</td>
</tr>
</tbody>
</table>

Ageing comes with an increased risk of age-related diseases and disabilities. According to the World Health Organization (WHO), approximately two out of every three older persons require long-term care at some point during their lives [3]. Long-term care (LTC) is defined as:

The activities undertaken by others to ensure that people with, or at risk of, a significant ongoing loss of capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms and human dignity [4].

The emphasis in this definition is functional ability, which is defined as the “health-related attributes that enable people to be and to do what they have reason to value”. Functional ability is determined by a person’s intrinsic capacity, the environments they live in and the interaction with these environments (Figure 1). For example, a person losing their mobility may have lower intrinsic capacity but their functional ability can be increased by having a wheelchair and living in a disability-friendly environment [4]. The provision of LTC is meant to optimise the level of

---

1 Intrinsic capacity comprises all the physical and mental capacities that a person can draw on. Important domains include a person’s locomotor capacity (physical movement); sensory capacity (such as vision and hearing); vitality (energy and equilibrium); cognition; and psychological capacity [4].
functional ability, and that may involve different types of activities. For the same person who is losing their mobility but without an enabling environment, a higher level of support is needed because they are unable to go to places independently. Environments are where people live and conduct their lives. Apart from physical environment, the socio-political, economic, and technological environments also play a part in determining older persons’ functional ability, as well as the types of LTC which are accessible. LTC for older persons living in different environments can look vastly different. In countries with more organised and regulated LTC, care can be provided across different settings such as nursing homes, community centres and private residences. It may also include transportation services, home cleaning services, visitor/companion volunteers, in addition to services to support daily activities and nursing needs. In this setting, family members may still play an important role in caregiving, but formal help is often available [5], [6].

In countries with little to no organised LTC, care is typically provided by self, family members or none at all. Poverty, unstable employment, and poor caregiving skills experienced by family members often affect older persons’ chance in accessing appropriate care or quality care. In extreme situations, older persons may be neglected or abused due to a lack of caregiving resources and/or understanding of the nature of age-related illnesses (e.g., dementia) [7].

Additionally, WHO does not define LTC solely based on service delivery but what is deemed important for people in fulfilling “basic rights, fundamental freedoms and human dignity”. In 2022, WHO launched a framework for helping countries to achieve an integrated continuum of LTC (Figure 2). This framework emphasises the importance of collaborative efforts from multiple stakeholders in delivering LTC that is “appropriate, affordable, accessible” and include elements of governance, service delivery, sustainable financing, workforce, information, monitoring and evaluation and innovation and research [8].

Figure 1 Interaction between intrinsic capacity, environments, and functional ability. Figure adopted from [3].
1.2. Current LTC classification systems

LTC systems are defined as “national systems that ensure integrated LTC that is appropriate, affordable, accessible and upholds the rights of older people and caregivers alike” [7]. WHO emphasised that the key elements and aspects laid out in the Integrated Continuum of LTC Framework (Figure 2) should be contextualised to country-specific needs, as each country has different levels of socioeconomic development, LTC orientation and health/social care system development [8]. This suggests that there is no single gold standard of LTC system, and countries would have different road maps to achieve an integrated continuum of LTC system. In general, governments of higher-income countries face the challenge of LTC reform to improve the quality of care, financial sustainability and integration with existing health and social care systems (e.g., [9]–[11]). Meanwhile, governments in lower-income countries face the challenge of creation of delivery systems that are not yet available (e.g., [12], [13]).

To date, most cross-country comparisons of LTC systems were conducted using system indicators and/or routinely collected quantitative data. For example, Kraus et al (2010) compared 21 European countries using scorings of system indicators (e.g., means-tested access, availability of cash benefits, public expenditure as a share of GDP) and quantitative data on the utilisation and financing of the LTC services [14]. Colombo (2012) expanded on this study, using LTC benefits and LTC coverage as the guiding criteria to group 31 OECD countries into three broad categories: universal coverage within a single scheme, means-tested safety net schemes and mixed systems [15]. Applebaum (2013) drew on both studies to produce five categories of LTC system based on system indicators: i) universal coverage; ii) mixed funding system; iii) no public insurance;
iv) few public funds, private providers developing; v) few services, no funding [16]. An updated LTC typology incorporating recent LTC reforms in 25 OECD countries (2021) continued with similar clustering methods based on system indicators [17].

To the best of our knowledge, no studies compared the performance of the LTC systems directly from the perspective of older persons. In fact, very few studies employed any performance indicators, apart from indirect indicators such as life expectancy at 65 and self-rated health status [17]. There is ample literature that investigated the impacts of policy interventions (e.g., support for informal caregiving) in reducing socio-economic inequities [18]–[20], but not directly on how well the older persons’ needs are met. Also, studies rarely compared countries outside of Europe and the Organisation for Economic Cooperation and Development (OECD).

1.3. Comparisons of LTC systems based on the perspective of older persons: introducing the 6A framework

In 2018, the International Longevity Centre Global Alliance (ILC GA)² embarked on a multi-country comparative study to classify LTC systems based on their ability to meet the needs of the older persons. The adoption of a patient-centred perspective is consistent with the recognition of the value for person-centredness in the wider healthcare narrative [21], as well as the principles explicated by WHO (alignment with “basic rights, fundamental freedoms and human dignity”) and other leading international LTC workgroups such as the European Partnership for the Wellbeing and Dignity of Older people (LTC to be “respectful of human rights and dignity; person-centred; preventive and rehabilitative; available; accessible; affordable; comprehensive; continuous; outcome oriented and evidence based; transparent; gender and culture sensitive”) [22].

The sixteen ILC GA member countries collaborated to develop and validate a framework to classify LTC systems based on person-centred domains for accessing and using LTC. These domains were adapted from the validated domains for patient-centred access to healthcare adapted from Levesque (2013), namely availability, approachability, adequacy, acceptability, affordability, and accountability [23]. The constructs in the framework have been developed through a Modified Delphi Approach with ILC GA country representatives who were participating members of a LTC workgroup. More details and methods for developing this framework is reported in the project proposal for the multi-country comparative study. In brief, there are six domains determining the experience and outcomes of accessing and using LTC for older persons:

1. Availability: What types of LTC exist?
2. Approachability: Can people get access to services?
3. Adequacy: Does the LTC meet the person’s needs?
4. Acceptability: Is care appropriate, safe and non-judgemental
5. Affordability: How much does care cost? Who pays?
6. Accountability: What checks are in place?

² The ILC GA is a multinational consortium consisting of member organizations, with a mission to help societies to address longevity and population ageing in positive and productive ways, typically using a life course approach, highlighting older people’s productivity and contributions to family and society as a whole. The ILC GA carry out the mission through developing ideas, undertaking research, and creating for debate and action, in which older people are key stakeholders. Currently, the ILC GA includes centres in 16 countries, namely Argentina, Australia, Brazil, Canada, China, Czech Republic, Dominican Republic, France, India, Israel, Japan, the Netherlands, Singapore, South Africa, the United States of America, and the United Kingdom.
Table 2 The 6As Framework. Adapted from ILC GA.

<table>
<thead>
<tr>
<th></th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(DIS)ABILITY</td>
<td>ABILITY TO SEEK CARE</td>
<td>ABILITY TO REACH CARE</td>
<td>ABILITY TO ENGAGE</td>
<td>VULNERABILITY/SENSIBILITY</td>
<td>ABILITY TO PAY</td>
</tr>
<tr>
<td>LTC SERVICES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVAILABILITY</td>
<td>What types of LTC exist?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community care</td>
<td>Residential care</td>
<td>Personal care</td>
<td>Safety</td>
<td>Costs</td>
</tr>
<tr>
<td></td>
<td>Aids and devices</td>
<td>Location</td>
<td>Wellbeing</td>
<td>Non-judgemental</td>
<td>Subsidies</td>
</tr>
<tr>
<td></td>
<td>Location</td>
<td>Workforce</td>
<td>Ability and activities</td>
<td>Cultural values</td>
<td>Financing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Autonomy</td>
<td>Language</td>
<td>Equity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dignity</td>
<td>Person-centred</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rights</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Satisfaction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subsidies</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Financing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Equity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLICY AND GOVERNANCE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A6</td>
<td>ACCOUNTABILITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What checks are in place?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>accreditation, quality assurance,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>complaints, consumer participation,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>information, and transparency.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.4. Using vignettes to talk about long-term care

Vignettes refer to “stimuli, including text and images, which research participants are invited to respond” [23], giving just enough information to stimulate thoughts or emotions, and various possibilities for the respondents to complete the ending [24]. It can be used as a standalone method or part of a survey or qualitative interview [25], [26]. Compared to direct questioning, vignettes offer a few advantages:

- **Relatability**: the realistic scenarios provided by vignettes make an issue or phenomenon under study more relatable, which enhances respondents’ ability to engage thereby providing better insight into their perceptions, beliefs and attitudes [27].

- **Consistency**: vignettes hold a ‘standardised’ context constant across all participants, thus enacting response consistency by removing the influence of extraneous variables when respondents are directed toward the same stimuli [28].

- **Selectivity**: vignettes present selected information to invite respondents to “fill in the gaps” of the unsaid, which gives insights into abstract or latent concepts as well as assumptions held by respondents.

- **Distance**: vignettes allow participants to speak on a third person’s account, as they could assume the perspective of the vignette character or that of other observed characters if needed. Fictitious scenarios also creates a safe distance to the story,
thereby providing a non-confrontational or less threatening way to explore sensitive topics and moral dilemmas (e.g., euthanasia, drug treatment decision-making) [29], [30].

- **Practicality**: vignettes offer a rapid method for collection of a relatively huge amount of data compared with traditional interviews or surveys [31].

- Therefore, vignettes can be used in:
  - **Quantitative research**: as anchoring vignette for comparing survey responses across different cultural settings, where participants’ answers (e.g., ratings for health states) are based on different cultural understandings [32]; or application of factorial design to check for differences in participants’ responses to different factors in the vignettes (e.g., ethnicity, age, sexual orientation) [33].
  - **Qualitative research**: as standalone or complementary tool to interviews, for comparing perceptions and attitudes between disparate groups, particularly in complex or controversial topics [34], [35].
  - Meetings or discussions, as ‘warm-up’ or icebreaking exercise [25].

LTC can be perceived differently across different settings and countries (section 1.1). Therefore, vignettes are commonly used in LTC research to create a ‘standardised’ context to anchor participants’ responses. They are more frequently used in quantitative research (e.g., discrete choice experiments), mostly to elicit opinions about their preferred care arrangement [36]–[40] or to assess awareness of LTC services [41]. However, the use of vignette in qualitative research is gaining popularity due to the need for more nuanced understanding of individual perspective on the value systems influencing healthcare decision-making and planning [35], [42], as well as system perspective on the country’s LTC service provision, care pathways and trajectories [43], [44]. International comparative studies using qualitative vignette are also emerging, allowing comparisons of practices in dementia care [45], national dementia strategies [46], palliative approach to dementia [47], attitudes toward institutionalised care [37], etc.

### 1.5. Study aim

The overall aim of this study was to develop a vignette tool for collecting standardised qualitative data from country experts on the ability of a country’s LTC systems to meet the needs of older persons. We sought to construct a vignette that can (i) collect qualitative data representing real-life experience of older persons with LTC needs; (ii) enable comparisons of LTC systems across countries; (iii) facilitate conversations about LTC systems in an authentic, engaging, and focused manner.

This is part of a bigger collaborative activity, which will employ the vignette tool to develop an international framework for describing, classifying and evaluating LTC systems across countries according to their ability to meet the needs of older people. The framework will also be used to identify examples of best practice and innovation in LTC systems, as well as the potential to transfer specific elements of LTC across different settings.
2. METHODOLOGICAL CONSIDERATIONS

There is no one standardised way to develop vignettes. A scoping review found a lack of reporting transparency on the methodology for vignette development [48]. We developed our methodology by understanding the general principles for vignette development and challenges presented on internal validity (section 2.1). Special attention was paid to vignette validation (as one of the components in vignette development (section 2.2). Based on the above-mentioned methodological considerations, a four-stepped methodology was developed for this study (section 2.3).

2.1. General principles for constructing vignettes

The function of vignettes is to present a hypothetical story that is realistic, relatable, and relevant to stimulate responses which could achieve the research aims [31]. Therefore, construction of vignette is guided by research questions, nature of the data sought and nature of participant groups [23]. Instead of one standardised method, literature discusses general principles for aligning vignettes with these important considerations. The task of alignment is an iterative process, where vignette developers have to “simultaneously looking outwards to conceptualise the research aims and inwards at the details of construction” [49]. Good methodological alignment contributes directly to the internal validity of vignettes, defined as “the extent to which vignette content captures the research topics under question” [49], [23].

A vignette framework was proposed by Skilling and Stylianides (2020), for purpose of helping researchers to develop vignettes which are methodologically consistent with research aims and objectives. In this framework, vignette development consists of three distinct yet inter-related phases: conception, design, and use of vignettes. For each phase, key characteristics are identified and general principles laid out [49]. Table 3 presents the phases, characteristics and general principles discussed by the authors. We also added to this framework general principles discussed in other studies, particularly those of Gray et al (2017) who examined methodological issues for vignette used qualitatively. Collectively, these principles guided the methodology undertaken for the conceptualisation and construction of our vignette tool.

2.2. Validation of vignettes

Essentially, the vignette developed should be able to produce relevant answers to the research questions. It should be [23], [52], [53]:

- **Authentic and coherent**: rooted in real-world and believable to the respondents
- **Relevant and important**: issues presented should be relatable and engaging to respondents
- **Clear and simple**: to prevent misinterpretations and information overload
- **Judicious detail**: just-enough information to convey a sense of the story and allow filling-in-the-gaps
- **Reflexive**: suitable for prompting reflections, aided by probes when necessary

Validation of vignettes is concerned with checking how authentic, coherent, relevant, etc, the vignette appears to the participant groups. Much has been said in the literature about the different validity or quality criteria applied in quantitative (Quan) versus qualitative (Qual) research paradigms [54]–[56], which also apply when establishing validity for vignettes used quantitatively versus qualitatively. In Quan vignette research, the vignette pre-defines the concepts to be measured upon which respondents’ answers would be interpreted. Therefore, validation seeks to ensure these pre-determined concepts are accurate, distinguishable and repeatable, akin
Table 3  General principles for conceptualising, designing, and using vignettes. Framework adapted from [49].

<table>
<thead>
<tr>
<th>Phase</th>
<th>Characteristic</th>
<th>General Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conception</td>
<td>Content of vignette</td>
<td>• Use evidence- or practice-informed content, e.g. existing literature, previous research, researchers’ or consultants’ personal or professional experiences, actual case studies [23].</td>
</tr>
<tr>
<td></td>
<td>Realistic and hypothetical</td>
<td>• Portray characters and scenarios which are hypothetical yet in accord with the prevalent patterns of the culture, so that they are familiar and meaningful to the respondents.</td>
</tr>
<tr>
<td></td>
<td>portrayals</td>
<td></td>
</tr>
<tr>
<td>Purpose / function</td>
<td></td>
<td>• Construction of vignette should be guided by research questions, nature of data sought and nature of participant groups.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If comparisons (e.g., different ethnicities used for the vignette character) are intended, all variations need a sound theoretical or empirical rationale, and other details in the vignette should be held constant to allow comparison of the intended factor [31].</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A vignette may function as the sole or complementary method in data collection. Vignettes used qualitatively are most commonly administered through individual interviews [48].</td>
</tr>
<tr>
<td>Design</td>
<td>Presentation: how much</td>
<td>• Information presented in vignettes is selective, and selectivity depends on the purpose / function of vignette.</td>
</tr>
<tr>
<td></td>
<td>detail?</td>
<td>• Brevity or incompleteness in the vignette allow exploration of respondents’ assumptions, e.g., about gender, race, sexuality or age.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Conversely, more details (e.g., on gender, race, sexuality, age) may be presented to direct respondents toward certain issues of interest.</td>
</tr>
<tr>
<td></td>
<td>En bloc vs. incremental</td>
<td>• An incremental vignette is useful to create more than one character or a particular plot development [31].</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• It may be too much to expect respondents to provide in-depth answers to ten questions in one vignette. In that case, incremental vignette may be used to spread out the questions [31].</td>
</tr>
<tr>
<td></td>
<td>Length</td>
<td>• Written vignettes usually range between 50~200 words. Visual tools may be single or multiple images (e.g., comics). Video vignettes are typically a few minutes long.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The length should consider maintaining interest, time for absorbing information and responding to it.</td>
</tr>
<tr>
<td></td>
<td>Settings and terminology</td>
<td>• Consider participants’ degree of familiarity with the vignette situation (settings/language specific to a particular participant group) and ability to adequately respond to it.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Also consider the appropriateness of using age-relevant and gender-neutral language.</td>
</tr>
<tr>
<td></td>
<td>Questions: how many?</td>
<td>• Ten in-depth questions are considered plentiful, with responses to the latter questions tailing off in both depth and detail [31].</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Overly long and overly complex vignette studies can put participants off and therefore impact on data quality [31].</td>
</tr>
<tr>
<td></td>
<td>Open- vs. close- ended</td>
<td>• Usually, open-ended questioning is applied in qualitative interviews and close-ended questioning applied in quantitative surveys [23].</td>
</tr>
<tr>
<td></td>
<td>questioning</td>
<td>• Open questions allow for more detailed, realistic, and independent reactions to the situation posed in vignettes.</td>
</tr>
</tbody>
</table>
### Table 3 — cont’d

<table>
<thead>
<tr>
<th>Phase</th>
<th>Characteristic</th>
<th>General Principles</th>
</tr>
</thead>
</table>
| Design      | “Should” vs. “would” vs. “might” questions | • “Should” questions may invite more idealistic answers, compared to “would” questions which are more pragmatic [50].  
• “Might” questions invite people to explore various possibilities and explanations for the scenarios [31]. |
| Participant perspective |                           | • Respondents could respond from a vignettes character’s perspective, another role, their own perspective, or a mix of perspectives.  
• First person perspective creates more empathy, whilst third person perspectives creates more distance [31].  
• how to interpret the responses when participants shift between discussing the vignettes as themselves, taking the perspective of the character in the vignette and commenting on what ‘ought’ to happen. [51]. |
| Use         | Instructions                   | • Provide clear instructions for delivering, and how to respond to, the vignette. |
| Timing and responses |                             | • Consider the phase within the research study the vignette will be given (e.g., as the starting point or to follow other data collection methods) and provide adequate time for responses. |
| Delivery mode and frequency |                                | • Consider how the vignette will be delivered (e.g., in person, on-line) and how this might influence completion and quality of responses.  
• Oral delivery may be appropriate but consider possible bias if read by the researcher or another.  
• Multiple and frequent use may lead to a lack of responses and risk ‘carry over’ effects. |

Validation of qualitatively-used vignette usually involve external reviews (using survey and/or qualitative data) and/or pilot testing of the vignettes, conducted with either experts and/or target participant groups [48]. In general, validation of vignettes asks two questions: (i) Does the vignette genuinely portray the phenomenon of interest? (ii) Do the questions measure the same phenomenon? [28]. In this study, we used both external reviews (with multi-country experts) and pilot testing (in Singapore only, with target participants).

#### 2.3. Four-step methodology

We designed a four-step methodology, following principles to ensure methodological alignment with research aims. For each step, we present the objective(s) or research question(s). Further details of each step will be presented in the subsequent four chapters.
Step 1: Identification of profiles for archetypal older persons

To identify (i) sociodemographic profiles, (ii) functional profile, as well as (iii) other key decision- or judgement-making factors influencing care seeking, care reaching and use of LTC, for a typical older person.

Step 2: Design of the vignette tool

To construct the vignette tool (i.e., both the story and the questions) based on findings from Step 1, and following general principles delineated in Table 3.

Step 3: Review and revision

To ascertain the internal validity of the vignette tool, through the following research questions:

i. Is the vignette storyline authentic / realistic in the different countries and viable / coherent given the character’s profile?
ii. Is the interpretation standardised across countries, and is the rationale sound?
iii. Are the questions relevant to / clearly reflecting the 6A framework?

Step 4: Pilot & critical analysis

To ascertain the applicability of the vignette tool, through the following research questions:

i. Was the time taken to present the vignette story and answer all questions feasible for the target participants?
ii. Could the vignette tool provide sufficient, relevant & useful data to describe the 6As of the country’s LTC system?
iii. Was the vignette method implemented as intended? This includes how well the vignette tool was delivered by interviewers, and received by participants, to assess the feasibility of this approach.

2.4. Ethical Approval

This study has been reviewed by the National Healthcare Group Domain Specific Review Board (the central ethics committee) for ethics approval (reference number 2021/00212).
In Step 1, we sought to identify (i) socio-demographics, (ii) functional profile, as well as (iii) other key decision or judgement-making factors influencing access and use of LTC, for the archetypal older person.

The archetypal older person

We used the concept of “archetype”, defined as “the most typical or perfect example of a particular kind of person or thing” by Oxford dictionary, to select a profile of older persons for the vignette. The archetypal profiles were identified using:

(i) Latent class analysis (LCA) to identify epidemiologically valid profiles of functional disability: using empirical data from the WHO Global Study on Ageing and Health (SAGE, Wave 1),

(ii) Literature review to select factors affecting access and use of LTC for older persons, as well as descriptions of LTC utilisation behaviours.

(i) Latent class analysis to identify epidemiologically valid profiles of functional disability

LCA was conducted to identify epidemiologically valid profiles in terms of disability in ADLs, using empirical data from WHO SAGE (Wave 1). The dataset was derived from nationally representative surveys conducted in persons aged 18 years or above (with an emphasis on populations aged 50+) in Ghana, China, India, Mexico, Russian Federation and South Africa between 2007 and 2010. For this study, we restricted the sample to persons aged 60 years or over (in keeping with the WHO definition of “older persons”) as well as to populations from only three ILC GA member countries (South Africa, China and India, n=23,567).

The LCA identified three classes for South Africa, five classes for India and three classes for China. For purpose of the vignette, the classes for China do not provide great descriptive value, identifying people with none, some, or all difficulties. South Africa and India both had classes where people had difficulties on mobility, including difficulties walking 100 metres and difficulties standing up from sitting down. Both these countries also had another class where, in addition to these mobility disabilities, the people also had trouble standing up from lying down, and toileting. In India, another class had difficulty with transfers, but not with walking. Across all countries there were some groups with difficulties on all items.

We selected three classes which are epidemiologically representative of South Africa and India, i.e., “difficulty in mobility only” (Figure 3), “difficulty in mobility and transfers” (Figure 4) and “difficulty in all activities” (Figure 5). These will be used to describe functional declines of the vignette character. More discussion of this step have been reported in a separate report [62].

(ii) Literature reviews to select relevant factors and attitudes / behaviours

We first conducted explorative searches in Google Scholar and PubMed using combinations and variations of the terms “long-term care” and “older persons”, to scan the literature for relevant concepts and models. After identifying relevant conceptual models, we conducted more targeted searches for evidence related to older persons’ attitudes and behaviours in relation to care seeking, as well as clinical presentations of disabilities.

Andersen’s Behavioural Model of Health Services Use & Long-term Care Use

We adopted the Andersen’s Behavioural Model of Health Services Use as the anchoring conceptual model for thinking about factors influencing care seeking, care reaching and use [63]. The initial
**Figure 3**  Functional disability profile 1 (INDIA): difficulty in mobility only. Figure adopted from [62].

![Graph showing functional disability profile 1](image)

**Figure 4**  Functional disability profile 2 (SOUTH AFRICA): difficulty in mobility and transfers. Figure adopted from [62].

![Graph showing functional disability profile 2](image)
Vignette development

**Figure 5** Functional disability profile 3 (SOUTH AFRICA): difficulty in all activities.

The initial Andersen’s Behavioural Model of Health Services Use (created in the 1960s) depicted three groups of factors determining use of health services: predisposing characteristics, enabling resources and need (Figure 6). These formed the three key domains of factors for describing the life context of the vignette character.

The initial model underwent a series of modifications based on subsequent waves of national health surveys [64]. It was also modified to enhance its explanatory power when applied to different health services, for example HIV care, psychiatric treatments, mental health services, etc. One of such modifications was for LTC use (Figure 7) [65].

We considered each construct in both versions of the model and decided to use a selected list of the constructs based on their alignment with our research aims. Certain descriptions were used for each selected construct based on stated rationale in Table 4. Further literature review was conducted to support each rationale that was used.

**WHO’s Public Health Framework for Healthy Ageing**

We also adopted the WHO’s Public Health Framework to guide the development of vignette story in three stages: “starting to deteriorate from high and stable capacity”, “declining capacity” and “significant loss of capacity” (Figure 8). With this conceptual framework, we were able to adopt functions-based, rather than disease-based, descriptions in the vignette, thereby bringing the focus to improving functional ability rather than absence of disease.
Figure 6  The initial Andersen’s Behavioural Model of Health Services Use. Figure adopted from [63].

<table>
<thead>
<tr>
<th>PREDISPONING CHARACTERISTICS</th>
<th>ENABLING RESOURCES</th>
<th>NEED</th>
<th>USE OF HEALTH SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic</td>
<td>Personal/Family</td>
<td>Perceived</td>
<td>(Evaluated)</td>
</tr>
<tr>
<td>Social Structure</td>
<td>Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Beliefs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 7  The Andersen’s Behavioural Model of Long-term Care Use. Figure adopted from [65].
Table 4 Selected factors and constructs to be used in the vignette and their rationale.

<table>
<thead>
<tr>
<th>Selected Construct</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical (degree of disability)</td>
<td>3 categories of physical disability: Difficulty in mobility only Difficulties in mobility and transfers only Difficulties in all activities</td>
<td>Based on findings from latent class analysis.</td>
</tr>
<tr>
<td>Cognitive (degree of disability)</td>
<td>3 categories of cognitive impairment: Mild cognitive impairment (MCI) Moderate dementia Severe dementia</td>
<td>Selection of stages was based on the Global Deterioration Scale, which is a widely used tool for staging dementia (Appendix 1). Descriptions of typical clinical presentations were based on the same scale, and patient-friendly medical websites e.g., Mayo Clinic (Appendix 2).</td>
</tr>
<tr>
<td>Duration of disability</td>
<td>Time lag between stages 1 and stage 2: 3 years Time lag between stages 2 and stage 3: 8 years</td>
<td>Time lag between onset of MCI and severe dementia is between 5–15 years (Appendix 3).</td>
</tr>
<tr>
<td>Predisposing factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographic characteristics</td>
<td>Age of vignette character is calculated using the formulae “life expectancy at 60 (LE60) for females in the country, subtracted by 15”</td>
<td>This study is interested in the older populations, thus LE60 (instead of LE at birth) was used. Vignette character’s age for 16 ILC GA countries is depicted in Appendix 4. Subtraction of 15 was used because the average expected life span between mid-stage of MCI and mid-stage of severe dementia is approximately 15 years (Appendix 3). The same formulae was applied universally to all countries because according to a systematic analysis using the Global Burden of Disease Study 2016, no specific patterns of between-country or between-region variations were found for disability-adjusted life years due to dementia [66]. Similar average age range was also reported from latent class analysis [62].</td>
</tr>
<tr>
<td>Gender: Female</td>
<td>Women have higher life expectancy than men</td>
<td></td>
</tr>
<tr>
<td>Marital Status: Widowed</td>
<td>To limit considerations on the need for long-term care in the vignette to one person</td>
<td></td>
</tr>
<tr>
<td>Social structure</td>
<td>Ethnicity: Majority group in the country</td>
<td>Issues faced by ethnic minorities are beyond the scope of this study.</td>
</tr>
</tbody>
</table>
Table 4—cont’d

<table>
<thead>
<tr>
<th>Selected Construct</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socioeconomic status</td>
<td>Socioeconomic status is described by financial resources, place of living and public health financing schemes</td>
<td>To represent the median-income group in the country.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social connectedness / network: Good neighbourhood with friends and social activities Having children</td>
<td>To facilitate a discussion on informal support from the community. One child is uncommon amongst older persons of this generation.</td>
<td></td>
</tr>
<tr>
<td>Enabling factors</td>
<td>Availability of support</td>
<td>Based on individual countries, as will be captured by the 6A questions.</td>
</tr>
<tr>
<td></td>
<td>Formal support: To suggest that services may be available</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informal support: To suggest that some form of informal support can be available from family or community in the early stages of disability</td>
<td>Based on stated preference of older persons to receive support from those familiar to them in earlier stages of disability &amp; not to overburden caregivers in latter stages [67].</td>
</tr>
<tr>
<td>Financial resources</td>
<td>Protection against risk: Public health financing schemes which is available to the median income and specific age group in the country</td>
<td>To reflect the ability of public health financing schemes in each country to protect people from catastrophic expenditure on long-term care.</td>
</tr>
</tbody>
</table>

**Figure 8** World Health Organisation’s Public Health Framework for Healthy Ageing.  
Figure adopted from [4].
In Step 2, we constructed the vignette tool (i.e., vignette story and accompanying questions) based on findings from Step 1, the 6A framework, and the general principles for ensuring methodological alignment in vignette development which will be alluded to in the following section.

Construction of the vignette story

Construction of the vignette story was guided by a set of general principles for vignette development discussed in the literature (Table 3) and the findings generated from Step 1. The study team (Singapore and Australia) went through an iterative process of discussion and refinement to decide on the descriptions be used for each construct or factor in the vignette, to ensure the alignment of the vignette to research aims. Table 5 reports the descriptions selected.

We produced a three-staged incremental written vignette for a hypothetical character who is female, widowed, ethnic majority and median income. The stages correspond to the three stages of functional decline in the WHO’s Public Health Framework. Most of the descriptions were standardised (e.g., degree and duration of disability) while some could be adjusted based on specific country context (e.g., age, ethnicity, financial resources). Lay language (rather than clinical terminology) was used to allow the tool to be administered to non-clinicians. Vignette character’s LTC needs were described based on functions rather than diseases, to align with WHO’s terminology about functional ability. The vignette contained “just-enough” information to both stimulate discussion and leave some gaps for the respondents to fill in.

Table 5 Descriptions to be used in the vignette across three stages.
Design of the accompanying questions

The questions were designed based on the 6A framework (Table 2), as discussed in section 1.3. Questions and prompts were developed based on these validated constructs.

We designed a total of 35 open-ended questions, some of them also have stage-specific prompts. While this is not in alignment with the guiding principle of “Questions: how many?”, which advised a maximum of ten questions, we felt that the 6A framework was important and had to be explored in-depth with the target participant. The feasibility of this long list of question will be tested in Steps 3 and 4.
5. REVIEW & REFINEMENT (STEP 3)

In Step 3, we sought to check the internal validity of the vignette tool by answering three research questions:

RQ1. Is the vignette storyline authentic / realistic in the different countries and viable / coherent given the character’s profile?

RQ2. Is the interpretation standardised across countries, and is the rationale sound?

RQ3. Are the questions relevant to / clearly reflecting the 6A framework?

The review process

Sixteen country representatives from ILC GA were invited to participate in reviewing the vignette tool. Round one was conducted in May–June 2022. Due to limited responses in round one, round two was subsequently conducted in July–August 2022, using vignette version 2.0 which was refined based on responses in round one. Country representatives came from varied professional backgrounds, including geriatricians, aged care leaders, academicians, researchers, and policy makers. Although they might not be directly involved in the LTC sector, they were deemed experts for the review because of their understanding of the lives of older persons in respective countries. Since this project was commissioned by ILC GA, the country representatives were aware of the research aims and the progress of this project.

Before the review survey were sent out, the country representatives were invited to a virtual meeting, where the study team explained the vignette tool and what was needed for the review. Then, a survey containing 17 open-ended questions was sent by email to the representatives. Box 1 contains the list

Box 1 Key questions for expert review.

Questions related to RQ1:
- Is the vignette storyline authentic / realistic in your country and viable / coherent given the character’s profile?
- How close does the vignette character represent the average older woman in your country?

Questions related to RQ2:
- What functional declines or deficits (if any) does the vignette character have at Stage 1 vs Stage 2 vs Stage 3?
- Does the vignette represent a credible set of needs, and a credible trajectory of change in needs?
- Does the vignette represent an authentic and believable profile of someone who would need and seek care?
- Does the vignette take account of important support structures which may help a person seek and receive care?
- Does the vignette represent a credible scenario in terms of access to care?
- What sort of care would you expect this person to receive at each stage of their journey?
- Is there any missing information that could create barrier to understanding the vignette?
- In what ways would you alter the substitutable aspects of the vignette to fit your country circumstances? Please identify substitutions.

Question related to RQ3:
- Are the questions helpful in providing information according to the domains of the 6A framework?
of key questions in the survey. Full survey form is available in Appendix 5. Country representatives were requested to fill in the survey, or to elect someone who they feel can fill in the survey and email it back to the study team.

Five countries (out of the sixteen member countries) responded in the first round of review, and six countries responded in the second round of review as shown in Table 6. Most countries did not complete all the review questions, and one country’s response (Canada) was excluded from the analysis due to a lack of relevance in the answers given. In total, seven (out of sixteen ILC GA) countries had responded. Combined with two countries already present in the study team (i.e., Singapore and Australia), the tool was reviewed by representatives from nine countries in total with 2 rounds of reviews.

| Table 6 Countries and representatives who had responded to the review rounds. |
|-------------------------------------------------|---------------------------------|---------------------------------|
| Review Round 1 | Review Round 2 |
| May – June 2022 | July – August 2022 |
| France | ✓ | ✓ |
| UK | ✓ | ✓ |
| Japan | ✓ | ✓ |
| South Africa | ✓ | ✓ |
| India | ✓ | ✓ |
| Dominican Republic | ✓ | ✓ |
| Canada | ✓ | ✓ |
| Israel | ✓ | ✓ |

**The refinement process**

We critically examined the written responses from the country representatives in both review rounds, guided by the three research questions. We grouped comments based on shared themes (Table 7), and used them to refine the vignette tool if they were not contradictory to the guiding principles that we followed (Table 3).

**RQ1. Is the vignette storyline authentic / realistic in the different countries and viable / coherent given the character’s profile?**

All countries except Israel and South Africa reported that the story was authentic and coherent. For Israel, the concern was that the vignette character in Stage 1 was too young, and the years of disability was too long. We investigated this concern by asking “do older persons in Israel have less years of age-related disabilities than other countries?”. To answer this, we used the evidence generated by Chang et al (2019), who developed a metric for measuring age-related disease burden at a population level using data from the Global Burden of Disease Study 2017. Compared to global average 65-year-olds, the equivalent age in terms of age-related disease burden (or “GBDage”) ranged from 45.6 years in Papua New Guinea to 76.1 years in Japan. The GBDage for Israel, Singapore and Australia were 74, 76 and 74 respectively [68]. This means at the population level, the older persons in Israel did not have lesser age-related disease burden. Therefore, the formulae used for calculating age in the vignette was left intact.
For South Africa, the concern about authenticity was related to contextual difference to the life of the vignette character. For example, the access to care would be hindered by violence and discrimination, and the financial resources would be affected by widespread unemployment. The respondent suggested adding these contextual details to the storyline. This suggestion was not adopted because they would not be applicable to context in other countries. However, we concurred that substantial contextual information may need to be added to the vignette (as suggested by the country representative) to improve on its authenticity. Further discussion is needed on this in the next phase of the study.

Respondents also gave suggestions to improve authenticity of the story, e.g., “81% of the older population lives with relatives” (Dominican Republic), “it is unlikely for the vignette character to live with her daughter and son-in-law” (France, Japan). These were used to revise the vignette (Table 7).

| Authenticity | • Most said that the storyline is authentic and realistic to the situation of older persons in their country.  
• A minority disagreed with reasons being (i) complexities in their country context aren’t represented, (ii) age of the vignette character is too young. |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Representativeness of the vignette character | • Most said the character is representative of the average older person in their country.  
• Some said “fairly close enough”.  
• Some said it is not representative of the “average” person in their county, or it is not possible to find an average person. |

**RQ2. Is the interpretation standardised across countries, and is the rationale sound?**

Most of the review questions were directed at answering RQ2, as it is important to examine if all countries consistently interpreted constructs used in the vignette as intended (i.e., as described in Table 4 and Table 5). We also examined the feasibility of using adjustable elements in the vignette.

Most countries were able to interpret the functional declines based on how we have designed them. Instead of using the language of functions (as designed), two countries (Japan, France) requested for the disease(s) to be named.

For needs factors, all countries except Israel and South Africa thought they were well represented in the vignette. The reasons cited (by Israel and South Africa) for a lack of credibility were the same reasons discussed in RQ1.

For predisposing factors, all countries agreed that they were well represented.

For enabling factors, countries had different opinions about what information needs be added, e.g., financial resources and taxation (France), role of non-governmental organisation (India), social benefits (Israel). Such information was purposely left out from the vignette, to allow respondents to fill in the gaps during data collection. Therefore, they were used to inform the questions but not to revise the content of the vignette.

Similar to RQ1, suggestions to improve the credibility of all these factors, e.g., “vignette character’s mental health should be highlighted” (India), were used to revise the vignette (Table 7).

All countries who answered the question on the feasibility of the vignette’s adjustable elements (France, India, Israel, Japan, UK) were able to produce country-specific descriptors for the adjustable components.
RQ3. Are the questions relevant to / clearly reflecting the 6A framework?

All countries apart from France answered yes to this question. France’s concern was that questions lack sufficient information on medical and social support for home care, ethical questions on who makes decision and legal protection schemes for people with loss of autonomy. These comments have been addressed in RQ2 and Table 7, i.e., they were intentional left out to create vignette incompleteness for country specific contexts.

| Needs factors          | • Most interpreted the vignette character’s needs according to how we have designed them.  
|                       | • Most agreed that these are credible and reasonable needs, except for one who said that the timeline is too long.  
|                       | • One suggested that there needs to be more clarity in some of the descriptions so as to avoid contradictions (e.g., if the character is already experiencing mental disorientation, does she still have the ability to feel like a burden to her family?).  
|                       | • One suggested to describe the vignette character’s mental health needs.  
| Enabling / Predisposing factors | • All agreed that these factors are authentic and believable.  
|                       | • Some recommended other factors to be added, for example more information on financial resources and support structure / care arrangement.  
| Substitutable parts    | • Most were able to substitute the parts of the story according to their country context.  
|                       | • A minority could not do it as they find the situation in their country too different from the vignette presented.  
| Access to care         | • Most provided appropriate responses about the type of care that the vignette character would receive in their countries.  
|                       | • A minority said that it is not possible to answer as the situation in their country is too complex, or that they need more information (e.g. about character’s diseases) before answering, or that they need an expert to answer.  

6A questions

| 6A questions | • Most reviewers agreed that that the questions reflected the domains of the 6A framework.  
|             | • Some suggested additional questions, as follows:  
|             | » Acceptability: Who makes the decision?  
|             | » Acceptability: What are the legal protection schemes for people with loss of autonomy?  
|             | » Approachability: How is LTC integrated with primary care?  
|             | » The difference between the typical, and the ideal care that we expect the person to receive at each stage.  

Table 7 Respondents’ comments grouped into themes.

**Income-Related**
More information was thought to be needed for the vignette character’s...
- Own financial resources
- Financial stability
- Description of money management
- Amount of rent paid
- Impact on taxation of the financial resources committed by the vignette character and his family
- Financial resources to assess the possibilities of home help
- How much money does the vignette character have? (Round 2)

What if the vignette character is...
- Dependent on spouse’s savings
- A homemaker instead of a retiree

**Living arrangement / Caregiving / Family**
- Possibility of daughter living with the older person is low
- More likely that the older person will live with son and his wife
- Caregiver needs more help at Stage 2
- Existence of family and presence of family at the home of older person need to be shown
- Primary and secondary family background / support should be described in the vignette
- More common for the older person to be living with relatives (Round 2)
- Do they have family members to provide informal care and advocate for them? (Round 2)
- Where does the older person live, does she own the home, and is it adapted to her needs? (Round 2)

**Other country-specific differentiations**
- Driving is more prevalent than public transport
- More likely that older person live in a house, not a flat
- Health checks usually occur once a year, unless the person has other health conditions
- Older person won’t be going to exercise class, but instead will be buying grocery, going to temple or yoga class
- Role of senior citizen organization and religious support group and their social workers should be described
- The older person should be younger (Round 2)

**Health-related**
- High incidence of NCDs resulting in higher incidence of functional decline at an earlier age
- More specific differences between Stages 2 (deteriorating IADL) & 3 (ADL majorly affected)
- Stage 2: Mrs Tan’s disorientation with time is in contradiction with her feeling like a burden to her daughter (I)
- Description of Mrs Tan’s anxiety or mental stress / depression
- Disease related comments:
  » Description of disability that resulted from the repeated falls
  » Description of medication management
  » For dementia: Medical diagnosis, response to medication
  » Use indices to show Mrs Tan’s condition e.g. Barthel Index for her physical function, MMSE for cognitive function
  » Explain why Mrs Tan can’t walk for long e.g. osteoarthritis
- What disease does she have? (Round 2)
- The description is functional but not diagnostic (Round 2)
6. PILOT AND CRITICAL ANALYSIS (STEP 4)

In Step 4, we pilot tested the vignette tool in a target population to examine its applicability based on three research questions.

RQ1. Was the time taken to present vignettes and answer all questions feasible for the target participants?

RQ2. Could the vignette tool provide sufficient, relevant & useful data to describe the 6As of the country’s LTC system?

RQ3. Was the vignette method implemented as intended? This includes how well the vignette tool was delivered by interviewers, and received by participants, to assess the feasibility of this approach.

Pilot of the vignette tool

Piloting aims to test the use of the vignette tool in the target populations. The study purposively sampled 1–3 key informants who are implementers with more than five years of experience in at least one of the four LTC settings: i) community care; ii) hospital; iii) residential care (nursing home / assisted living); and policy (home and centre-based).

Purposive sampling began with 21 potential participants in our sampling frame. After considering their profiles and potential for variation, we approached 8 potential participants across the four settings whom we considered to have: i) good understanding of realities experienced by older persons on the ground; ii) a systems perspective to the LTC sector in the country. One rejected the interview. Two participants (from the same organisation) were invited with the understanding that only one of them would be participating. Table 8 provides descriptions on the professional experience of the six participants.

Table 8 Profiles of participants for Step 4 (pilot of the vignette tool).

<table>
<thead>
<tr>
<th>LTC setting</th>
<th>Current career position and relevant experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>P01 Community care (home and centre-based)</td>
<td>Consultant in an eldercare family foundation. Experiences include as community-based social worker, counsellor, starting a care management team, and non-profit management.</td>
</tr>
<tr>
<td>P02 Community care (home and centre-based)</td>
<td>Senior social worker in an eldercare arm of a non-profit organisation. Experiences in multiple community-based organisations and residential care setting.</td>
</tr>
<tr>
<td>P03 Hospital</td>
<td>Specialist in one of the public hospitals, and part of the management for integrative and community care at the hospital.</td>
</tr>
<tr>
<td>P04 Community care (home and centre-based)</td>
<td>Director of the eldercare arm in a non-profit organisation. Experiences include as a physiotherapist.</td>
</tr>
<tr>
<td>P05 Residential care (nursing home)</td>
<td>Director of a nursing home. Trained as a nurse. Experienced in setting up and managing private and non-profit nursing homes.</td>
</tr>
<tr>
<td>P06 Policy</td>
<td>Part of the management team in a government agency which is responsible for coordinating and integrating eldercare services.</td>
</tr>
</tbody>
</table>
Interviews were conducted between 30 August 2022 – 17 October 2022. Each interview averaged around 2 hours (Table 9 for interview time spent for each participant, and breakdowns for each stage). In-depth, semi-structured interviews were conducted with these participants. The same vignette was used in all interviews. Participants were given a paper copy of the vignette story stage-by-stage. After each stage, the interviewers asked the relevant 6A questions from the vignette tool. All interviews were audio-recorded after obtaining consent from the participants.

Two interviewers were present in every interview. One of the interviewers lead the discussion, while the other was scribing to ensure that all relevant questions have been asked. The interviewers were both trained qualitative researchers with background in health sciences and social sciences, as well as some familiarity with Singapore’s age care sector.

Critical analysis

We first prepared the data in a matrix consisting of 6As questions (in rows), participants’ summarised answers to the 6As questions (in columns) and observation of the ways participants responded to the questions (additional columns). These data were first inputted through scribing (on excel sheets) during the interviews, then checked for accuracy by listening to the audio recordings afterwards. In addition, reflexivity journalling was used to document our reflections after every interview.

Upon completion of six interviews, data were critically examined for the three research questions:

RQ1. Was the time taken to present vignettes and answer all questions feasible for the target participants?

Theme 1. Interviews took longer than planned, but participants remain engaged when there was no time pressure.

When participants were invited to participate in the pilot, they were informed that interviews will take 60–90 minutes of their time. The actual interviews average to about 2 hours, ranging from 47 minutes to 2 hours and 54 minutes (see Table 9 for a detailed breakdown). The two interviews that ran below 2 hours were due to participants’ time constraint. For the rest of the interviews, participants were enthusiastic enough to share more of their time. Participants noted that the vignette tool was interesting and allow them to reflect on the state of the LTC system, hence keeping them engaged in the interviews.

RQ2. Could the vignette tool provide sufficient, relevant & useful data to describe the 6As of the country’s LTC system? This was to investigate whether the answers provided by the participants, in response to the vignette, were adequate to produce a good understanding of the LTC trajectory commonly experienced by the older persons in the country. To do this, we conducted rapid analysis of the pilot data to demonstrate the kind of data produced by the vignette tool.

RQ3. Was the vignette method implemented as intended? This includes how well the vignette tool was delivered by interviewers, and received by participants, to assess the feasibility of this approach. We examined the feasibility of using semi-structured, in-depth interviews as a method to collect data, acceptability and reactions of participants toward the vignette tool, and skills and experience required of the interviewers to collect good data.
Theme 2. Time management strategy was applied based on participant’s relevant expertise and experience.

Participants were able to answer in more details for Mrs Tan’s care aspects that were relevant to their experience, and less able to share concretely in other aspects. For example, participants with direct experience in the community setting only were less able to answer when Mrs Tan’s care needs require interventions from the medical or residential care settings. Hence, instead of pressing for answers that participants were not able to provide as accurately, the interviewers focused on the aspects that corresponded with participant’s expertise/experience for effective time management. For example, when interviewing a specialist from the hospital setting (P03), we primarily asked about the 6As from the perspective of Mrs Tan’s medical care across the three stages. This ensured that the limited time was spent to collect a unique set of information that could not be provided by other participants.

In summary, we found 1.5–2 hours a good length of time to adequately engage participants for taking interest and reflect on the vignette tool. It would not be feasible to ask all questions for every stage. Interviewers should focus on questions most relevant to participants’ expertise and experience.

RQ2. Could the vignette tool provide sufficient, relevant & useful data to describe the 6As of the country’s LTC system?

Theme 3. The vignette tool provided an overview of the character’s LTC trajectory across three stages.

All interviews with the participants generated codes which could be mapped into a care trajectory for the character, and could be organized based on the 6A framework. A substantial amount of data came from the first question — “What care, if any, is available to support Mrs Tan’s needs? This care could include formal services and informal care.” Participants usually spent the longest time answering this question, in which their responses also answered other questions (see quote below). The rest of the questions provide an opportunity for the participants to reflect deeper about what currently exist in the country’s LTC system. The first question also set the tone for other questions, because participants would reflect on 6As based on the types of care they already had in mind.

I01: What kind of care she may get at this stage (i.e., Stage 2)?

P06: So there’s the physical and then there’s the cognitive right, I think. So the physical bits she starts maybe needing day care. Three times in the last one year is not as bad right, but if she can’t move from chair to bed to toilet, then can she

### Table 9: Time taken by participants to answer questions in each stage.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3*</th>
<th>Total duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>P01</td>
<td>1 hour 20 mins</td>
<td>1 hour</td>
<td>15 mins</td>
<td>2 hours 35 mins</td>
</tr>
<tr>
<td>P02</td>
<td>1 hour 7 mins</td>
<td>1 hour 2 mins</td>
<td>45 mins</td>
<td>2 hours 54 mins</td>
</tr>
<tr>
<td>P03</td>
<td>20 mins</td>
<td>20 mins</td>
<td>6 mins</td>
<td>46 mins</td>
</tr>
<tr>
<td>P04</td>
<td>1 hour 18 mins</td>
<td>7 mins</td>
<td>14 mins</td>
<td>1 hour 39 mins</td>
</tr>
<tr>
<td>P05</td>
<td>30 mins</td>
<td>1 hour 5 mins</td>
<td>25 mins</td>
<td>2 hours</td>
</tr>
<tr>
<td>P06</td>
<td>1 hour</td>
<td>30 mins</td>
<td>30 mins</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

*Including three additional questions and concluding remarks, if any.
Vignette development

manage at home by herself? So what is not clear is how her caregiving arrangements are like. Her children are they sort of willing, able caregivers? Or do her children work? In which case they can't be at home to make sure that, you know. So I think some day care will help. At the day care she can get some strengthening exercises, hopefully she is less wobbly, and strengthen her ability to sit up on bed, to be able to go toilet safely. Some home modifications may need to be made, like grab bars or to help her be able to move a bit more safely. So I think in the day centre then she can get a bit more services around there. Cognitive is more of a problem, if she starts not being able to articulate or voice what she needs; self-management. Or tell her children what she needs. So meals, showers I’m assuming she at least listens to her children and not shouts at them or beats them when they try to convince her to go shower. Then that will be the whole dimension of behavioural issues related to the dementia. So if she still sort of goes 'Okay I forgot to take shower, I go and take shower now', rather than you know, stink up the whole flat, then still manageable. But if she starts getting all those like challenge you, don't want to take shower, you try and force her to shower then she throws things at you, then it’s a whole different level of caregiver burden. So I will still try to get her into a day centre as much as possible. Maybe a day centre that has a higher capability. There's another service called the Integrated Home and Day Care package, and it may be better for her because some days she can go to day care, some days she may have to be managed at home. If the day care doesn't have shower then you do need someone to come in to persuade her to shower and then maybe help her shower more safely, not sure. So if that happens then the IHDC allows her to flex between the day as well as the home care. The social activities part is a problem. I think if she goes to a day care centre at least she still has some social engagement and hopefully they do some cognitive stimulation. And then the caregiver part is the other thing, right. We probably need to help the children be able to plan a little bit further. I don't know whether it's right time also to talk about Advanced Care Planning of her, what she prefers when something more serious happens to her, how is the care arrangement that she would like? We know she wants to stay at home but the caregivers are the ones that are feeling the stress. But she doesn't want to burden her children so like aiya, we cannot have the whole world. Financial counselling on the schemes that might manage—the home caregiving grant helps a bit. 72 so she's not Pioneer, don't have. Maybe CHAS. So some of these things. Her ADLs are not so clear yet so maybe at some point the CareShield can kick in; at some point but not yet. So I think somebody will walk her through the existing schemes and subsidies, will at least help her children be able to size up a little bit more the cost. But I think they will still be quite stressed anyway.

The answers provided suggest that LTC options are highly dependent on homebound status, social support (especially from the caregivers) and eligibility for government subsidies. A brief overview of the key themes is available in Figure 9.

Theme 4. The vignette tool provided useful findings on the facilitators and barriers to 6As which may influence the care trajectory.

Participants conjured up many different “what if” scenarios during the interviews due to the ambiguity that was intentionally created in the vignette. The scenarios were usually derived based on their experiences within specific organisations, collaboration with other services/institutions and general understanding of the sector (Table 8). These “what if” scenarios are captured by the “If...” codes in Figure 9, as well as the thematic analysis on the facilitators and barriers to 6As (Box 2).
Figure 9 Overview of long-term care trajectory for a typical older person in Singapore.

Mrs Tan would most likely receive...

community ambulant (Stage 1)

- If no one picks up the issues
- If “someone” picks up the issues

- No care
- Primary care
- Specialist care (eg, memory clinic)

- Community-based services
  - Centre activities: exercise, cognitive stimulating, interest classes
  - Centre-based services: Day Care, Day Rehab
  - Home modifications: falls risk assessment
  - Aged-friendly services

- Family / friends
- Neighbours / volunteers
- Psychosocial support in discourse, jobs, life stability
- Keep an eye on Mrs Tan
- Bring her downstairs for exercise
- Help her with housework job

becoming homebound (Stage 2)

- If primary CGs are capable & committed
- If need supplemental help AND with sufficient subsidies
- If completely home-bound AND with sufficient subsidies
- If she is hospitalized following a fall

- Informal care
- Paid informal care (helper)
- Training & respite care for informal CGs
- Home personal care
- Centre-based services (including Dementia Day Care)
- Home medical / nursing / therapy
- Transportation services
- Nursing home

- Death

\*Subsidised service gate-kept by AIC (Agency for Integrated Care). Three steps to request for services:
Step 1: Need for service assessed by MSWs / physicians based on AIC’s eligibility criteria
Step 2: Application (for subsidy & preferred service providers) submitted to AIC, for means testing based on monthly household per capita income framework
Step 3: Outcomes of means testing & options of service providers (if not yet decided) provided by AIC. If service changes are affordable with subsidy: proceed with accepting (one of) the service provider(s) & view the service before making decision OR go on waitlist of preferred services if fully subscribed. If unaffordable: see B3.

Notes: (1) If Mrs Tan / CGs want(s) to change the service providers, Steps 1-3 will be repeated. (2) Options for home care are limited by geographical boundaries. (3) Mrs Tan / CGs may make a complaint to AIC should they be unhappy with the service.
example, the vignette did not state whether Mrs Tan was admitted to a hospital following a fall, but this possibility was picked up by most participants. Another example is that the vignette stated Mrs Tan’s preference to stay home but did not state the children’s preference. Some participants picked up on the possibility of children’s preference overwriting Mrs Tan’s, based on their understanding of the cultural norms. Both factors (i.e., hospital referral and children’s preference) might over-write Mrs Tan’s preference to stay at home. These formed one of the themes describing barriers to 6As (i.e., “Barrier 3. Cultural Factors”)

P01: It depends on how strong her (i.e., Mrs Tan’s) preference (to stay home), how close she is to the children. Whether the children will really want to go by her wishes. Sometimes they just feel like — so I think it depends on at which point — and usually the nursing home is asked of them when there is like a sentient (?) event, like they go to hospital then the doctor will ask (her to admit to a NH). I think it happens very often around that kind of situation.

Ten themes emerged in the preliminary thematic analysis of the data from six pilot interviews, demonstrating the ability of the vignette tool to provide specific and relevant data to investigate facilitators and barriers to 6As in the country’s LTC system (Box 2).

Box 2 Key themes on Facilitators (F) and Barriers (B) to 6As in Singapore’s LTC system.

F1. Help-seeking. Mrs Tan is more likely to seek help if she is connected to someone whom she trusts and able to provide help, including:

- Family members who take her issues seriously
- Community workers who are trained to do basic screening, eg staff at the Active Ageing Centres (AACs) attended by Mrs Tan, community outreach teams who visit her at home. The likelihood of early detection of Mrs Tan’s issues is greater in some AACs with staff trained in functional / mental health assessments and/or AACs with better outreach coverage
- Primary care physicians who have time to listen to Mrs Tan + able to accurately identify the issues.

F2. “Holistic (Care) Social Service Agencies (SSAs)*. Mrs Tan is more likely to reverse / slow decline (Stage 1) + delay institutionalisation (Stage 2/3) if she encounters “holistic SSA” who practises holistic care & is usually equipped with a suite of different services. Apart from mainstream services (depicted in Figure 9), some holistic SSAs may also provide:

- Care management / case management services to proactively identify / monitor Mrs Tan’s changing needs, negotiate different needs / preferences between Mrs Tan and CGs, transfer / refer to relevant services, provide financial counselling, navigate the complexities in the LTC system. Care managers may also initiate early ACP (advanced care planning) discussions, which are typically introduced only in the hospital when patients have less than a year to live.
- Counselling (usually nested within other services) to provide mental health support to Mrs Tan and CGs.
• Better availability of NH-like services (e.g., showering and respite care), thus delaying nursing home (NH) admission.
• Technological devices to monitor safety and wellbeing (e.g., thermal tracker for falls), thus delaying NH admission.

**F3. Integrated Primary Care.** Traditionally primary care provides only episodic medical care. However, this is changing, and Mrs Tan is more likely to receive more holistic care if she receives care from some providers who practise:
• Multidisciplinary team-based care: usually including social workers to also care for Mrs Tan’s psychosocial needs and work collaboratively with SSAs.
• Integrated care with the memory clinic: to diagnose / manage MCI / uncomplicated dementia at primary care level, thus saving Mrs Tan from long wait time to memory clinic.
• Integrated care with the SSAs

**F4. Good caregiver (CG) support.** Usually, CGs are involved in all decisions about care for their elder parents apart from participation in social activities. Mrs Tan’s CGs will most likely receive CG support if she is receiving care from SSA(s) and/or connected to medical social workers in hospitals / polyclinics, who provide:
• Financial counselling most likely happens when Mrs Tan becomes ADL dependent & qualify for a range of disability subsidies.
• Psycho-socio-emotional support will most likely be provided by the same SSA provider caring for Mrs Tan (not uncommon for CGs to become a “second client”).
• Informal CG support groups organised by some SSAs.
• Respite care is more easily available with connection to “holistic SSAs” (see F2).

**F5. Good care organisation / regulation and person-centeredness.** Service providers vary in their organisational practices in meeting clients’ needs and preferences. There are guidelines for good care e.g., the Enhanced NH Standards but no standardised mechanisms for inspections and compliances checks in the LTC sector. Client complaints are usually resolved directly with the service providers. Failing which, they can be brought to regulatory / political / legal channels. Mrs Tan is more likely to receive better quality in care if her service providers have:
• Regular & on-the-job training for patient-centred care (PCC). Examples of PCC practices: co-create care plans, seek to understand behaviours rather than imposing institution’s rules (e.g., in a NH), provide unstructured activities based on interests (e.g., in a day centre), make routine activities fun and meaningful, balance preferences and safety.
• Efficient client feedback channel & whistle-blowing policies.

In Stage 3, it makes a difference if Mrs Tan is admitted to a “good nursing home” with good quality of care.

**B1. Poor awareness & stigma.** It is less likely for Mrs Tan / CGs to receive help for her declining memory (Stage 1) compared with declining mobility because:
• Lesser health talks and preventive care for memory issues compared with mobility issues.
• Stigma associated with dementia may cause Mrs Tan to be hesitant about seeking help, or change her mind mid-way if it takes multiple appointments / long waiting time (e.g., to memory clinic) to get help.
B2. The multiple assessment hoops/gate keeping. Mrs Tan is less likely to access all services needed without help because the process involves:

- The needs assessment hoop: most applications for services require inputs from medical social workers, who usually reside within the hospitals (hence hospitalisation is a “shortcut” to access care quickly).
- The means testing hoop: Mrs Tan would receive no subsidy if her monthly household per capita income exceeds $2,800 (which is below the country’s median of $2,886). However, she may apply for charitable support if she could prove that her disposable income is lesser than service charges. If she does qualify for subsidies, the increasing need for more types of home care (each has subsidy capped at 75%) may eventually make staying at home unaffordable.
- The “can cope?” assessment hoop: Mrs Tan’s CGs would have to justify their need for a NH beyond the eligibility criteria on-paper, because of limited NH beds. This assessment is more subjective, depending on CGs’ expressed needs, NH’s bed vacancies and judgement by the gatekeeper (i.e. the Agency for Integrated Care).

B3. Limited autonomy (cultural factors). Mrs Tan is less likely to exercise her personal choice when:

- Hospital refers her to a NH (Stage 2), because culturally patients & CGs tend to follow hospital’s advice, especially when CGs are unsure of what to do (as in Stage 2).
- Children’s preference may overwrite hers, because culturally older persons tend to follow children’s opinions, especially as Mrs Tan does not want to burden her children.

B4. Long waiting time. Mrs Tan would have to wait longer for services with high demand (marked within Figure 9):

- Memory Clinic (6–8 weeks): non-urgent cases wait longer.
- Dementia Day Care (1–2 months): Mrs Tan would require a diagnosis of dementia to be eligible.
- NH (varies, average 1 month for uncomplicated cases)
- Day Centres in more mature estates: Mrs Tan would have to go on the waitlist if she does not expand her options.

Waiting time is also longer if Mrs Tan / CGs have specific preferences (eg types of food) and/or take time to decide.

B5. The plight of being “not poor and/or disabled enough”. Mrs Tan may not afford community-based services (especially in Stage 2) because:

- She may not qualify for government subsidies (see B2)
- She is less likely to afford the unsubsidised service charges compared with higher-income groups.
- She is ineligible for schemes tied to disability (e.g., Eldershield, Senior Mobility Fund, Home Caregiving Grant) because she is “not disabled enough” at this stage.
In summary, we found that the vignette tool provided an overview of Mrs Tan’s care trajectory across three stages and sufficient findings on the facilitators and barriers to 6As which may influence the care trajectory. Substantial amount of data was collected from the first question alone.

RQ3. Was the vignette tool implemented as intended?
This includes how well they are delivered by interviewers and/or received and answered by participants, to assess the feasibility of the approaches.

Theme 5. Participants perceived the vignette story as sufficiently realistic, with some guidance needed for “filling in the gaps”.

Upon reading each stage of the vignette story, all participants nodded and expressed how relatable the story of Mrs Tan was to them. In fact, participants were often able to predict the next stage even before it was being shared, which is an indication of the vignette representing a sufficiently realistic picture to the participants. Meanwhile, many participants requested for additional details before answering the questions. For example, one of the study participants requested for further information for every stage of the vignette:

Stage 1: “Who is the primary caregiver?”
Stage 2: “Are children working, are they committed to caregiving?”
Stage 3: “Is she just homebound or bedbound?”, “Does difficulty in eating mean difficulty in swallowing or just need reminding?”

In these circumstances, we nudged the participants to “fill in” additional details themselves, by considering the possibilities of different scenarios and how each of them might affect the care trajectory. This approach proved to be feasible, because all participants were able to follow the nudge and provide relevant responses. For example, the same participant (mentioned above) filled in the gaps about the difficulty in eating, by laying out two possible scenarios (see quote below).

P06: (if it is) difficulty eating as in she needs reminders and spills food and drink, but in a way you can work with her on that right. But if she’s having difficulty swallowing then that’s another challenge right, that she chokes often... she may need (home) speech therapy to help with the swallowing, strengthening the muscles so that she doesn’t choke so often, if the difficulty eating is referring to that.

Theme 6. Participants switched between scenarios / perspectives when answering the vignette questions.

All study participants were informed that they were to answer in relation to (a) the perspective of the character, (b) the country’s overall LTC system and (c) what is realistically / currently available (i.e., the “would” scenario). These criteria were employed to generate a realistic representation of a typical older person’s experience within the LTC system in the country. However, in all the pilot interviews, responses did deviate from these criteria at times. Below are explanations on how the responses may differ, and how these affected the implementation of the vignette tool:

(a) Perspective of the non-typical older persons:
Participants shared many real-life stories observed on the ground which may or may not represent a typical older person’s perspective. When this happened, participants would be guided to return to Mrs Tan’s perspective. Although the data may not be directly relevant, they can be useful in understanding the nuances in navigating the long-term care system. They may also provide hints to service gaps and inequities in the system. For example, one participant talked about the inadequacies in the means-testing system to holistically assess the clients’ needs.
Although the difficulty expressed (i.e., failing to get government subsidies because one is living in a private property) does not apply to someone like Mrs Tan (who lives in a public housing, which is typical to older persons in Singapore), it provides an insight into the system-level barrier and gaps to affordable LTC.

P02: Our (subsidy) system (is) like not very updated. Like last time we got a case... before he could get any services, he was actually employed and staying in a rental place. So apparently that time he (could) get higher subsidies, I mean a higher percentage of means-testing so get more subsidies. But currently because he's staying with a friend, and the friend has a private property, so the address reflected in the system was that he has a private property, so he gets 0% of subsidies. But they (i.e., the system) actually didn’t see that actually he has loss of income.

(b) **Perspective of individual organisations:** Participants tended to fall back to answering from the perspective of their organisations, since this was what they were most familiar with. It is important for interviewers to discern the difference between services that are more broadly available versus services that are specific to an organisation, because the latter may not be representative of the whole country. During the interviews, we clarified with the participants if the organisational practice also applied to the sector as a whole.

Interviewer: Do you think this (i.e., structured training for cultural competency) is available in other agencies as well?

P04: Not really, I would say that let's say... it's not so structured as of now, and I can't also think (of) any specific agency running any training programmes for that... (Our training is structured) Because we have gone into the — not for the whole organisation but then some business units went into the CARF accreditation. That is similar to the ISO certification. CARF is for certification on – it's a Canadian certification on rehabilitation for agencies.

Nonetheless, inter-organisational variability is also reflective of the mixed realities in the sector, especially in areas where there are innovations. For example, the increasing number of primary care innovations may provide better care for Mrs Tan (coded as Facilitator 3. "Integrated Primary Care", see quote below), though they are still a minority in the sector. Therefore, we also allowed participants to speak about innovations outside of mainstream services, while checking to what extent these innovations apply to the typical older persons.

Interviewer: In most cases as you can see in Singapore, she would be able to be managed at primary care level?

P03: I think it's a little bit more borderline in this case, mainly because... layer(ing) on the memory issue is her functional issues and a bit of the social stress to the family as well. So I think if it is not a very holistic primary care practice, you know other allied health professionals like social workers, therapist and all that, they may find it challenging to manage. So they may end up taking the easier way out which is to refer her to a specialist clinic, memory clinic. But if you have got a more holistic service, who have experience dealing with older persons– which we're hoping to build right, in primary care practice.

(c) **The idealistic ("should") scenarios:** Participants often spoke about both the realistic and ideal scenarios, sometimes concurrently (see quote below). We term this as the "would" (realistic) and the "should" (idealistic) answers. In most cases, it was easy to differentiate between these two types of answers. We observed that participants were more likely to provide "should" answers when they (i) had been involved in developing LTC.
innovations, thus more idealistic about what Mrs Tan should receive; (ii) were rushing to finish the interview, thus falling back to the “public account” of what should be happening.

P04: Most scenarios people may look at nursing homes, start looking at nursing homes (in Stage 3). But in the current context if you ask me, our vision will be successful only when people at this stage have confidence to live in their own homes. So I feel that with the Active Aging Centre, with the home personal care, with the centre-based nursing and the home-based nursing, I think people should be able to live here (i.e., in own home). And now there are many other (innovations)...

We probed for “would” scenarios to guide participants back from “should” responses. We also compare responses across the pilot interviews to differentiate the “would” from the “should”. For example, one participant was giving a pessimistic account for meeting Mrs Tan’s needs for mental, emotional, social and spiritual wellbeing, because she was focusing on the lack of counseling services in the system. However, data from other participants were less pessimistic because they considered broader types of care to meet these needs.

Interviewer: So apart from all these healthcare needs, how are Mrs. Tan’s needs for mental, emotional, social and spiritual well-being taken care of?

P01: It’s anybody’s guess, isn’t it? Because I think again it depends on — you see I think of all the problems that she has. You know if I’m in her shoes I’ll probably be most concerned about the memory one, right? (...) I suppose in a way some kind of counselling and education might be helpful for her. So I guess it’s who should be doing this and where should it be done, at which point?

Interviewer: It will be beneficial for her but not sure who will be doing that for her?

P01: Yeah. Because I don’t think — even if the doctor refers her, I’m not sure if they have those people but if they have those nurse educator in the polyclinic for example, or if she manages to even get to the hospital and see the doctor and all that. They definitely have nurse educator in the hospital, right? Whether first of all she gets referred, and even if she gets referred how is that conversation being carried out? How is that session being done, being carried out you see. If you are very focused on just providing information...you know information comes about...

During the course of the interviews, participants naturally considered alternative scenarios / perspectives as they reflect on the questions and their experiences with the LTC system. These responses did generate valuable insight into the contexts, inequities (particularly to non-typical persons) and the needed improvements in the LTC sector. However, with time constraint interviewers must (learn to) maneuver a good balance between the required and alternative scenarios / perspectives.

In summary, the vignette was perceived as realistic by the participants. In cases where it was thought to be “incomplete”, the vignette could be completed by the participants with some guidance from the interviewers. Participants naturally reflect from multiple perspectives and on the possibility of multiple scenarios. Guidance from interviewers were needed if a certain focus is preferred.

Recommendations on using the vignette tool

Based on findings above (Themes 1–6), we recommend the following strategies for implementing the vignette tool.
(i) **Sampling of key informants:**
- Purposively sample experienced long-term care (LTC) experts who have BOTH the experience overseeing ground operations AND system perspective to the LTC sector in the country.
- Select key informants representing different settings in the LTC sector: community care, hospital care, residential care, policy making, etc. Prioritise those who have worked across / interacted with various organisations and services.

(ii) **Format of data collection:**
- Consider using a combination of semi-structured in-depth interviews (IDIs) and focus group discussions (FGDs).
- IDIs allow participants more time to reflect more deeply. FGDs stimulate discussion between participants with different disciplinary backgrounds.
- Interviewers may first conduct a few exploratory IDIs to map out vignette character’s journey in a diagram, then conduct 1-2 confirmatory FGDs by inviting comments to the diagram.

(iii) **Interviewers:**
- Have two interviewers. One for scribing and one for leading the interview.
- Interviewers should have some basic understanding about health and social care in the country.
- Both interviewers to familiarise themselves with the interview guide.

(iv) **Time management:**
- Aim to keep the interview between 1.5–2 hours.
- For more effective time management, prioritise the conversation based on participant’s area of expertise.
- Allow participant(s) to take as much time as they need for the first questions (on care needs and available types of care), before asking other questions.

(v) **During the interview:**
- For ice breaking, interviewers to self-introduce, explain the purpose of the interview and how the data will be used. Also invite participant(s) to self-introduce and briefly introduce the organisation(s) they are representing, if any.
- Show the vignette story stage-by-stage, one stage to a page.
- Let the participant(s) have the vignette on paper, for easy reference when answering questions.
- Record the interview if possible, and with consent.
• Create a relaxed and reflective atmosphere to the interview, by encouraging participant(s) to take time to reflect on what *would* happen (rather than *should*) happen to the vignette character.

• If participant(s) represent(s) certain organisation(s), clarify that the answers should be "based on the vignette character’s perspectives and your understanding of the country’s LTC system" (as per instruction for Stage 1), not based on organisational perspective.

• When "should" answers are given, gently bring the conversation back to "would", and acknowledge the gap.

• If the participant(s) ask for more information for the story, lead them into thinking about possible scenarios ("if this happens...") and the ensuing consequences ("then that will most likely happen...").

• Discuss real-life examples when they provide insight into LTC context. Bring the conversation back to the case of the vignette character when sufficient understanding has been established.

• If participant(s) is/are going on a roll critiquing the system, acknowledge their frustration then clarify what most commonly does / does not happen in a case like the vignette character’s.
7. DISCUSSION & CONCLUSION

This is, to the best of our knowledge, the first vignette developed for the purpose of collecting qualitative data on LTC systems across countries. The vignette tool achieved our threefold objectives of getting informants (i) interested in giving inputs on a country’s LTC system, (ii) respond to the standardised context, and (iii) reflect on what matters most to the older persons. Qualitative data generated by the tool would enable cross-country comparisons of LTC systems, based on six domains of availability, approachability, adequacy, appropriateness, affordability, and accountability. As such, we created a person-centred approach to speak and think about LTC. This complements the more conventional comparative approaches which focus on system indicators e.g., coverage, types of services, financing structures [17], [14]–[16].

When constructing the vignette, the biggest challenge faced was the construction of one vignette that portrays a believable story across all countries. We underwent an iterative process to ascertain a right balance between standardised and country-specific descriptors. This is because the more country-specific descriptions used in the vignette, the more realistic it would appear to the country’s vignette users, but the less standardisation could be achieved for meaningful cross-country comparisons, and vice versa. Eventually, eight descriptors were country-specific including six for describing demographic profiles (surname, age, living arrangement, housing type, area of residences, name of country) and two for finances (personal financial resources and public health financing schemes) of the vignette character. Meanwhile, twelve descriptors were standardised, including six for describing disabilities (types, degree and duration of both physical and cognitive disabilities), two for demographics (gender and marital status), two for social participation (across two stages) and two for preferred care arrangements (across two stages). Of these, living arrangement (i.e., living alone or living with family) invited the most debate. This was because a different living arrangement may greatly alter one’s LTC trajectory (hence requiring standardised descriptions across countries), but using only one description reduces authenticity of the vignette for certain countries which did not share a particular description. After two rounds of review by country representatives, we adopted it as a country-specific descriptor but added an additional question “what about if the vignette character has a different living arrangement?”. Despite a high number of descriptors inserted into the vignette, most participants still felt that they were insufficient to fully understand the vignette character. This is common feedback to vignette-based interviews, as all vignettes are meant to be selective in their descriptions, leaving the undescribed to be filled in by participants’ own interpretations. The balance between descriptions and “incompleteness” shall be determined by research questions and the nature of participant groups answering the vignette [23], [31], [50]. During the pilot testing of the tool, the incompleteness was easily picked up by the participants because of their ability, as experts, to explore possible scenarios not mentioned in the vignette. Unlike studies using vignette to explore sensitive or value-laden issues [50], [52], [60], we did not encounter any major issues in getting participants to explore any topics. Socially desirable answers were minimal, apart from when participants felt they were speaking on behalf of their organisations. When they deviate from “would” to “should” answers, it was not too difficult to guide the participants back to the required perspective by asking “what would happen to Mrs Tan?”. However, it may be more feasible to also include the “should” scenarios if not much can be said for the “would” scenarios in countries with lesser developed LTC systems.
Additionally, the vignette also intentionally left out any disease descriptions. Instead, we described vignette character’s functions (e.g., physical and cognitive functions) to encourage participants to speak about functions instead of disease. This is to align the narrative of the vignette toward the concept of functional ability [4]. In both the reviews and pilot testing of the vignette tool, respondents were able to comment using the language of functions even though “dementia” was either mentioned or implied in most cases.

When implementing the vignette tool, the biggest challenge faced was time constraint. Compared to other qualitative vignettes [48], [67], a three-staged vignette with over thirty questions would be deemed more complex. It was important to create a reflective atmosphere during the interview to shift participants out of their usual provider’s lens. For busy participants to stop and reflect, they must feel unhurried, engaged and that they could trust the interviewers. Also, it would be more appropriate to use researchers who are knowledgeable about the LTC contexts in the country because the content of the interviews is usually highly contextualised. Collectively, these “researcher effects” (facilitation skills, relationship with participants, etc) are known to affect the quality of any qualitative research [55].

An unexpected finding from the interviews was that most participants were far more willing than we thought in giving their time. Each interview averaged about two hours, with the longest interview lasting almost three hours and had it not due to other work commitment, we could have continued speaking for the rest of the day! Apart from a successful creation of a reflective atmosphere, we believe that the sustained interest was due to the interesting unfolding of the three stages of the vignette story. This unique strength of the vignette methodology has also been shared by other studies [50].

Like other qualitative studies, participant selection deserves careful considerations. In general, we seek a good representation of typical older persons’ experience across various settings in the LTC sector. The issue of representation in qualitative sampling is well explained by Beebe (1995), who distinguished “individual respondents” from “key informants”. Whilst individual respondents are valuable for sharing their own experience (i.e., representing themselves), key informants are knowledgeable about others’ experience thus able to represent the broader system beyond their own direct participation [69]. In this study, we were interested in key informants who can represent older persons throughout all settings in the LTC sector. We had the options of selecting those who worked on the ground or those in the leadership position. Whilst ground workers have more in-depth interactions with the older persons in certain LTC areas, experts at the leadership positions have broader understanding at the big-picture level. Between depth and breadth of representation, we sampled individuals who are in senior management or leadership positions but also experienced in overseeing daily operations. In this way, we reduced the number of key informants needed. However, this required some investigations of the potential informants’ background because not many people fulfilled these criteria.

Due to the above-mentioned reasons, semi-structured IDI is a feasible method for implementing the vignette tool, as they allow the participants to reflect out loud and complete the vignette when necessary. It also enables the interviewers to select more relevant questions based on participants’ expertise areas, guide them back to the focus on vignette character/realistic scenarios and more accurately interpret nuances in the data, if any. We also think that it might be useful to conduct FGDs with key informants representing different areas of the LTC sector. Through discussions, different perceptions could be clarified, and new insights might be stimulated.

The key limitation of the vignette is the potential lack of authenticity for countries with very different sets of challenges and understanding of LTC. In
Vignette development

In conclusion, this study has developed and validated a vignette tool for collecting standardised qualitative data on LTC systems. The validity and applicability of the tool was ensured by four methods including using empirical data (from SAGE) to improve archetypal representation, evidence from existing literature on LTC, reviews by multi-country experts and pilot testing in target participant groups. The tool can be used for the next steps in ILC GA’s larger effort to develop an international LTC framework. However, further work may be needed to improve its applicability in countries with very different sets of challenges and understanding of LTC.
REFERENCES


APPENDICES

Appendix 1  The Global Deterioration Scale. Descriptions adopted from [70].

Stage 1: NCI. No subjective memory deficit (no cognitive impairment); no problems with activities of daily living.

Stage 2: SCI. Subjective cognitive impairment (subjective memory and/or other cognitive complaints): observations, sometimes accompanied by complaints, of being forgetful, such as difficulties with recall of names, and/or of misplacing objects.

Stage 3: MCI. Earliest subtle deficits (mild cognitive impairment): difficulties often noted at work; may have become lost; may have misplaced a valuable object.

Stage 4: Mild dementia. Clear deficits on clinical examination (moderate cognitive impairment): decreased knowledge of personal and/or current events; often difficulties with finances or shopping or meal preparation or travel.

Stage 5: Moderate dementia. Can no longer survive independently in the community without some assistance (moderately severe cognitive impairment): difficulty with recall of some important personal details (e.g. address, names of one or more important schools attended); may require cueing for activities for daily living.

Stage 6: Moderately severe dementia. Largely unable to verbalize recent events in their life (severe cognitive impairment): may forget name of spouse; incontinence develops as this stage progresses; requires increasing assistance with activities for daily living such as dressing and showering. Increased behavioural problems (e.g. agitation) or other personality problems are common.

Stage 7: Severe dementia. Few intelligible words or no verbal abilities (very severe cognitive impairment): the ability to walk is lost as this stage evolves. Later, basic capacities such as the ability to sit up independently, to smile, and to move and/or to hold up the head independently are progressively lost.
Appendix 2 Symptoms of Mild Cognitive Impairment.

- You forget things more often.
- You forget important events such as appointments or social engagements.
- You lose your train of thought or the thread of conversations, books or movies.
- You feel increasingly overwhelmed by making decisions, planning steps to accomplish a task or understanding instructions.
- You start to have trouble finding your way around familiar environments.
- You become more impulsive or show increasingly poor judgment.
- Your family and friends notice any of these changes.

From https://my.clevelandclinic.org/health/diseases/17990-mild-cognitive-impairment:
- Memory loss. Forgets recent events, repeats the same questions and the same stories, forgets the names of close friends and family members, forgets appointments or planned events, forgets conversations, misplaces items often.
- Language problems. Has trouble coming up with the desired words. Has difficulty understanding written or verbal (spoken to) information.
- Attention. Loses focus. Is easily distracted.
- Complex decision-making. May struggle, but can complete complex tasks such as paying bills, taking medications, shopping, cooking, household cleaning, driving.
Appendix 3  Staging of dementia and time course of functional and cognitive disabilities for each stage of dementia. Figure adopted from [70].

<table>
<thead>
<tr>
<th>Clinical diagnosis</th>
<th>Normal adult</th>
<th>Subjective cognitive impairment (SCI)</th>
<th>Mild cognitive impairment (MCI)</th>
<th>Mild AD</th>
<th>Mod AD</th>
<th>Mod AD Sev AD</th>
<th>Severe AD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDR stage a</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>GDS &amp; FAST stage b</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>FAST substage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years c</td>
<td>Approximately 90 to 50 years</td>
<td>Approximately 15 years</td>
<td>0</td>
<td>7</td>
<td>9</td>
<td>10.5</td>
<td>13</td>
</tr>
<tr>
<td>MMSE c</td>
<td>20</td>
<td>29</td>
<td>29</td>
<td>20</td>
<td>25</td>
<td>19</td>
<td>14</td>
</tr>
</tbody>
</table>

Psychometric tests:

- Normal adult range
- Questionable impairment
- Impaired

Uniform bottom score and usual stage of death

---

a Stage range comparisons shown between the CDR and GDS/FAST stages are based upon published functioning and self-care descriptors.
b Numerical values represent time in years.
Appendix 4 Life expectancy at 60 for females in sixteen ILC GA countries, as well as their corresponding age to be used in the vignette. Age to be used in vignette is calculated using the formulae “life expectancy at 60 (LE60) for female subtracted by 15”. Data extracted from https://www.who.int/data/gho/data/indicators/indicator-details/GHO/life-expectancy-at-age-60-(years).

<table>
<thead>
<tr>
<th>Country</th>
<th>LE60 for females (2019 data)</th>
<th>Age to be used in vignette</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>23.08</td>
<td>68</td>
</tr>
<tr>
<td>Australia</td>
<td>26.83</td>
<td>72</td>
</tr>
<tr>
<td>Brazil</td>
<td>23.51</td>
<td>69</td>
</tr>
<tr>
<td>Canada</td>
<td>26.38</td>
<td>71</td>
</tr>
<tr>
<td>China</td>
<td>23.08</td>
<td>68</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>24.00</td>
<td>69</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>22.36</td>
<td>67</td>
</tr>
<tr>
<td>France</td>
<td>27.21</td>
<td>72</td>
</tr>
<tr>
<td>India</td>
<td>19.54</td>
<td>65</td>
</tr>
<tr>
<td>Israel</td>
<td>26.03</td>
<td>71</td>
</tr>
<tr>
<td>Japan</td>
<td>28.56</td>
<td>74</td>
</tr>
<tr>
<td>Netherlands</td>
<td>25.13</td>
<td>70</td>
</tr>
<tr>
<td>Singapore</td>
<td>27.22</td>
<td>72</td>
</tr>
<tr>
<td>South Africa</td>
<td>20.52</td>
<td>66</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>25.23</td>
<td>70</td>
</tr>
<tr>
<td>United States of America</td>
<td>24.38</td>
<td>69</td>
</tr>
</tbody>
</table>
Appendix 5 Expert review survey form (full version for Review Round One).

Background:

As the world’s leading advocacy group for older persons’ health and wellbeing, the International Longevity Centre Global Alliance (ILC GA) has embarked on a multi-country project to address this knowledge gap in needs-based LTC comparative studies. The project aims to develop an international framework for describing and classifying LTC systems in different countries according to their ability to meet the needs of older people. The key difference between this project and other LTC comparative studies, which usually take on a disciplinary (e.g., financing, legislative, health system) perspective, is its person-centred perspective.

In this study, the classification of LTC will be driven from the perspective of the older person, their need, enabling and predisposing factors within the context of their country setting and social and cultural environment.

This perspective is consistent with WHO definition which places support of older persons’ functional abilities, rights and dignity as the central and essential elements of any LTC system.

Instructions

We are asking one representative from each ILC-GA member country to review the below vignette for authenticity and adaptability. Please read the draft vignette and provide your responses to the vignette validation and review questions that follow. Please email your completed response to Longevity.Aus@gmail.com by 31st May 2022.

DRAFT VIGNETTE

Stage 1

I’d now like to tell you the story of Mrs Tan (1), an older woman who is starting to have declines in her physical and cognitive functions. Then I will ask you some questions. Please answer these questions based on Mrs Tan’s perspectives and your understanding of the country’s long-term care system.

Mrs Tan is a retired secretary aged 72 years old (2) who lives alone in a 2-bedroom flat located in Hougang (3), Singapore (4). Her husband passed away a couple of years ago. She has a daughter who visits her regularly. She has been living in the same house for about 40 years and has good relationships with long-term neighbours. She can walk to the shops and facilities in the neighbourhood independently, and attend social gatherings / activities with her neighbour-friends. However, this changed two years ago when her health started to deteriorate. She is unable to walk for long. For a longer distance, she needs a walking stick. She is also getting more forgetful. She is taking more time to recall information such as phone messages, shopping lists and appointment dates. A few times, she alighted at the wrong bus stop when she was going to her weekly exercise class. Her daughter brings her to the polyclinic (5) for health checks twice a year. Mrs Tan is still eager to maintain her regular activities in the neighbourhood.
Stage 2

OK, now we fast forward to see what happens to Mrs Tan in another three years...

Mrs Tan’s health has become worse. Her daughter lives with her now as she needs support to get up from chair, bed and toilet. Mrs Tan has fallen three times in the last one year at home especially when she needs to go to the toilet as her daughter is not home all the time. She frequently has to be reminded to take her meals and showers. She also forgets important personal details like her own address and is often disoriented about time. She has since stopped going out into her neighbourhood to do her shopping and participate in community activities. Mrs Tan’s daughter is starting to worry about expenditure that will be incurred and on who should be making decisions for her mother’s care arrangements, if her mother’s health conditions continue to deteriorate. Mrs Tan prefers to stay home but she does not wish to over burden her daughter. Her daughter and son-in-law have a combined income of $5,800 (6) per month from work. Thus far, they have been relying on CPF schemes (7) for health expenditures.

Stage 3

I will now tell you the last part of the story.

It has been eight years and Mrs Tan’s functions and memory have further deteriorated. She needs help in most of her daily activities including bathing, toileting, and dressing. She is starting to have difficulty feeding herself as she constantly needs reminders on when to eat and she spills food and drinks. She is also occasionally quarrelsome and agitated in the evenings and refuses to bathe. Her daughter feels depressed and hopes that she could get help.

Aspects in orange represent substitutable elements that allow tailoring of vignettes to different countries, cultures and settings.

(1) A common surname of ethnic majority persons in the country
(2) Life expectancy of women at 60 in the country minus 15
(3) The most common housing type/neighbourhood for the median income group in the country
(4) Country for data collection
(5) The most common community-based healthcare facility
(6) The most common measure for median income (e.g., median per capita income, median family income, median household income). For Singapore, it is median household income from work.
(7) Public health financing schemes which are available to the median income group in the country
**APPLYING 6A FRAMEWORK TO THE VIGNETTES**

Items relating to the 6A framework were related to each stage of the vignette.

<table>
<thead>
<tr>
<th>6A Framework</th>
<th>General Questions (asked for all stages)</th>
<th>Stage Specific Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Stage 1</strong></td>
<td><strong>Stage 2</strong></td>
</tr>
<tr>
<td><strong>Availability – Does Long Term Care Exist?</strong></td>
<td>What care, if any, is availability to support [Mrs Tan’s] needs? This care could include formal (services) and informal care (family and friends, community).</td>
<td>What community-based services can [Mrs Tan] tap into?</td>
</tr>
<tr>
<td></td>
<td>What strategies encourage prevention, reablement or rehabilitation?</td>
<td>Whathelp can [Mrs Tan] get for her declining mobility? Whatstrategies are available to prevent falls or other adverse events?</td>
</tr>
<tr>
<td></td>
<td>What assistance, aids, devices, home modification, technologies or transport might [Mrs Tan] receive?</td>
<td>What support or respite care is available and how is this provided?</td>
</tr>
<tr>
<td></td>
<td>What education and support programs are available for [Mrs Tan] or her caregivers?</td>
<td>What support or respite care is available and how is this provided?</td>
</tr>
<tr>
<td></td>
<td>Is there financial support for [Mrs Tan’s] caregivers?</td>
<td>Is there financial support for [Mrs Tan’s] caregivers?</td>
</tr>
<tr>
<td></td>
<td>Is there emotional support for [Mrs Tan’s] caregivers?</td>
<td>Is there emotional support for [Mrs Tan’s] caregivers?</td>
</tr>
<tr>
<td></td>
<td>How would these services differ across urban/rural areas?</td>
<td>How would these services differ across urban/rural areas?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6A Framework</th>
<th>General Questions (asked for all stages)</th>
<th>Stage Specific Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Stage 1</strong></td>
<td><strong>Stage 2</strong></td>
</tr>
<tr>
<td><strong>Approachability – Can people get access to the care they need?</strong></td>
<td>How would [Mrs Tan] and/or her caregivers become aware of the Long-Term Care options available to meet her needs?</td>
<td>What is the process to request Long Term Care services that meet [Mrs Tan’s] needs?</td>
</tr>
<tr>
<td></td>
<td>How is [Mrs Tan’s] eligibility for the service assessed?</td>
<td>If [Mrs Tan’s] needs change accommodate her changing needs or does she need to reapply for a new service?</td>
</tr>
<tr>
<td></td>
<td>How long would [Mrs Tan] wait for the services she needs?</td>
<td>How long would [Mrs Tan] wait for the services she needs?</td>
</tr>
<tr>
<td><strong>6A Framework</strong></td>
<td><strong>General Questions (asked for all stages)</strong></td>
<td><strong>Stage Specific Prompts</strong></td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><strong>Adequacy (Quality, Scope/Integration) – Does the LTC meet the person's needs?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How would [Mrs Tan] be assessed for her need for services?</td>
<td>How are changes in [Mrs Tan]’s care needs monitored?</td>
<td>How are changes in [Mrs Tan]’s care needs monitored?</td>
</tr>
<tr>
<td>In what ways are the care strategies [Mrs Tan] would receive person-centred and goal-oriented?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What forms of care would be provided for [Mrs Tan’s] IADL/ADL limitations and personal support needs?</td>
<td>What strategies are there to encourage reablement/rehabilitation and prevention of functional decline and loss IADL/ADL abilities for [Mrs Tan]?</td>
<td>In what ways would the care strategies address: Continence needs? Nutrition needs? Falls and other acute emergencies?</td>
</tr>
<tr>
<td>How are [Mrs Tan’s] needs for mental, emotional, social and spiritual wellbeing taken care of?</td>
<td>How will advanced care planning be discussed and documented?</td>
<td></td>
</tr>
<tr>
<td>What opportunities are there to increase [Mrs Tan’s] social interactions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the level of family involvement in [Mrs Tan’s] LTC and the decisions about her care?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What support would [Mrs Tan’s] caregiver receive?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 6A Framework

<table>
<thead>
<tr>
<th>General Questions (asked for all stages)</th>
<th>Stage Specific Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acceptability</strong> – Is care appropriate, safe and non-judgmental?</td>
<td></td>
</tr>
</tbody>
</table>
| What guidelines/systems are in place to prevent and detect the possibility of [Mrs Tan] experiencing elder abuse? | What assessments would be made of the home environment? | What assessments would be made of the home environment? | What assessments would be made of the institutional environment?  
Is it safe?  
Is it dementia-friendly?  
When and how are chemical and/or physical restraints used and are there guidelines for their use? |
| Are there protections for [Mrs Tan] against prejudice and discrimination on the basis of race/ethnicity, religion, gender, LGBTIQ, or physical traits? | How is [Mrs Tan]’s satisfaction with services assessed? |
| Do staff undergo cultural training and is care provided to [Mrs Tan] in a way that is culturally appropriate? | What range of professionals would be involved in [Mrs Tan]’s care?  
How are they trained? |
| How much privacy, agency and autonomy are afforded to [Mrs Tan]? | How are [Mrs Tan]’s privacy and dignity protected? |
| Can [Mrs Tan] refuse services, or request something other than what has been offered? Does she have a say? | |
| How are [Mrs Tan]’s preferences regarding her care considered and accounted for? | |
| What if [Mrs Tan] needs to change service providers? | |

| **Affordability** – How much does care cost / who pays? | |
| How would [Mrs Tan] afford her care? Please consider: What the cost is.  
How the bill is broken down.  
How [Mrs Tan] will be paying for it.  
If there is any Long Term Care scheme or subsidies apply. | What proportion (if any) is paid by government?  
Is it means tested? |
| Does [Mrs Tan] have equal access to services for equal need regardless of ability to pay? | |
### 6A Framework

<table>
<thead>
<tr>
<th>General Questions (asked for all stages)</th>
<th>Stage Specific Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability – What checks are in place?</td>
<td></td>
</tr>
<tr>
<td>What are the mechanisms for inspections and compliance checks?</td>
<td></td>
</tr>
<tr>
<td>What would [Mrs Tan] or her caregiver do if they were not happy with the care?</td>
<td></td>
</tr>
<tr>
<td>Is there a complaints procedure/arbitrator/ombudsman?</td>
<td></td>
</tr>
</tbody>
</table>

### Additional Questions

- What if this person we are talking about is of a minority race?
- What if this person is a LGBTIQ?

### VIGNETTE VALIDATION AND REVIEW

**Authenticity:**

**STORY**

Is the vignette storyline authentic / realistic in your country and viable / coherent given the character’s profile?

- [ ] Yes
- [ ] No

If no, why?

---

How close does Mrs Tan represent the average older woman in your country?

---

**NEED**

What functional declines or deficits (if any) does Mrs Tan have at Stage 1 vs Stage 2 vs Stage 3?
Does the vignette represent a credible set of needs, and a credible trajectory of change in needs?

☐ Yes
☐ No

If no, why?

Are any needs unreasonable?

Are any needs not represented?

PREDISPOSING FACTORS

Does the vignette represent an authentic and believable profile of someone who would need and seek care?

☐ Yes
☐ No

If no, why?

What other characteristics might make a difference to the care they would seek and the care they would receive?
ENABLING FACTORS
Does the vignette take account of important support structures which may help a person seek and receive care?

☐ Yes
☐ No
If no, why?

What other characteristics might make a difference to the care they would seek and the care they would receive?

CARE
Does the vignette represent a credible scenario in terms of access to care?

☐ Yes
☐ No
If no, why?

What sort of care would you expect this person to receive at each stage of their journey?

Is there any missing information that could create barrier to understanding the vignette?
Adaptability:

In what ways would you alter the substitutable aspects of the vignette to fit your country circumstances? Please identify substitutions.

Assessment

Are the questions helpful in providing information according to the domains of the 6A framework?

☐ Yes
☐ No

If no, why?

Are there questions that need to be added?

Are there questions that should be deleted?

Analysis

Comments, additions and substitutions will be collated and compared. Importantly the vignettes will be assessed to ensure that standardised predisposing enabling and need factors can be maintained while still allowing for adaptation to different countries. The Vignette will be refined in accordance with the findings from the review.