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Dear s47E(c), s47F

Independent review of IAT trial data

We present the Department of Health and Aged Care ('The Department') with our report on whether the data collection for the Integrated Assessment Tool (IAT) was performed in a manner that means the data is valid, reliable and fit for the intended purposes.

We opine **it is likely feasible to construct a classification system subject to** careful treatment of the trial data during modelling. Specifically, with the data features and limitations discussed within, we expect this to be a relatively complex modelling exercise for the Department. We endorse the Department's approach of monitoring the performance of the proposed classification system during 2024/25 and not using it for determining Support at-Home funding until 1 July 2025.

In relation to validity and reliability, many questions in the IAT are not drawn from validated assessment tools. The Department has undertaken significant consultation and review of the NSAF, which we understand these questions have been drawn from, so they are likely useful for modelling. The Department should ensure it is comfortable with the accuracy of the data collected through these questions, and we suggest it should favour questions from validated tools over other questions where they cover similar content. We also suggest the Department reconfirms that 13 assessment tools HealthConsult classified as validated have been reviewed for both validity and reliability as this was not stated explicitly, as well as whether the KICA Cog regional/urban version was assessed for reliability.

While our review has considered the data collection, we note that **having fit-for-purpose data does not automatically mean a classification system will be fit for purpose** – this will need to be assessed after the algorithm is developed and its performance tested. Among other things, this testing should consider whether the funding results are fair and justifiable, and the extent to which assessors will need to modify recommendations from the classification system to ensure an appropriate outcome for clients.

The opinions we provide are based on a limited week-long review of trial materials and data. As such, these opinions are suggestive rather than conclusive. We may have different opinions if we completed a thorough review. We encourage the Department to use its own judgement when assessing our opinions.

We look forward to discussing further.

Yours sincerely

s47E(c), s47F

Principal Director

1 Background

In February 2021 the Royal Commission into Aged Care Quality and Safety ("Royal Commission") delivered its final report. Among the recommendations of the Royal Commission were that the Australian Government:

- Implement a new aged care program to replace the current in-home aged care programs, residential aged care, short-term care and respite care
- Replace the existing Assessment programs – the *Aged Care Assessment Program* (ACAP) and *Regional Assessment Services* (RAS) – with one assessment process.

As part of the Australian Government's response to the Royal Commission, the Department has developed the IAT to assess older Australians accessing aged care supports in the home. It is intended that the IAT will replace the current National Screening and Assessment Form (NSAF).

The Department launched a 3-month pilot study of the IAT trial in April 2023, with the primary goal of collecting a large sample of assessment data from older Australians, to refine the classification system, aligning it to the needs of the client population. In total, 22,002 assessments were collected during this pilot.

The data collected through the IAT will be used to:

- Develop a new classification system to inform the amount of support people receive for aged care services. This will be implemented as follows:
  - From 1 July 2024, the framework will be used for assigning clients into CHSP and HCP.
  - From 1 July 2025, the framework will be used for estimating Support at Home (SaH) program support.

  Prior to implementation, we understand the model will be subject to substantial testing. The results of this will inform how and whether the models are implemented, including the extent to which a human decision-maker retains final responsibility for deciding CHSP, HCP and SAH eligibility and funding.
- Develop budget costings e.g. preliminary costs for the Mid-Year Economic and Fiscal Outlook (MYEFO) budget update process.
- Assist with ad hoc policy development for the SaH program more generally.

2 Scope and limitations of our review

Taylor Fry were engaged by the Department to conduct an independent review of the IAT Live Trial data. The scope of this review was to provide an opinion on the fitness for purpose of data collected as part of the Live Trial. We did not conduct review or analysis of the modelling using the trial data, but we comment on the classification modelling implications in our review of the data.

We report on fitness of purpose by examining:

- **Data completeness** – the extent to which the Department has all the relevant and necessary information – in Section 3
- **Data validity and reliability**– the extent to which the assessment instruments actually measure the underlying outcome of interest, and the extent to which assessment instruments give the same results each time these are used in the same setting with the same type of subjects – in Section 4.
- **Risk of bias** – the extent to which the data may capture people with higher or lower support needs than average.

Primarily, we opine on the fitness of the trial data for building a classification system that will operate alongside funding assessments rather than determine funding directly for 2024/25. It is prudent for classification systems intended for funding to operate without direct funding implications for a period

before full implementation. The Department's flexibility in potentially implementing the model with a human decision-maker still making the final funding decision is an important consideration in our review and limitation of our opinion. It is out of scope for us to examine whether the system will perform sufficiently well to remove the role of a human decision-maker in the funding decision.

Additionally, the trial data may be used for analysis of funding and policy. We offer limited insight on these uses because:

- The mapping of recommended services to funding is still a work in progress for the Department
- The trial data's usefulness in policy analysis is dependent on the policy question.

However, we expect the trial data to be a rich source for funding and policy analysis if the Department can develop a robust classification model.

We present our opinions relying on the completeness, reliability and validity of the observation and information we were provided through stakeholder engagement and discussions. Our review is limited by the information we were provided and time constraints of this review, and therefore not a comprehensive review of the IAT Live Trial data and the IAT tool.

We urge the Department to not rely solely upon our opinions, nor implement our considerations without conducting further validation of the data.

3 Data completeness

We divide our review of data completeness into:

- Assessment instruments
- Other assessment questions
- Recommended services

Assessment instruments

The use of many of the validated assessment instruments by an assessor is reliant on when specific criteria are met to do so. As such, several of the individual assessment instruments have low participation rates despite 22,002 completions. We examine the participation by assessment instrument.

We observed:

- The participation rates under 3% for:
  - Revised Urinary Incontinence Scale (RUIS)
  - Revised Faecal Incontinence Scale (RFIS)
  - Geriatric Depression Scale (GDS).

  This is likely a feature of the participants not meeting the criteria to necessitate participation.
- Cognition assessment instruments – General Practitioner Assessment of Cognition (GPCOG Step 1, Step 2) and Kimberley Indigenous Cognitive Assessment (KICA) has very low participation for the first half of the trial. The Department recognised this and issued communications to assessors to emphasise the importance of undertaking these assessments part way through the trial.
- The comprehensive assessment has higher participation for many assessment instruments, with de Morton Mobility Index (DEMMI) used almost exclusively for ACAT participants.

- KICA and Good Spirit Good Life (GSGL) assessment instruments are used exclusively for First Nations participants:
  - The KICA instruments had low participation (under 20 assessments in each case) but, combined with the GPCOG, have participation comparable to the overall population
  - GSGL has high participation rate (85%) for this cohort.

Opinion

The overall number of complete assessment responses is likely sufficient for the purpose of building a classification system using the assessment instruments. However, we expect this to be a complex process because of the structure of the data and the limitations discussed below.

The low participation rate for several of the individual assessment instruments mean that inclusion of the responses to these assessment instruments are unlikely to provide robust needs or cost estimates. In any case, it is likely that the Department's modelling algorithms would exclude these responses from informing the needs or cost estimates.

The incomplete participation in GPCOG and KICA assessments is potentially a material shortcoming given cognitive impairment was expected to be a key driver of home care costs[1]. We understand that recent modelling by the Department indicates cognition may not be as large a driver of cost as expected, however we have not reviewed the detail of the modelling and understand it was undertaken for more limited purposes than the model to be implemented in 1 July 2025. Overall, the incomplete participation in the cognitive instruments validates the Department's limited use of the classification system in 2024/25 while performance is being tested. We expect sufficient cognitive impairment data to be collected prior to the classification being used to determine funding.

Assessment participation rates for First Nations and Culturally and Linguistically Diverse (CALD) cohorts were similar to the overall population. While inconclusive without further analysis of the responses and support assessments, this provides comfort that the criteria for assessment instruments were applied similarly across cohorts and that the classification modelling is unlikely to inadvertently estimate cohort effects.

Robust First Nations specific predictive outcomes from the classification model are unlikely given the low number of assessments. This means it may not be possible to take advantage of First Nations-specific assessment tools in the classification model.

Modelling notes

Establishing separate validation data will help protect against spurious conclusions on the poorly populated responses. We encourage the Department to err on the side of parsimony in the modelling process.

The limitations of some instruments may be partly mitigated during the modelling process. For example:

- The participation in the survey may be informative of needs or cost as participation of most surveys are based on qualifying criteria
- Engineered variables, such as the intersection between participation and a group of responses indicating severity, may be informative of needs or costs, although clinical or subject matter expertise should check any engineering of variables from the assessment instruments

[1] HealthConsult (2021), 'Develop the assessment, classification and funding model to underpin a single in-home care program: assessment tool development paper'

- First Nations and non-Indigenous cognitive test responses may be grouped into a set of common engineered variables to avoid inadvertently estimating cohort effects. However, this will rely on assumptions and should be informed by clinical opinion.

We encourage the Department to avoid 'black box' models and choose modelling techniques that produce transparent results that can be vetted by subject matter experts.

Other assessment questions

In addition to the questions discussed in the preceding sections, there were a further 894 questions included in the IAT dataset supplied to us by the Department of Health. We understand that these questions were largely sourced from the NSAF.

These question categories had higher participation rates than the assessment instruments, with most question categories being attempted by over 40% of participants. We observe exceptions where the questions are highly conditional – such as care profile – or intended for advanced or extended assessments only.

Opinion

The completeness of data for any assessment question should be reviewed if it is a candidate for inclusion in the classification system.

There may be redundancy in between the assessment instruments and the other assessment questions. As the other assessment questions are better populated in many cases, these may be preferred by the classification algorithm. However, it may be desirable to override the algorithm's recommendation in some cases – see the discussion of questions drawn from outside formal validated assessment tools in Section 4.

Modelling notes

All modelling notes that applied to the assessment instruments apply here.

The 'living alone' other assessment questions and similar questions indicating family assistance are important for robust classification. This is because our understanding is that the recommended services represent an estimate of the potentially funded needs for participants and *not* the total needs. The potentially funded needs may be less than the total needs where the participant receives informal care from family members, for example. As such, is important that the classification system accounts for participant needs met from other sources. If not, the classification is likely to rank participants by total needs rather than potentially funded needs. Those with informal care may be overfunded, and those without informal care may be underfunded. We understand the Department has a 'living alone' variable that serves this purpose. We suggest that the effectiveness this variable in appropriately capturing informal support should be considered when testing the final classification framework, with comparisons made to other measures of informal support.

Recommended services

The assessors estimate recommended services based on needs. Service recommendations are provided by type, sub-type, and recommended duration, frequency, unit and number of units. These recommended services are used by the Department to estimate cost.

Of these classification types, there are only minor variations between service recommendation percentages for different demographic groups.

As expected, ACAT participants have higher needs and are more likely than RAS participants to have multiple service types. However, a high proportion (41%) of ACAT participants have no service recommendations. From discussions with the Department, one possible reason for this may be that ACAT assessors historically have not recommended service types and may have been less comfortable with this part of the process.

Opinion

We recommended further investigation into the completeness of recommended services for ACAT participants. This anomaly may be an issue with the data prepared for this review. Currently, we understand the Department intends to exclude these incomplete records from the modelling used to develop its classification framework for the SaH program – meaning that the number of assessments included in the modelling is less than the total reported of 22,002. However, the Department should satisfy itself that missing recommended services is not suggestive that the client being assessed had higher or lower funding needs than average.

We understand the classification framework is still a work in progress, so we do not have an opinion on translation of recommended services to costs.

During 2024/25, we understand the Department will compare recommended services and their likely costs against predicted funding. This will demonstrate the reliability of the classification system and highlight any risks. For example, Living Lab ran a pilot with 151 participants. This pilot included an algorithm that capped funding based on the IAT assessment results. Living Lab's report notes examples where the assessor believed that the algorithm recommended an insufficient amount of funding and would have placed the client at risk[2].

4 Data validity and reliability

It is beyond the scope of this review to independently assess reliability and validity of the IAT survey instruments. Instead, we reviewed two documents that the Department of Health supplied as evidence of existing testing of the reliability and validity of the IAT assessment instruments:

- HealthConsult (2021), *'Develop the assessment, classification and funding model to underpin a single in-home care program: assessment tool development paper'*
- Flinders University and GCMA (2022), *'Support at Home Living Lab Trial of Integrated Assessment Tool Part Two: Trial Delivery Tranche 3 – Final Report V3 28072022'*

In some cases, the above reports' findings rely on a review of academic literature. We have **not** reviewed the source literature behind each paper due to time and resource limitations.

Assessor training

Assessor training affects data reliability. We examine the IAT pilot training processes and requirements by looking at documentation and feedback. It is beyond our expertise to comment definitively on whether the training materials and clinical requirements are suitable given the clinical complexity of each assessment instrument. However, we observe:

- Structured training requirements are set out for assessors
- Assessors may have existing skills and qualifications, including the requirement that ACAT assessors have nursing or allied health qualifications in line with the My Aged Care Workforce Learning Strategy 2023[3].

Not all assessors expressed confidence in completing assessments following the training.

Some assessors expressed a particular concern regarding whether they were qualified to estimate how much Allied Health support clients require. The IAT Trial Final Report notes that *'a number of assessors indicated that they lacked the requisite experience and expertise to propose the frequency of allied health input.*

[2] Flinders University and GCMA (2022), 'Support at Home Living Lab Trial of Integrated Assessment Tool Part Two: Trial Delivery Tranche 3 – Final Report V3 28072022'

[3] https://www.health.gov.au/sites/default/files/2023-03/my-aged-care-workforce-learning-strategy-2023.pdf

*This was noted in the Monthly Assessor Surveys on **48 [out of 585]** occasions.'* This means there is some potential uncertainty in the accuracy of assessor estimates of Allied Health support.

Opinion

A proportion of assessors having low confidence may be expected with any new assessment process, but this may impact data reliability nonetheless. This learning curve is another argument for the Department undertaking model testing in 2024/25 to assess the performance of the model.

The concerns on quantifying allied health support are likely to impact the classification algorithm, as it is used to estimate the cost of services the model is seeking to derive. As this was raised by fewer than 10% of respondents, it is possible that many assessors were comfortable with it. The Department should review this closely, with clinical input if necessary, prior to implementing the model.

Formal assessment instruments

The IAT includes 15 formal assessment instruments.

HealthConsult (2021) assessed whether the instruments included in the IAT were 'validated', alongside other criteria. It appears this was primarily based on a literature review. Of the 15 instruments included in the IAT, the report found:

- 11 tools were 'validated in an Australian population'.
- 2 tools were a 'component of a validated tool'.

However, we note that:

- 2 instruments do not appear to have been examined – the Good Spirit Good Life (GSGL), and the regional/urban version of the KICA COG. On these we note:
  - The Department shared separate research[4] it has identified demonstrating GSGL's validity and reliability - we have confirmed the paper shared with us assesses both reliability and validity, but have not independently reviewed the paper's methodology.
  - The Department also shared separate research[5] it has identified demonstrating the KICA COG regional/urban version's validity. This research did not consider reliability. As with the previous paper, we have not independently reviewed the paper's methodology, other than to confirm it made an assessment of validity. We note that it is possible reliability was considered in some of the existing work the Department has commissioned – HealthConsult (2021) may have considered it when assessing the KICA COG, and Living Lab (2022) may have considered it as part of its inter-rater reliability testing. Neither report is clear on this and we suggest the Department confirms with the authors.
- The HealthConsult report does not clearly state that the term 'validated' means that, in all cases, both the instruments reliability and validity have been examined. We suggest this is confirmed with the report's authors for clarity.

[4] Gilchrist, Hyde, Petersen, Douglas, Hayden, Bessarab, Flicker, LoGuidice, Ratcliffe, Clinch, Taylor, Bradley, Smith 2021, 'Validation of the Good Spirit, Good Life quality-of-life tool for older Aboriginal Australians', Australasian Journal of Ageing. Accessed https://onlinelibrary.wiley.com/doi/epdf/10.1111/ajag.13128.

[5] Radford, Mack, Draper, Chalkley, Delbaere, Daylight, Cumming, Bennett, Broe 2015, 'Comparison of Three Cognitive Screening Tools in Older Urban and Regional Aboriginal Australians', Dementia and Geriatric Cognitive Disorders. https://karger.com/dem/article-abstract/40/1-2/22/98144

Opinion

We defer to HealthConsult on the validity and reliability of the assessment instruments. However, we recommend that the Department:

- Follows up with HealthConsult to confirm that both validity and reliability have been examined for each assessment, given the report doesn't explicitly use these terms.
- Confirms whether HealthConsult and/or Living Lab considered the reliability of the KICA COG regional/urban version. If not, it is possible the tool has only been assessed for validity and not reliability.

Additionally, the HealthConsult report does not make clear whether each instrument has been validated for specific sub-cohorts, for example CALD populations. The draft IAT Pilot Final Report further highlights some concerns in assessor feedback surveys about the appropriateness of tools for CALD and First Nations populations, as well as in-hospital administered surveys.

Appendix C shows the results of HealthConsult's review for each of the 15 instruments.

Other IAT questions

Alongside the 15 formal assessment instruments, the IAT includes 894 additional questions that may also be used for classification and other purposes. These were not drawn from validated tools, however we note that:

- Flinders University and GCMA (2022) makes note of inter-rater reliability testing being undertaken in an earlier IAT pilot (specifically, to assess whether training programs were adequate). Inter-rater reliability is a common technique used to assess the reliability of assessment tools or questions. However, the report does not outline what the results of inter-rater reliability testing were. Though we do not know the full context, it is also possible that inter-rater reliability testing had not actually been finalised when the report was prepared, as the comments in the report refers to some aspects of this being 'TBC'. We encourage the Department to examine the inter-rater reliability results to inform it on data reliability.
- While we are not aware of any formal assessment of validity of these questions, the Department has undertaken significant consultation and review of the NSAF[6], which we understand these questions have been drawn from. Given this, we believe the data are are still likely useful for the Department's modelling. The Department should ensure it is comfortable with the accuracy of the data collected through these questions, and we suggest it should favour questions from validated tools over other questions where they cover similar content.

[6] Department of Health 2018, 'Report on the National Screening and Assessment Form (NSAF) Review'. Accessed: https://agedcare.royalcommission.gov.au/system/files/2020-06/CTH.1000.0002.9889.pdf and https://agedcare.royalcommission.gov.au/system/files/2020-06/CTH.1000.0002.9852.pdf

Opinion

Many questions in the IAT are not drawn from validated assessment tools. The Department has undertaken significant consultation and review of the NSAF, which we understand these questions have been drawn from, so they are likely still useful for modelling. The Department should ensure it is comfortable with the accuracy of the data collected through these questions, and we suggest it should favour questions from validated tools over other questions where they cover similar content.

We encourage the Department to examine the inter-rater reliability results produced by Living Lab. These results are likely to inform the Department on data reliability of these questions.

Summary and follow up actions

In summary, we recommend the Department takes the three follow-up actions to clarify its documentation of validity and reliability:

- The Department should confirm that the 13 assessment instruments have all been subject to validity and reliability testing by HealthConsult – existing documentation implies this, but it could be made more explicit.
- The Department should confirm whether HealthConsult and/or Living Lab considered the reliability of the KICA COG regional/urban version. If it was not examined, it is possible that the reliability of this tool has not been examined.
- The Department should examine the results of Living Lab's inter-rater reliability testing of questions drawn from outside the validated tools, as this was not provided in Living Lab's existing documentation.

For questions drawn from outside of the validated tools, the Department should ensure it is comfortable with the accuracy of the data collected, and we suggest it should favour questions from validated tools over other questions where they cover similar content.

5 Risk of bias

The IAT pilot was conducted on a voluntary basis. This creates a risk of bias in the data, as participants may have higher or lower support needs on average than the general population receiving aged care services.

From our discussions with the Department and review of their documentation, we understand that:

- There is an argument to be made that bias in the IAT Live Trial may be lower than in other voluntary assessments – in particular, in our discussions the Department highlighted that people who opted out of the pilot would still have needed to do an assessment, and many participants would not have a strong view on whether the assessment was done through the NSAF or IAT.
- Nonetheless, there is still a risk of bias. The Department's IAT Pilot Final Report identifies that *'The voluntary nature of participation suggests that despite the large number of completed assessments, the outcomes may not be representative of the diverse population of older Australians, but particularly for [some demographic] cohorts'*. For CALD cohorts, the Final Report notes that assessor feedback indicated *'a reluctance from CALD clients to participate in the IAT Live Trial due to difficulty understanding why they would undertake a longer assessment, concerns with suitability of cognition assessment tools, and the need for translation using an interpreter'*.

Opinion

While the risk of bias may be lower in the IAT Live Trial than other voluntary assessments, there is still a risk that the population has higher or lower support needs on average than the general population receiving aged care services.

This could be mitigated through:

- Controlling for any sources of bias that can be measured – for example, controlling for under-represented demographic characteristics or other cost drivers.
- Comparing the distribution of aged care package amounts to the general population. For clients undertaking a reassessment, the distribution of their previous support amounts could also be compared to the general population undertaking a reassessment, given this was not impacted by the new assessment process.

Notwithstanding these modelling strategies, it is likely that some residual risk will still remain. Testing the model against the whole population or a randomised sample in 2024/25 would mitigate this risk. Alternatively, the Department could leave human decision-makers responsible for the final funding decision until the model is demonstrated to produce suitable results.

6 Overall opinion

We opine it is likely feasible to construct a classification system subject to careful treatment of the trial data during modelling. Specifically, with the data features and limitations discussed in this report, we expect this to be a relatively complex modelling exercise for the Department.

Our opinion is subject to the Department clarifying the reason for and potential biases from low response rates for recommended services for ACAT assessments.

In relation to validity and reliability, many questions in the IAT are not drawn from validated assessment tools. The Department has undertaken significant consultation and review of the NSAF, which we understand these questions have been drawn from, so they are likely useful for modelling. The Department should ensure it is comfortable with the accuracy of the data collected through these questions, and we suggest it should favour questions from validated tools over other questions where they cover similar content. We also suggest the Department reconfirms that 13 assessment tools HealthConsult classified as validated have been reviewed for both validity and reliability as this was not stated explicitly, as well as whether the KICA Cog regional/urban version was assessed for reliability.

We encourage the Department to consider the modelling notes offered throughout this document when building its draft classification system and refining it over time.

Once the classification framework is developed, it should be tested in 2024/25. This should assess the performance of the model in general and the specific issues identified in our review, including:

- Cognition impairment instrument participation.
- First Nations response rates.
- Assessor confidence, including recommending allied health services.

Implementing the classification system to determine funding for at-home support from July 2025 should depend on the classification performance in 2024/25. In this regard, performance should be assessed inclusive of but not exclusively by statistical means. Specifically, the Department should:

- Assess whether the funding results are fair and justifiable
- Determine the role, if any, of assessors in modifying recommendations from the classification system.

Appendix A Inputs into the review

A.1 Consultations

As part of our review, we conducted stakeholder engagement and consultation with key stakeholders from the IAT Live Trial project team, including members of the algorithm, classification and costings team and the Schema and Policy design leads.

- s47E(c), s47F were our contacts within the Department, coordinating our review of IAT Live Data Trial. We consulted with s47E(c), s47F on multiple occasions to discuss scope, provide any updated data we requested, and any additional Departmental contacts for consultation.
- s47E(c), s47F are staff in the Department of Health who are overseeing the design of the classification system for the Support at Home initiative using the data collected from the IAT. We consulted with s47E(c), s47F to further understand the use of the IAT Live Trial data collection for classification and costing algorithms.
- s47E(c), s47F is the IAT Live Trial Project lead, and is responsible for Live Trial pilot. We consulted s47E(c), s47F to further understand the formal assessment tools that were selected and developed as part of the IAT questionnaire, and how these tools were selected.
- Assistant Secretary group – Taylor Fry met with the following First Assistant Secretaries and Assistant Secretary from the Department, to discuss the scope and background of the IAT Live Data Trial.
  - **Thea Connolly**, First Assistant Secretary
  - **Nicholas Hartland**, First Assistant Secretary
  - **Nicholas Morgan**, Assistant Secretary.
- s47E(c), s47F is responsible for the IAT Data Schema within the aged care Data Warehouse. We consulted with s47E(c), s47F to confirm whether there were any data warehousing issues of note for us to consider in our review.

A.2 Information

In order to review the validity and fitness for purpose of the data collection, we conducted a validation of the Live Trial data set, provided by the Department.

The following documents were provided to us by the Department to assist with our review:

Folder name	Document
Data Analytics Handover	▪ IAT Power BI Dashboard - 20 August 2023.pdf
Data Specifications	▪ Data Cleaning – R project ▪ Various summary reports
IAT Trial Background Documents	▪ Att G. Appendix A_IAT live trial 2023 NM.docx ▪ Att G. IAT Live trial 2023 - Detailed Statement of Work NM.docx ▪ IAT Live Trial Final Report - Draft 1.0.docx ▪ IAT Trial Monthly Analysis Report - July v1.0.pdf ▪ Export_iat_trial_data_aco.csv

Folder name	Document
	▪ Export_iat_trial_data_additional.csv ▪ WDDS_FCT_NARROW_IAT_EXTRACT_ADDITIONAL_SQL.txt
Further Background docs	▪ Fact sheet IAT live trial and system arrangements.pdf ▪ Fact sheet IAT vs NSAF.pdf ▪ IAT offline form.pdf ▪ IAT training learning pack update for ANACC organisations.pdf ▪ Quick Reference Guide IAT Key Features.pdf ▪ User Guide Integrated Assessment Tool.pdf
IAT Main Dataset	▪ export_iat_trial_data.csv ▪ WDDS NSAF NARROW IAT.jpg ▪ WDDS_FCT_NARROW_IAT_EXTRACT_SQL.txt
Reliability, validity and training documentation	▪ 280722_Living Lab Tranche 3 Final Report_V3 28072022.pdf ▪ Clinical and non clinical triggers.csv ▪ Fact sheet - IAT live trial and system arrangements.pdf ▪ Fact sheet - IAT vs NSAF.pdf ▪ FW My Aged Care Training Strategy SECOFFICIAL.msg ▪ IAT training - learning pack (update for AN-ACC organisations).pdf ▪ my-aged-care-workforce-learning-strategy-2023.pdf ▪ Quick Reference Guide – Integrated Assessment Tool (Key Features).pdf ▪ Re Taylor Fry IAT Documents (SECOFFICIAL SECOFFICIAL.msg ▪ Tool Development_Health Consult.pdf ▪ User Guide - Integrated Assessment Tool (IAT).pdf ▪ ACF Assessment Methodology Paper 28_01.docx ▪ Part A ACF Interim Report FINAL.pdf ▪ Summary Consultation Paper - Assessors 12_11.pdf

Appendix B Data completeness

B.1 Assessment instruments

Table B.1 – Assessment instrument participation

Assessment instruments	Participants	
General Practitioner Assessment of Cognition Step 1 (GPCOG Step 1)	6,284	29%
General Practitioner Assessment of Cognition Step 2 (GPCOG Step 2)	5,315	24%
Older Americans Resources and Services Instrumental Activities of Daily Living (OARS-IADL)	22,001	100%
Barthel Index of Activities of Daily Living	22,001	100%
Dukes Social Support Index (DSSI)	16,232	74%
de Morton Mobility Index (DEMMI)	4,546	21%
Kimberley Indigenous cognitive assessment (KICA COG)	17	0%
KICA COG Regional Urban	7	0%
Good Spirit Good Life (GSGL)	256	1%
Revised Urinary Incontinence Scale (RUIS)	389	2%
Revised Faecal Incontinence Scale (RFIS)	101	0%
Geriatric Depression Scale (GDS)	508	2%
Kimberley Indigenous cognitive informant questionnaire (KICA Carer)	15	0%
Patient Health Questionnaire-4 (PHQ-4).	21,999	100%
All completions	**22,002**	

Table B.2 – Assessment instrument participation by ACAT and RAS

Assessment instruments	ACAT participants		RAS participants	
GPCOG Step 1	2,818	34%	3,466	25%
GPCOG Step 2	3,431	41%	1,884	14%
OARS-IADL	8,354	100%	13,647	100%
Barthel Index	8,354	100%	13,647	100%
DSSI	5,707	68%	10,525	77%
DEMMI	4,544	54%	2	0%
KICA COG	11	0%	6	0%
KICA COG Regional Urban	6	0%	1	0%
GSGL	100	1%	156	1%
RUIS	190	2%	199	1%
RFIS	65	1%	36	0%
GDS	359	4%	149	1%
KICA Carer	11	0%	4	0%
PHQ-4	8,353	100%	13,646	100%
All completions	**8,354**		**13,648**	

Table B.3 – Assessment instrument participation for First Nations and CALD cohorts

Assessment instruments	First Nations participants		CALD participants	
GPCOG Step 1	47	16%	467	19%
GPCOG Step 2	34	12%	747	30%
OARS-IADL	293	100%	2,513	100%
Barthel Index	293	100%	2,513	100%
DSSI	223	76%	1,631	65%
DEMMI	43	15%	547	22%
KICA COG	17	6%	0	0%
KICA COG Regional Urban	7	2%	2	0%
GSGL	251	86%	18	1%
RUIS	10	3%	39	2%
RFIS	1	0%	3	0%
GDS	16	5%	39	2%
KICA Carer	14	5%	0	0%
PHQ-4	293	100%	2,512	100%
All completions	**293**		**2,513**	

B.2 Other assessment questions

Table B.4 – Other assessment question participation

Category[(a)]	Number of questions in IAT	Average number of respondents per question	
Assessment Details	44	22,002	100%
Medical	16	20,646	94%
Frailty	20	19,608	89%
Reason for assessment	15	19,203	87%
Client details	27	19,118	87%
Medications	4	18,247	83%
Behaviour	4	17,298	79%
Financial or legal	4	16,392	75%
Home and personal safety	24	16,098	73%
Goal setting	19	14,087	64%
Physical Health	9	10,475	48%
Personal Health	34	10,443	47%
Health and Safety	19	9,209	42%
Carer Profile	72	9,084	41%
Function	94	8,253	38%
Current access to services	91	4,428	20%
Advanced - Medical	8	13,481	61%
Advanced - Psychological	9	4,859	22%
Extended - Cognitive	9	6,766	31%
Extended – Behaviour	6	4,213	19%
Extended – Financial and Legal	14	1,324	6%
Excluded from analysis – could not be assigned to a category	352	5,832	27%
Total	**894**	**9,087**	**41%**

Notes:

(a) Some categories of assessment question were entirely made up of formal assessment tools. These are not shown in the table.

(b) To simplify the calculation across a large number of questions, we have only counted all non-missing values as a valid response. We checked the data for 3 for obvious examples of poor quality responses – 'missing', 'null' and '<no response>' (the latter being identified from visual inspection of the data). These three are counted in the numbers above. If we removed them, it would reduce the estimated total completeness rate slightly from 41% to 40%. We have not checked for other invalid values in the assessment responses.

B.3 Recommended services

Table B.5 – Recommended services

Service type	Cohort				
	All	First Nations	CALD	ACAT	RAS
Allied Health	26%	25%	27%	21%	29%
Assistance with care and housing	0%	1%	0%	0%	0%
Assistance with squalor and hoarding	0%	1%	0%	0%	0%
Case Management	3%	3%	4%	8%	0%
Domestic Assistance	36%	43%	40%	41%	32%
Home Maintenance	22%	25%	22%	21%	22%
Meals	14%	14%	14%	23%	9%
Nursing	5%	4%	5%	7%	3%
Personal Care	10%	10%	15%	22%	3%
Respits non residential	5%	3%	9%	9%	3%
Social support	20%	20%	26%	29%	14%
Specialised Support	4%	5%	3%	4%	4%
Transport	19%	18%	22%	22%	16%
No service recommendation	30%	29%	28%	41%	23%

Appendix C Data validity

Table 1 – Health Consult conclusions regarding the IAT assessment tools

Assessment tool	Health Consult report conclusion	Page reference
GPCOG	*'Component of a validated tool'*	27
OARS-IADL	*'Validated in an Australian population'*	17
Barthel Index of Activities of Daily Living	*'Validated in an Australian population'*	17
Dukes Social Support Index (DSSI)	*'Validated in an Australian population'*	37
de Morton Mobility Index (DEMMI)	*'Validated in an Australian population'*	19
KICA COG	*'Validated in an Australian population'*	27
KICA COG REG URBAN	May not have been examined	
Good Spirit Good Life	Not examined	
Revised Urinary Incontinence Scale	*'Validated in an Australian population'*	21
Revised Faecal Incontinence Scale	*'Validated in an Australian population'*	21
Geriatric Depression Scale	*'Validated in an Australian population'*	33
KICA CARER	*'Validated in an Australian population'*	27
Patient Health Questionnaire-4	*'Component of a validated tool'*	33
Fatigue, Resistance, Ambulation, Illnesses, Loss of Weight Nursing Home (FRAIL-NH)	*'Validated in an Australian population'*	19
Falls Risk in Older People Community (FROP-Comm)	*'Validated in an Australian population'*	19

Notes:

(a) *'Validated in an Australian population'* includes tools rated as *'Validated in Australian population for persons aged 65 years or over'* and rated as *'Validated in Australian population for Indigenous persons aged 50 years or over'*. The latter category was used for First Nations specific tools.