Analysis of younger people living in residential aged care

Report prepared for the Department of Health

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1 Executive summary

1.1 Introduction and research objectives

This report provides a new analysis undertaken by Ipsos of the 5,681 people aged under 65 (as at 11 March 2020) who were living in residential aged care (RAC) between 1 July 2019 and 28 February 2020.

Initial analysis was originally intended to be supplemented by interviews with younger people living in residential aged care (YPIRAC) to provide additional insights into areas where data was limited. Due to restrictions associated with the COVID-19 pandemic, the scope of this research was limited to analysis of existing data.

Nevertheless, this report seeks to provide new insight into the characteristics of YPIRAC to help understand the reasons why they may be living in RAC facilities, who primarily provide care and supported accommodation for people aged 65 and over.

1.2 Overview of method and analysis

The data examined in the report has been combined from data held by the Department of Health (DOH) and separately by the National Disability Insurance Agency (NDIA).

Data from the DOH covers all 5,681 YPIRAC between 1 July 2019 and 28 February 2020.

As well as administrative data about current care provided by RAC facilities, it includes data drawn from the National Screening and Assessment Form (NSAF) which, since 2015/2016, has been collected as part of assessments conducted before entry into RAC, including by Aged Care Assessment Teams (ACAT). For each individual client, the data may include multiple ACAT assessments, and each ACAT assessment may record details of multiple health conditions.

Data from the NDIA includes information for younger people who are participants or awaiting a decision on their eligibility to access the National Disability Insurance Scheme (NDIS). This data includes further demographic and service information, including disabilities and types of support.

Ipsos has completed data matching between these two sources of data to facilitate a wide-ranging analysis of YPIRAC that draws upon both DOH and NDIA data. The matching found that 3,969 of the YPIRAC identified are either participants in the NDIS or are awaiting an access decision, including 455 whose status is draft and 18 whose status is in progress.

This report presents analysis of all 5,681 YPIRAC. It includes additional information known only for NDIS participants. The report also includes a summary of the extent to which there remain gaps in our knowledge about YPIRAC.

1.3 Key findings

The majority of those aged under 65 living in RAC who were analysed are approaching the age of 65, with 3,111 (55 percent) being aged 60 or over, and the mean age of the whole cohort being 58.5 years. A total of 164 (3 percent) are aged under 45.

Males are over-represented compared to the population, comprising 54 percent of all YPIRAC.

YPIRAC are present in all states and territories, with the largest numbers being in states with the largest populations – 1,958 in New South Wales, 1,634 in Victoria, 1,080 in Queensland, 430 in Western Australia, 369 in South Australia, 134 in Tasmania, 49 in the Northern Territory and 26 in the ACT.

Health conditions are recorded during ACAT assessments. In the analysed YPIRAC cohort, at least one health condition was available for 59 percent of the cohort. Multiple health conditions may be recorded for each person at each assessment. Of those whose health conditions are known, 64 percent have conditions recorded that can be categorised as mental and behavioural disorders, 38 percent have conditions that can be categorised as diseases of the circulatory system, 33 percent with diseases of the nervous system and 32 percent have endocrine, nutritional and metabolic disorders.

Categorised disabilities (both those recorded as primary disabilities and secondary disabilities) are available for 88 percent of the NDIS cohort (the 12 percent for whom this data is unavailable are waiting an access or eligibility decision). Neurological disabilities make up the single largest grouping of disabilities recorded (35 percent of NDIS participants have undefined neurological disabilities, with the next largest category being 18 percent with “psychosocial disability”).

Of NDIS participants, the vast majority receive support in the core, capacity building and support coordination categories (96, 96 and 95 percent respectively). Just over half receive capital or assistive technology support (54 percent each).

Aboriginal and Torres Strait Islander (Indigenous) people are over-represented in the YPIRAC cohort comparative to the Australian population of equivalent ages, forming 8 percent of the cohort. It should be noted that access to RAC is available for Indigenous people from the age of 50 years.

A group of particular interest are those people aged under 45. Those under 45 are more likely to have a disability associated with an acquired brain injury – comprising 34 percent of those aged under 45 who are NDIS participants, compared to 18 percent of those aged 45-64.

1.4 Challenges using existing data

Although the data available supports a wide-ranging understanding of the general characteristics of YPIRAC, there are gaps that remain. In particular, data about the reported health conditions and disabilities are lacking for those without recent ACAT assessments and

those without NDIA data. For all YPIRAC, no data in this dataset is available as to their aspirations, including the extent to which their current living and support arrangements meet their needs or where they may wish to live in the future.

Enduring COVID-19 related restrictions may present challenges to additional data gathering, but there remains a real need to more fully understand the characteristics of YPIRAC. This is needed to inform the delivery of services whilst also meeting their individual needs and preferences, especially those younger people not identified as being, or in the process of becoming, NDIS Participants.

2 Background

This report presents analysis of data about YPIRAC. The data is drawn from data provided by the Department of Health (DOH), including data from the aged care system and from the National Disability Insurance Agency (NDIA).

2.1 Research background

Younger people are considered to be those aged under 65. Generally, services other than residential aged care (RAC) are likely to be better suited to meet the needs of younger people, but for many, their needs, and a possible lack of other support services, have resulted in them living in permanent RAC.

An earlier report from the Australian Institute of Health and Welfare, based on 2009–10 to 2013–14 data, reported that there were approximately 6,000 YPIRAC.[1] There had been an average of 2,000 new entries per year in 1999-00 to 2013-14.[2] By way of further reference, as at 31 December 2019 there were 5,297 YPRIAC and as at 31 March 2020, the Department of Health reported there were 5,113 YPIRAC.[3]

Changes to the way disability support is provided resulted from the introduction of the National Disability Insurance Scheme (NDIS) from 2013, including expansion of its Specialist Disability Accommodation program in 2019 (to address the housing needs of people with disability).

In 2019, the Royal Commission into Aged Care Quality and Safety published an Interim Report. This concluded that more needed to be done to address the continued number of younger people living in RAC that was unsuitable for them.[4]

In response to the Royal Commission, the Government announced it would strengthen the initial targets of the Younger People in Residential Aged Care Action Plan.

The new targets, apart from in exceptional circumstances, will seek to ensure there are:

- No people under the age of 65 entering residential aged care by 2022;
- No people under the age of 45 living in residential aged care by 2022; and

[1] Australian Institute of Health and Welfare (AIHW), *Pathways of younger people entering permanent residential aged care*, Cat. no. AGE 89 (Canberra: AIHW, July, 2019), iv.
[2] AIHW, *Pathways*, iv.
[3] National Disability Insurance Agency (NDIA), *COAG Disability Reform Council Quarterly Report* (NDIA, 31 March, 2020), 22; The Department of Health provided Ipsos with data from the Ageing and Aged Care Data Warehouse as at 31 March, 2020. This is live recipients data and therefore, future extracts of this data are subject to change.
[4] Royal Commission into Aged Care Quality and Safety, *Interim report: Neglect* (31 October, 2019), https://agedcare.royalcommission.gov.au/publications/interim-report.

- No people under the age of 65 living in residential aged care by 2025.[5]

Amongst a number of priorities for action to support these targets, was a need to undertake a detailed analysis of younger people currently living in RAC, as well as up to 2,000 young people at risk of entering aged care, to better inform new policies and pathways to find alternative accommodation.

2.2 Research objectives

In order to increase knowledge of the characteristics of existing YPIRAC and new people who enter, or are at risk of entering each year, the DOH commissioned Ipsos to conduct an analysis of existing data with an initial expectation that it would be supplemented by conducting face-to-face-interviews. The aim of these interviews would be to collect additional data for those younger people for whom less information was known. This was expected to inform understanding of:

- Health conditions and disability
- Pathways into RAC
- Interactions with the NDIS
- Necessary accommodation and support needed to exit RAC or to prevent entry to RAC
- Aspirations
- Location issues (rural/remote)

Information gathered through the analysis and survey was expected to enable the DOH to more fully understand the cohort on an ongoing basis.

2.3 Research scope

Within the initial broader research objectives, this report provides an analysis of data relating to YPIRAC. It draws only on data made available to Ipsos in March to June 2020 by DOH and incorporating data from the NDIA.

The report considers data on 5,681 people aged under 65 (as at 11 March 2020) who were living in residential aged care between 1 July 2019 and 28 February 2020. Due to time lags in the administrative data provided, this data may have included reference to a small number of people who had departed RAC.

The report describes the existing data and the way in which it has been combined to provide resources to support ongoing research.

The report also contains descriptive statistics that explore what is known about this cohort of YPIRAC.

[5] Prime Minister of Australia, "Response to the Aged Care Royal Commission Interim Report" (media release, 25 November, 2019), https://www.pm.gov.au/media/response-aged-care-royal-commission-interim-report.

2.4 Change in scope due to COVID-19 crisis

During initial development work in March 2020, it became clear that restrictions imposed to assist with avoiding the spread of COVID-19 would prevent the conduct of any face-to-face interviews in the short-term. This affected the collection of data from those younger people already in RAC, those newly entering RAC, and those at risk of entering RAC for the first time. As a result, the scope of the research was reduced to encompass only an analysis of existing data on YPIRAC, which is aimed at informing ongoing research and support.

2.5 Project Interim Report

An Interim Report was prepared in March and April 2020 and finalised in May 2020. It contained an initial analysis of the existing data made available to Ipsos.

The initial report was originally intended to inform the development of a face-to-face survey and the eventual creation of a more comprehensive report that used additional data, including that gathered through face-to-face interviews, and analysis to present a more thorough understanding of the characteristics, needs and aspirations of YPIRAC.

Due to the cancellation of the survey element of the research, the Interim Report was instead used to aid planning of additional analysis of the existing data that would then form part of this final report.

3 Method

3.1 Data considered in scope

The client dataset provided by the DOH formed the basis of the dataset underpinning this report. Records from the NDIA dataset that could not be linked with a record in the DOH dataset were not included in this analysis.

Records belonging to people aged 65 or older on 11 March 2020 were excluded from analysis.

The report considers data on 5,681 people aged under 65 (as at 11 March 2020) who were living in RAC between 1 July 2019 and 28 February 2020. It should be noted that some may have exited RAC by the end of that period.

See section 3.4 for a description of the datasets used.

3.2 Data governance

Data used in this project has been released by the DOH and NDIA under data release provisions within the *Aged Care Act 1997* (Cwth) and the *National Disability Insurance Scheme Act 2013* (Cwth). Release, and analysis of this data is intended to inform work to improve the delivery of services for YPIRAC.

3.3 Construction of data file

Summary

Data linkage was carried out by comparing a number of potential 'match variables' between the DOH and NDIA datasets. These variables were:

- SPARCID;
- Name variables (in the DOH dataset names are recorded in three different variables whereas in the NDIA dataset they are recorded in a single variable);
- Date of birth; and
- Address variables (primarily state although postcode was also tried).

Name variables were cleaned and recoded to allow improved matching between datasets. Details of the cleaning carried out are presented in the Interim Report.

All potential matches that were an inexact match on the above variables were appraised individually. 24 potential matches that could be not explained by differences in the recording of names, spelling mistakes, typographical error or other mistakes in the recording of data were rejected.

Detailed process description

The SAS statistical software system was used to conduct data manipulation, reduction and merging of the three key data sources described in section 3.4 to arrive at a single source 'by person' data base for analysis.

A systematic process of data reduction and merging was conducted, and further supported by outputting check files to Excel for manual checking of flagged records where the merge score for name comparison was high, or where there was a flagged difference in one of three primary keys: SPARCID, Date of Birth or State.

Any records which were considered unreliable were added to an issues file to be imported back in, removed from the merged set and allocated back to their original sources. Further extensive checks were conducted to check duplicate records in both sources and added to the process.

The process phases were as follows:

Import of Original Excel Data files into the SAS system

The files imported for merging included:

- YPIAC_Clients_Import.xlsx (N=7,786; 95 variables; multi-level assessment data)
- YPIAC_HealthCond_Import.xlsx (N=17,597; 7 variables; multi-level health conditions related to one ACAT assessment id)
- Primary key for merging to YPIAC client data being assess_id
- NDIA_Import.xlsx
- Primary key for merging to YPIAC client data being SPARCID and a series of alternative merges via names, date of birth and jurisdiction

The original files of YPIAC clients and NDIA data were updated to include an additional unique de-identified id number for a client's ACAT assessment in DOH Data and also create three (3) additional name fields being Surname_dummy, First_name_Dummy and Middle_name(s)_dummy. The Surname_dummy was the last string of the Surname and First_Name_Dummy was the first string of the First name and the Middle_name(s)_dummy was to account for all text between. This process allowed for matching by surname only and first and surname only.

Data Cleaning and Creation of Additional Variables

In the DOH Data, the following cleaning and additions were made:

- Name cleaning., including removal of special characters, unusual text, e.g. 'duplicate record', punctuation except hyphens to match NDIA and trimming.
- Creation of new name variables, including merged first name and surname, merged first name, middle name and surname and phonetic names of all types.
- Lengths of variables to be consistent between datasets to assist with merging.

- Renaming of variables for consistent primary merge keys to be similar in both sets of data, including SPARCID, DOB, First_Name, Surname, Mergename, other name variations and State.
- Copies of original variables kept with *_DOH or *_ND extension to be used in checking process and restoring originals after unaccepted merges are split.

Similar name cleaning processes, checks and variable creations were applied to the NDIA data. A frequency check of NDIA data of SPARCID by Name by DOB, showed 10 duplicates.

Later stages of the process also revealed duplicates in the NDIA data for clients who had missing SPARCIDs for one record and present for another. However, these were clearly the same client. These were identified in further checks in the process to be merged and removed from the NDIA-only set.

Flag variables (FromDOH or FromNDIA = 1) were created to identify which set of data the record pertained to. This allowed for checks to the overlap set, and the remaining set of each.

Merging of NDIA data to Department of Health Data

Conducted in-line with data governance requirements, the merge process was used to progressively merge the NDIA data (N=5,264) to the main DOH data (N=5,706) to find matches and then output the remaining NDIA records to reiterate a merge at the next stage. There were 11 key stages, two of which were removed in later iterations due to the quality of the merge not being strong. The omitted stages used phonetic versions of names for matching.

Data Quality Checks

In the final file there were check flags created to identify and compare variables between sets including date of birth, SPARCID and state jurisdiction. The SAS Levenshtein distance functions of Spedis and Complev were used to create a score for names which did not match on first name, surname or combined name. These were exported to a file named 'Non zero distance.xls' to enable manual checking. These were mostly identified as spelling differences and the matches accepted.

The main file was then filtered by the different merge stages to check the quality of the merge based on the key indicators. Any issues were tracked in an Excel document to be imported later and separate from the merged record and placed back into their original data.

Further checks were also carried out to look up and compare DOH data back to the original source and similarly with NDIA.

Duplicate checks across all ID variables conducted.

There were 13 records identified as being the same person in the NDIA file due to a missing SPARCID in one record and a SPARCID in another record. These were added to the issues list and then later removed earlier in the process to avoid impact on merges. There were also another 10 NDIA clients with duplicate SPARCIDs added to the issues list.

At the end of the process there was one record, which despite not meeting match criteria due to a missing SPARCID, was still considered the same client and then remerged back into the merge set.

A combination of systematic matching with manual checking for limited records, completed the merged dataset.

Final Dataset

The raw SAS combined dataset was then exported to SPSS and then Q software where a number of additional conversions, calculation of variables and data labels were applied.

The final combined dataset contains 5,681 records. These include matched records and unmatched records from the DOH dataset. The matching process found that 3,969 of the YPIRAC identified are either participants in the NDIS or are awaiting an access or eligibility decision, including 455 whose status is draft and 18 whose status is in progress. These 3,969 are collectively referred to in this report as the NDIS cohort.

3.4 Description of data

3.4.1 Background on ACAT assessments and the NSAF

The National Screening and Assessment Form (NSAF) facilitates the national screening and assessment process. It consists of three components:

- Screening conducted over-the-phone by My Aged Care contact centre staff
- Home Support Assessment conducted face-to-face by the Regional Assessment Service
- Comprehensive Assessment conducted face-to-face by Aged Care Assessment Teams (ACAT)

The data from the NSAF is held by the DOH. Data was unavailable where assessments were undertaken before the introduction of the NSAF (from 2015/2016).

Anyone seeking entry into a permanent, government funded place in RAC must first complete an ACAT assessment, to test their eligibility to receive aged care services. A person can have more than one ACAT assessment during their life. Some people, in emergency circumstances, will enter RAC before their ACAT is completed.

In addition, ACAT assessments can be triggered by a change in a person's medical conditions, care needs, caring and living arrangements or risk of vulnerability. An individual may, therefore, have had more than one ACAT assessment recorded in the data.

3.4.2 Department of Health data

The client dataset provided by the DOH formed the basis of the dataset underpinning this report.

The two DOH files were YPIAC_Clients.xlsx and YPIAC_HealthCond.xlsx.

YPIAC_Clients comprises 7,788 records, each of which represents a single ACAT assessment. Two duplicate records were found, leaving 7,786 unique records. The file contains 67 variables, encompassing personal information, details of communication requirements, administrative data regarding ACAT assessments and multiple ID variables. For the purposes of this project, Ipsos referred to this dataset as the DOH dataset and that is how we will refer to it in this report.

YPIAC_HealthCond comprises 17,597 records, each of which represents a single health condition recorded during ACAT assessment. 52 duplicate records where found, leaving 17,545 unique records. The file contains seven variables, four of which describe health conditions and one of which is an ID variable. Ipsos has referred to this dataset as the Health Conditions dataset.

To complement these, the DOH provided data notes and dictionaries.

3.4.3 Residents and facilities data

On 14 May 2020, the DOH provided data regarding RAC facilities and residents' admission into them. This included RAC addresses, service names, provider names and dates of residents' admission. This data has been linked to the master data file via clients' SPARCID.

3.4.4 ACAT assessment data

ACAT assessment data relating to health conditions were provided by the DOH in a stacked data file of multiple conditions per assessment.

To enable linkage with DOH client data, assessment data has been transformed so that each assessment is represented by a single case containing all health conditions and administrative data recorded during that assessment. A second transformation created a single case for each person in the dataset, as identified by their SPARCID. This facilitated analysis of all ACAT assessments that each person has partaken in.

As shown in Table 1, information from multiple ACAT assessments is known for 26 percent of the population.

Table 1. Count of number of ACAT assessments per person

	%	n
TOTAL	**100%**	**5681**
1	74%	4210
2	19%	1078
3	4%	251
4	2%	106
5	0%	23
6	0%	6
7	0%	4
8	0%	3

base n = 5681

3.4.5 NDIA data

The NDIA data file is Copy of NDIA data request fields spreadsheet_partfilled_tosend20200310 (002).xlsx, which we describe as the NDIA dataset. This file has 5,277 records, all of which are unique. Ten NDIS participants were found to have two records in the dataset, one with a 'draft' pathway status and one with an 'eligible' status, in each case the record with the 'eligible' status was used for data linkage.

In instances where a person has had multiple NDIS plans, the records provided by NDIA relate to the most recent one.

Only records that could be matched to records from the DOH dataset were included in analysis for this report. This leaves a total of 3,969 records that include some data from the NDIA dataset. 3,496 of these records have a 'final pathway status' of eligible and are considered NDIS-participants, a further 455 have a status of draft and another 18 a status of in progress. All 3,969 records are included in the majority of analysis and are collectively referred to in this report as the NDIS cohort.

3.4.6 Missing data within supplied variables

The source datasets each treat missing data differently between variables. For the majority of variables, missing data is null, for specific variables (such as Indigenous status in the DOH dataset) missing data has been coded ('Not stated/inadequately desc'). Wherever possible, treatment of missing data has been kept consistent in the final dataset for analysis.

Given that the final dataset for analysis contained both matched and unmatched records, there is a large amount of structurally missing data for the unmatched records. We refer to this as 'structurally missing' to distinguish it from data that is missing without explanation. We understand why the structurally missing data is missing, because no NDIA record could be found to pair with the DOH record and thus any variables derived from the NDIA dataset must be null.

There are also large amounts of structurally missing data in the analysis of health conditions as no health condition data collected prior to the introduction of the NSAF was provided for

inclusion in this report. This data is stored in a different database system from the presently used system and is not comparable.

In more general terms, the prevalence of missing data is evidence of the breadth and incompatibility of data collection and storage systems that the various government departments and agencies that interact with YPIRAC have employed in the past.

3.5 Analysis techniques

3.5.1 NDIS cohort

For simplicity of analysis all records provided as part of the NDIA dataset have been deemed in-scope for this report. This includes 18 people whose 'status' is listed as 'in progress' and a further 455 as 'draft'.

For simplicity we refer to anyone with an NDIA record as part of the NDIS cohort. The report notes any analysis that is reported only for participant and excludes those who are draft or in progress.

3.5.2 Health conditions coding

During ACAT assessments, multiple health conditions can be recorded. In addition, a primary health condition can also be recorded.

All health condition analysis in this report uses all health conditions, regardless of whether or not they were 'primary'. In this report, all health conditions were analysed in order to get an understanding of the range of conditions reported by YPIRAC.

This approach differs from that used in the Interim Report, where time constraints necessitated analysis be constrained to primary health conditions only.

In agreement with the DOH, recoding work has been carried out on the variables detailing health conditions. This work has allowed a more complete picture than was available in the Interim Report.

3.5.3 Identification of health-condition cohorts

Three cohorts with specific health conditions were identified as being of particular interest to the Department. These are people with neoplasms (tumours/cancer), people with mental and/or behavioural disorders and people with neurodegenerative diseases.

The first two cohorts have been identified by health condition categories of the same names. The cohort of people with neurodegenerative diseases has been identified by using the 'diseases of the nervous system' category of health conditions. For a detailed breakdown of the health conditions included in these categories, please see Section 8.2.

3.5.4 Other cohorts of interest

Other cohorts of interest to the Department are YPIRAC who identify as Indigenous and YPIRAC under the age of 45. These cohorts have been identified using the appropriate variables.

3.5.5 Approach to cross tabulation and cross-sectional analysis

Wherever possible proportions (%) and counts (n) have been reported to describe the population. Unless otherwise specified, percentages in tables are column percentages.

Percentages are presented in tables to zero decimal places. Note that due to rounding percentages in tables may not sum to 100 percent.

Significance testing has been conducted wherever tables compare cohorts. For more information on significance testing, please see Section 3.5.8.

3.5.6 Text analysis

Text analytics algorithms were employed to try and extract some value from free text fields present in the datasets. Variations in phrasing and spelling of each of these were entered into a list categorisation algorithm to produce frequencies of occurrence. Examples of content assessed using this technique are discussed include:

- Health conditions – DOH – multiple health condition variables were provided by DOH. Coding of health conditions was inconsistent within these variables – sometimes health conditions were signified by their four-digit numeric code, sometimes only by their name and sometimes by both. A categorisation algorithm was applied to extract clean coded data from these variables. See Section 8.2 or Health Conditions Codes and Categories.
- Secondary disabilities - NDIA - this variable sometimes contains multiple disabilities separated by punctuation. A simple categorisation algorithm was used to effectively code all disabilities mentioned.
- Type of communication difficulties - DOH - this variable contains a combination of unstructured text and repeated diagnosis codes. An initial review of the variable revealed that some value could be extracted in attempting to categorise the repeated codes and produce frequencies. A further review identified the following prevalent diagnosis codes:
    - Aphasia; Dysphasia
    - Nonverbal
    - Cognitive decline; cognitive impairment
    - No English; poor English
    - Memory impairment; memory decline
    - Slurred speech; stuttered speech; mumbling
    - Intellectual disability;

- Poor hearing;
- Difficult to understand;
- Confusion;
- No issues; nil

3.5.7 Creation of composite variables

Some variables appear in both source datasets. Where possible, information from both source variables was recoded into a single variable in order to minimise the instances of missing data. For example, Indigenous status appears in both datasets. Ipsos created a composite variable that uses the Indigenous status from the DOH dataset unless that status is missing, in which case the NDIA status is used.

All composite variables were re-coded in a similar way, prioritising the DOH variable.

The composite variables created are:

- Indigenous status
- State/Territory
- Preferred language

3.5.8 Significance testing

A variety of statistical significance tests have been conducted whenever comparisons between categorical groupings have been made.

All significance tests conducted in preparation of this report are non-overlapping, i.e. tests are conducted between a group and its complement. Because of this, it is possible for tests on multiple categories to produce results only in one direction.

A 99 percent confidence level was deemed appropriate for significance testing in this report. As multiple tests are sometimes carried out in one table, a multiple comparisons correction has been applied. A note outlining the correction used is contained in the footer or all tables and charts on which testing was undertaken.

Significant differences are shown using blue and red font colours and up and down arrows.

3.5.9 Data suppression

Counts below five have been suppressed throughout the report in order to protect the privacy of individuals.

4 YPIRAC cohort

4.1 Who are Younger People in Residential Aged Care?

4.1.1 Basic demographic profile

4.1.1.1 Age

The mean age for the YPIRAC cohort was found to be 58.5 years old; the median age is 60 years old and the mode is 64 years old. The distribution can be seen in age bands in Table 2, below.

Table 2. Age

	%	n
TOTAL	**100%**	**5681**
Under 30	0%	7
30 - 34	0%	23
35 - 39	1%	38
40 - 44	2%	96
45 - 49	5%	283
50 - 54	11%	620
55 - 59	26%	1503
60 - 64	55%	3111

base n = 5681

Table 3 shows that the under 45-year-old group, that the DOH has a special interest in, was comprised of 164 people at the time of analysis, which represents 3 percent of the YPIRAC cohort studied in this report.

This group is of particular interest as one of the new targets announced by the Australian Government in response to the Interim Report of the Royal Commission into Aged Care Quality and Safety was to ensure that, apart from in exceptional circumstances, no people under the age of 45 will be living in RAC by 2022.

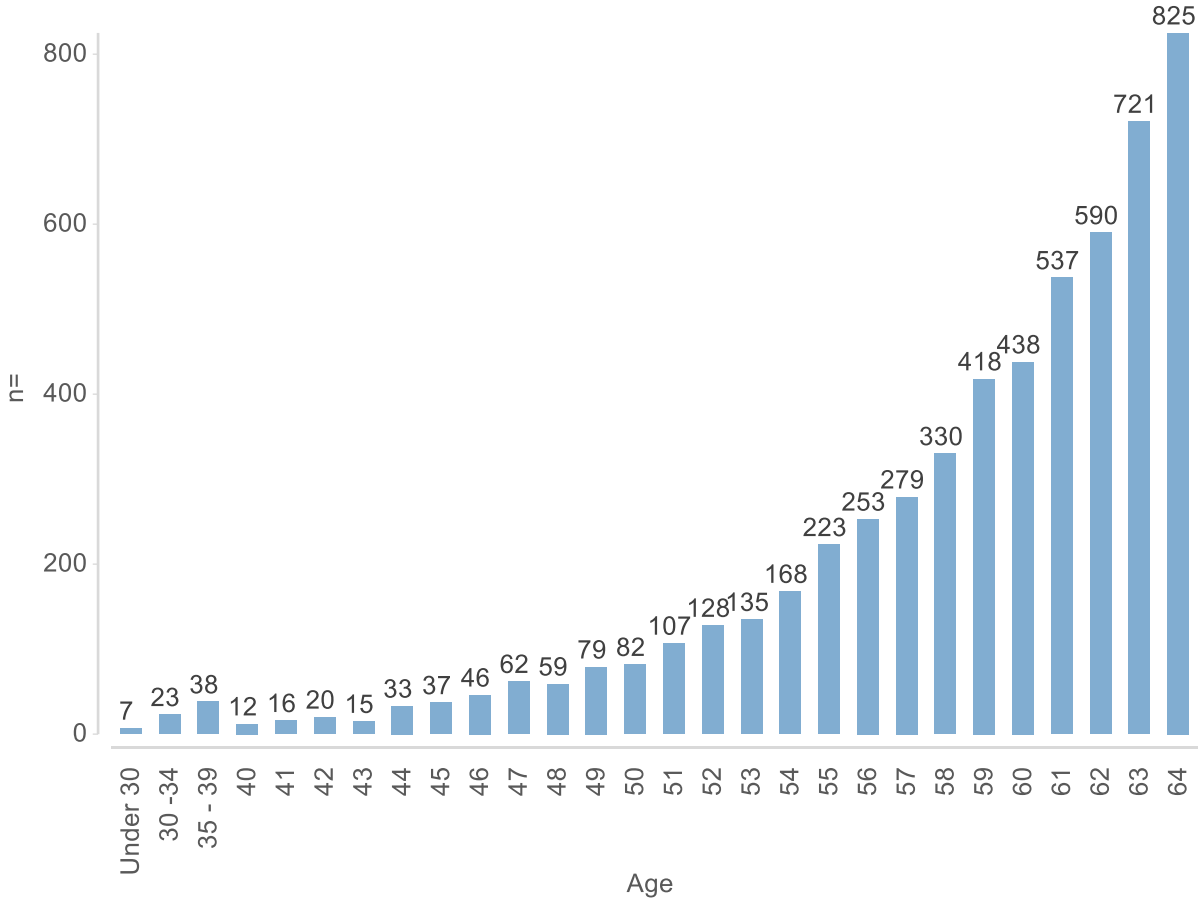
Table 3. Age (dichotomous)

	%	n
TOTAL	**100%**	**5681**
Under 45	3%	164
45 or older	97%	5517

base n = 5681

Figure 1. Age distribution, below, shows the ages of YPIRAC in more detail. Ages under 40 have been aggregated to protect privacy.

Figure 1. Age distribution



base n = 5681

4.1.1.2 Gender

Gender is recorded in several of the datasets provided for this project. The variable from the DOH dataset has been used for all gender analysis in this report.

Table 4, below, shows the gender of the YPIRAC cohort. Males are over-represented in comparison with the Australian population of the same age ranges.[6]

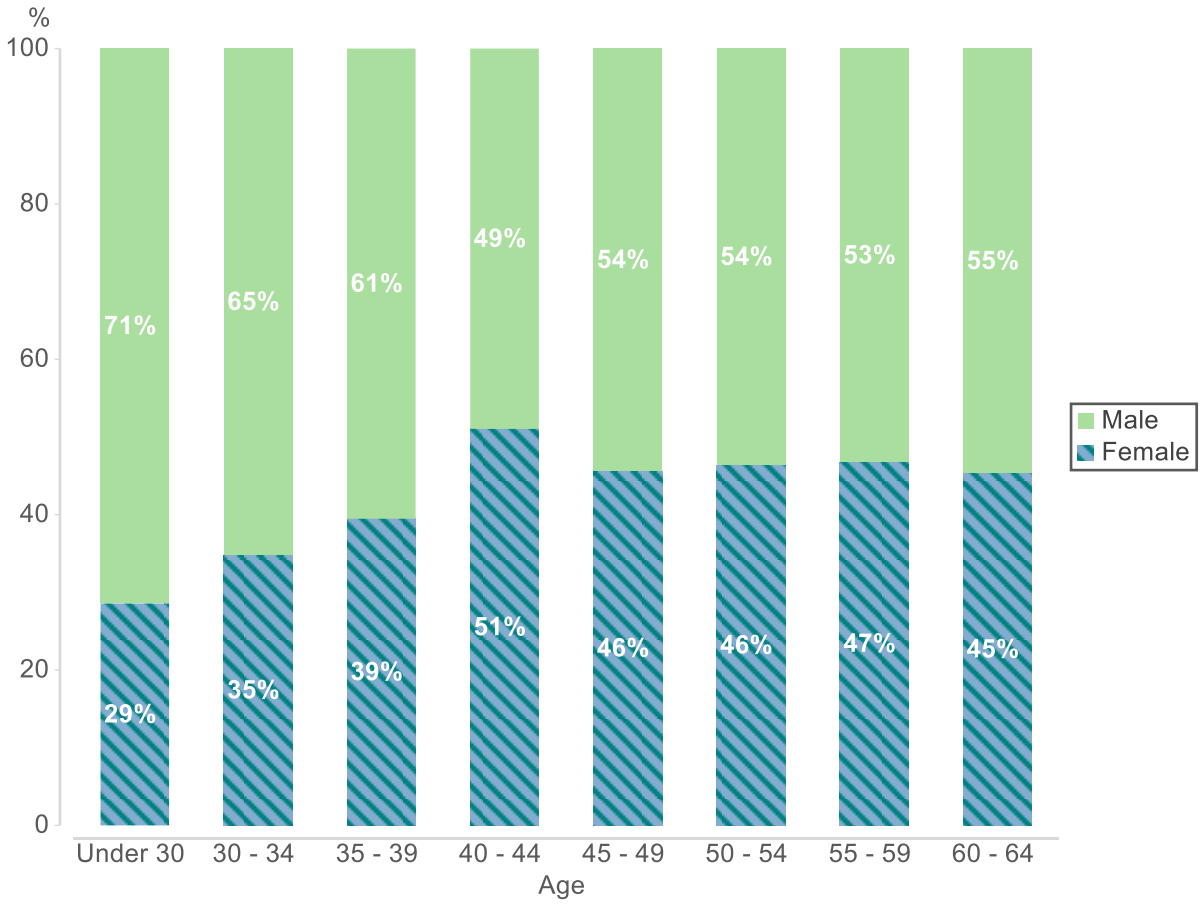
Table 4. Gender

	%	n
TOTAL	**100%**	**5680**
Female	46%	2603
Male	54%	3077

base n = 5680; total n = 5681; 1 missing

An analysis of the interaction between age and gender, presented in Figure 2. Gender proportions of different age groups, below, shows that males are over-represented in all age ranges except 40 – 44, but especially among the youngest residents.[7]

Figure 2. Gender proportions of different age groups



base n = 5680; total n=5681; 1 missing

[6] Australian Bureau of Statistics (ABS), "Population by Age and Sex Tables: Table 8 Estimated resident population, by age and sex–at 30 June 2019", Cat. no. 3101.0, 30 June 2019, viewed 14 July 2020, https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Dec%202019?OpenDocument.
[7] ABS, "Population."

4.1.1.3 Indigenous status

Indigenous status is recorded in both the DOH and NDIA datasets. The status is recorded in more detail in the DOH dataset and this is presented in Table 5, below.

Table 5. Indigenous status (derived from DOH data only)

	%	n
TOTAL	**100%**	**5632**
Yes - Aboriginal	8%	426
Yes - Torres Strait Islander	0%	15
Yes - Both	0%	15
No - Neither	90%	5067
Not stated/inadequately desc	2%	109

base n = 5632; total n = 5681; 49 missing

A composite variable has been created that uses both the DOH and NDIA datasets to minimise the occurrence of missing data when conducting analysis using residents' Indigenous status. This variable, presented in Table 6, below is used for all further analysis in this report.

YPIRAC identifying as Indigenous are over-represented in this YPIRAC cohort when compared to Australian population statistics for equivalent age groups.[8]

Table 6. Younger People in Residential Aged Care identifying as Indigenous (incorporating NDIA data to minimise missing)

	%	n
TOTAL	**100%**	**5681**
Aboriginal, Torres Strait Islander or both	8%	458
Neither	90%	5095
Not stated	2%	128

base n = 5681

YPIRAC who identify as Indigenous are a special focus of this report. Further analysis of this cohort can be found in the section Younger People in Residential Aged Care identifying as Indigenous at 6.1.

[8] Australian Bureau of Statistics (ABS), "Estimates of Aboriginal and Torres Strait Islander Australians: Table 1 Estimated resident Aboriginal and Torres Strait Islander population, States and territories–5-year age groups (to 85 and over)–30 June 2016", Cat. no. 3238.0.55.001, 30 June 2016, viewed 14 July 2020, https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3238.0.55.001June%202016?OpenDocument.

4.1.1.4 Cultural and Linguistic Diversity (CALD)

The Cultural and Linguistic Diversity (CALD) of the YPIRAC cohort analysed is recorded only by a flag variable in the NDIA dataset and therefore is not known for any YPIRAC without an NDIS record. CALD status is known for 99% of NDIS participants in the YPIRAC population and for 94% of those with an 'in progress' NDIS pathway status but only for 8% of those with a draft status.

Table 7. CALD status

Column %	**TOTAL**	Draft	Eligible	In Progress
TOTAL	**100%**	**100%**	**100%**	**100%**
CALD	**12%**	92%	11%	18%
Not CALD	**88%**	8%	89%	82%
Column n	**3523**	37	3469	17

base n = 3969

Table 8, below, shows that 12 percent of YPIRAC in the NDIS cohort are identified as being CALD. We cannot assume that this is representative of the diversity of those not in the NDIS cohort.

It is also worth noting that CALD status was recorded as "Not stated" for 446 of the NDIS cohort, this is presented as missing data in Table 8.

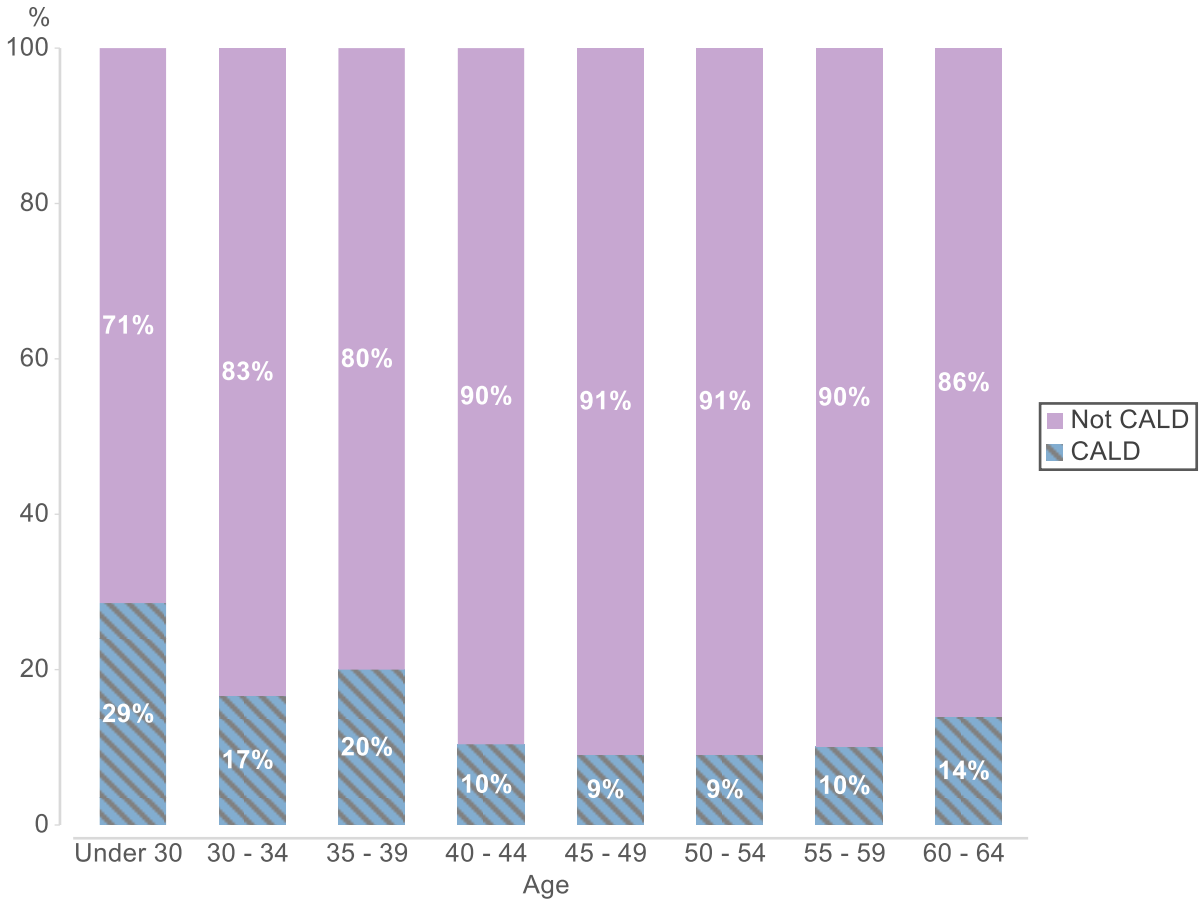
Table 8. CALD status (excluding 'Not stated')

	%	n
TOTAL	**100%**	**3523**
Yes	12%	421
No	88%	3102

base n = 3523; total n= 3969; 446 missing

Analysis of CALD status within age groups shows that residents under the age of 40 are more likely identify as CALD, see Figure 3. CALD status within age groups (excluding 'Not stated'), below.

Figure 3. CALD status within age groups (excluding 'Not stated')



base n = 3523; total n= 3969; 446 missing

Analysis of the relationship between CALD status and gender showed only trivial differences between males and females and similar levels of missing data.

Table 9. CALD status within gender (excluding 'Not stated')

Column %	**TOTAL**	Female	Male
TOTAL	**100%**	**100%**	**100%**
CALD	**12%**	11%	13%
Not CALD	**88%**	89%	87%

base n = 3523; total n=3969; 446 missing

4.1.2 Jurisdiction

Several of the datasets provided for this project contained some form of jurisdiction data. State and territory (referred to as jurisdiction) has been chosen as the most appropriate level of aggregation for most analysis. In order to minimise missing data, a new State/ Territory variable has been derived which prioritises the Residents and Facilities dataset but also uses the DOH dataset to code state of residence.

4.1.2.1 Jurisdiction (State and Territory)

The jurisdiction of RAC facility is shown in Table 10, below.

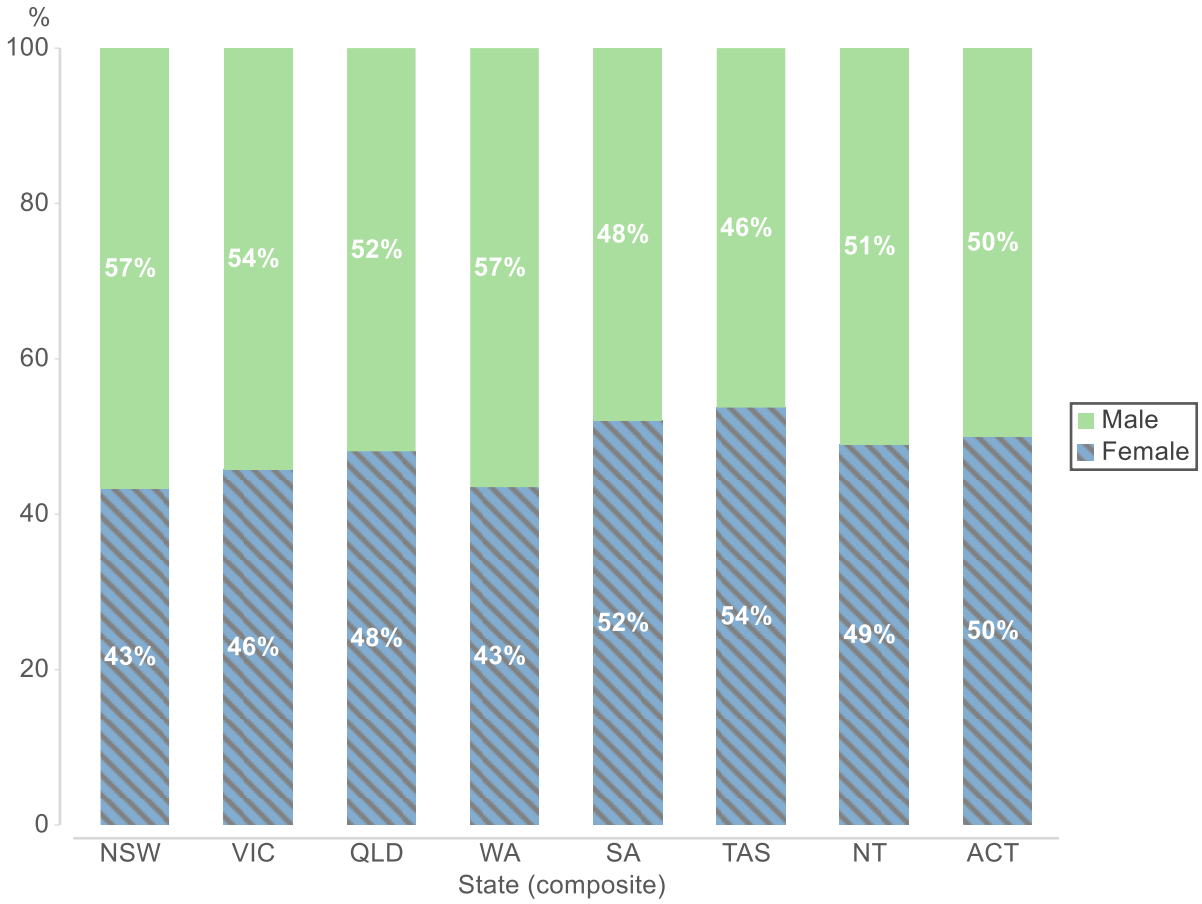
Table 10. Jurisdiction (derived from Residents and Facilities data)

	%	n
TOTAL	**100%**	**5680**
NSW	34%	1958
VIC	29%	1634
QLD	19%	1080
WA	8%	430
SA	6%	369
TAS	2%	134
NT	1%	49
ACT	0%	26

base n = 5680; total n = 5681; 1 missing

Analysis of the relationship between jurisdiction and gender shows that the over-representation of males amongst YPIRAC (see 4.1.1.2) is not universal across jurisdictions but is concentrated in the states of New South Wales, Victoria and Western Australia. This relationship is presented in Figure 4. Gender distribution by jurisdiction, below.

Figure 4. Gender distribution by jurisdiction



base n = 5679; 2 missing

Analysis of the age distribution of residents in each jurisdiction shows relatively little variation. As shown in Table 11, below, Victoria is the only jurisdiction where the mean age of YPIRAC is statistically significantly different from the overall cohort. Please note that the statistical significance test conducted is between Victoria and its complement, i.e. the total of all other states and territories. See section 3.5.8 for further description of significance testing.

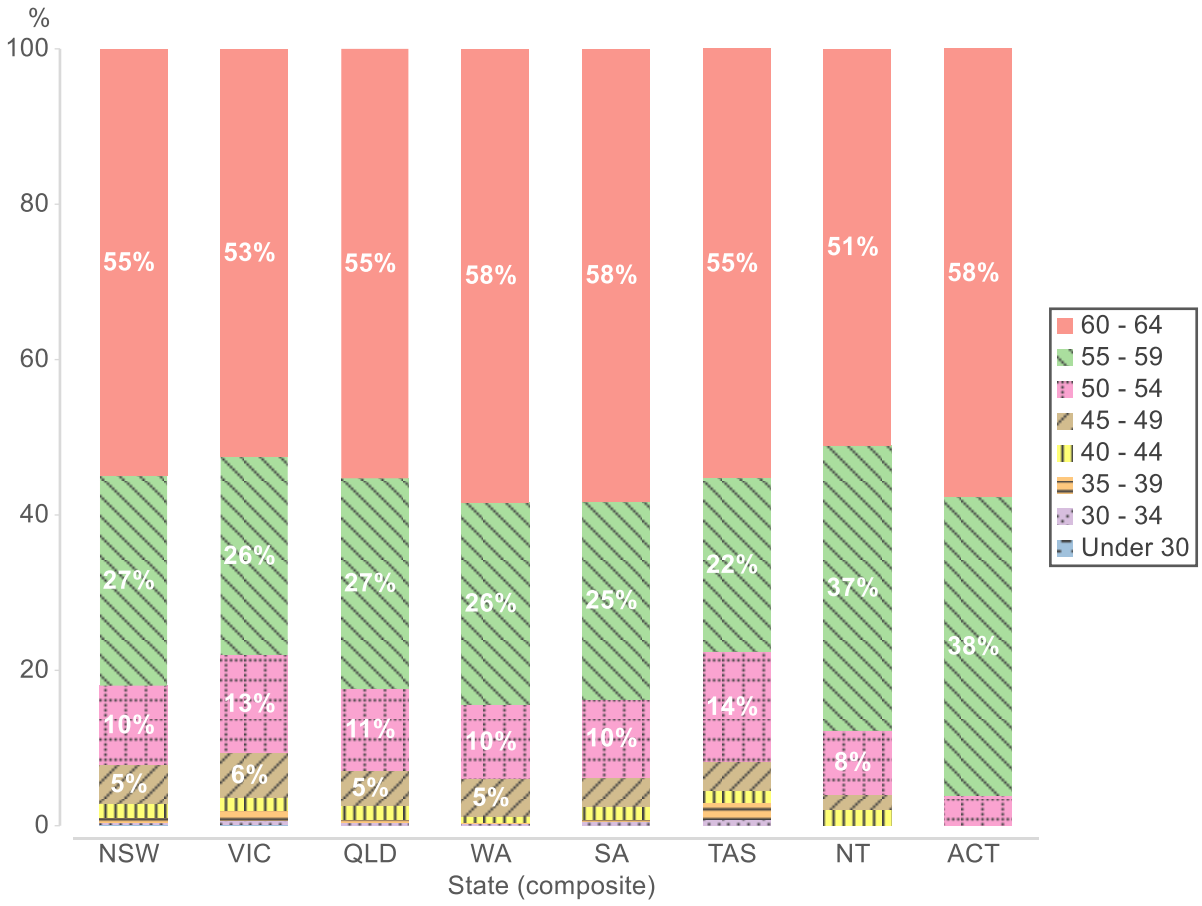
Table 11. Mean age of residents by jurisdiction

Average	**TOTAL**	NSW	VIC	QLD	WA	SA	TAS	NT	ACT
Age	**58.5**	58.6	58.0 ↓	58.7	59.1	58.9	58.1	58.9	60.2
Column n	**5680**	1958	1634	1080	430	369	134	49	26

base n = 5680; 1 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Figure 5. Age distribution by jurisdiction, below, shows the age distribution in each jurisdiction.

Figure 5. Age distribution by jurisdiction



base n = 5680; total n=5681; 1 missing
Proportions below 5% not labelled

4.1.2.2 Residential aged care facilities

There are 641 listed providers of RAC service facilities listed in the analysed YPIRAC data.

The vast majority of these (604 providers) operate in only one jurisdiction; 25 operate in two jurisdictions and the remaining twelve operate in between three and seven jurisdictions.

As shown in Table 12, below, the majority of the 641 RAC providers provide care to fewer than ten YPIRAC. There are seven providers that care for more than 100 YPIRAC each and between them they care for 1,240 YPIRAC.

Table 12. Number of providers delivering care to YPIRAC

	n
Total number of providers	**641**
Fewer than ten YPIRAC	527
10 to 19 YPIRAC	50
20 to 29 YPIRAC	21
30 to 39 YPIRAC	13
40 to 49 YPIRAC	10
50 to 99 YPIRAC	13
100 to 149 YPIRAC	2
150 to 199 YPIRAC	3
200 + YPIRAC	2

base n = 5663; total n = 5681; 18 missing

4.1.2.3 Metro / regional / rural

The Modified Monash Model (MMM) has been used to classify the location of services where YPIRAC live as either metropolitan, regional, rural or remote. The majority of YPIRAC in the analysed YPIRAC cohort reside in metropolitan locations and a sizeable minority in rural locations.

Table 13. Location of YPIRAC according to Modified Monash Model coding

	%	n
TOTAL	**100%**	**5645**
Metropolitan	66%	3751
Regional	9%	497
Rural	23%	1293
Remote	2%	104

base n = 5645; total n = 5681; 36 MMM data missing

The location distribution of YPIRAC in each jurisdiction can be seen in Table 14, below. The majority of YPIRAC living in remote locations are in Western Australia and the Northern Territory.

Table 14. Location (MMM) of YPIRAC in each jurisdiction

Column %	**TOTAL**	NSW	VIC	QLD	WA	SA	TAS	NT	ACT
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Metropolitan	**66%**	67%	70% ↑	65%	72%	74% ↑	0% ↓	0% ↓	100% ↑
Regional	**9%**	2% ↓	8%	19% ↑	5% ↓	1% ↓	56% ↑	39% ↑	0%
Rural	**23%**	30% ↑	22%	14% ↓	12% ↓	23%	42% ↑	0% ↓	0% ↓
Remote	**2%**	0% ↓	0% ↓	1%	11% ↑	2%	2%	61% ↑	0%

base n = 5645; total n = 5681; 36 MMM data missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

4.1.3 What are their needs?

The needs of YPIRAC are identified through the communication aids that they require, their health conditions recorded in ACAT assessments, the disabilities of those who participate in the NDIS and the supports provided as a part of their NDIS plans.

4.1.3.1 Communication

Details of younger peoples' preferred languages and their communication difficulties and needs were provided as part of the DOH data. As outlined in 4.1.3.3, below, this information has been collected inconsistently.

4.1.3.2 Language

Younger peoples' preferred languages are known for nearly the entire analysed YPIRAC cohort and are presented in Table 15, below. English is the preferred language of 93 percent of the cohort; Vietnamese, Australian Indigenous languages, Cantonese and Arabic are the only other languages to be preferred by more than 20 residents.

Table 15. Preferred language

	%	n
TOTAL	**100%**	**5655**
English	93%	5281
Vietnamese	1%	47
Australian Indigenous Lang	0%	25
Cantonese	0%	24
Arabic	0%	22
Mandarin	0%	14
Greek	0%	13
Spanish	0%	13
Macedonian	0%	11
Turkish	0%	11
Italian	0%	10
Serbian	0%	8
Korean	0%	7
Polish	0%	7
Kriol	0%	5
Others below five	1%	79
Other languages (NSAF code)	1%	44
Not Stated/Inadequately Desc	0%	19
Non-Verbal	0%	15

base n = 5655; total n=5681; 26 missing

Languages Other Than English (LOTE) were aggregated to facilitate the use of preferred language in further analysis. All analysis involving preferred language in the remainder of the report uses this variable.

Table 16. Preferred language (recoded)

	%	n
English	94%	5281
Language Other Than English	6%	340

base n = 5621; total n = 5681; 60 missing

4.1.3.3 Communication difficulties

Information on the communication difficulties encountered by YPIRAC is incomplete and inconsistent. Communication difficulties are recorded in two different ways during the ACAT assessment process: a flag variable that assessors are instructed to use (see Table 17) and open-text variables used to describe the nature of the communication difficulties (see Table 18).

Coordination between the flag and descriptive variables is poor, with descriptive text frequently occurring alongside "No" or null in the flag variable. The opposite is also true: a 'Yes' in the flag variable is often followed by no description. The tables in this section have different base sizes as a result.

The descriptive variable is drawn from the NSAF which was completed for ACAT assessments from 2015/2016. Prior assessments under the previous Aged Care Assessment Program (ACAP) are held separately and were not available for this analysis and therefore no descriptive information regarding communication difficulties is available from these assessments.

Table 17, below, shows that roughly a quarter of YPIRAC for whom we have relevant data require help communicating at least some of the time.

Table 17. Does the client need help to communicate?

	%	n
TOTAL	**100%**	**1345**
Yes - Always	16%	219
Yes - Sometimes	11%	148
TOTAL Yes	27%	367
No	73%	978

base n = 1345; total n=5681, 4336 missing

Analysis of the descriptions of communication difficulties is somewhat limited by the variability in the text recorded. Text analytics have been used to identify frequently appearing 'categories' in the data. The most frequent categories are presented in Table 18, below.

Table 18. Summary of communication difficulties

	%	n
TOTAL	**100%**	**535**
Cognitive decline / impairment	19%	104
Aphasia / dysphasia	15%	79
Memory decline / impairment	12%	65
Slurred / stuttered/ mumbled speech	12%	63
Non verbal	11%	60
Difficult to understand	8%	42
No / poor English	8%	41
No issues	7%	37
Confusion	7%	35
Hearing	6%	34
Intellectual disability	5%	27

base n = 535; total n = 5681; 5146 missing

Caution should be used when interpreting these results. Due to the poor data quality and large amount of missing data, these results are indicative rather than representative of the frequencies of the types of communication difficulties encountered by the population analysed.

4.1.3.4 Communication support needs

ACAT assessors can also record whether their client would benefit from access to either the Translating and Interpreting Service (TIS) or the National Relay Service (NRS), or whether they already use either of these services.

Only 52 cases had a TIS flag recorded, and the most common language recorded was English (35 percent). Fewer than five cases had an NRS flag recorded. Use of these two variables appears to be sporadic (given the volume of missing data).

Table 19. Translating and Interpreting Service (TIS) required

	%	n
TOTAL	**100%**	**52**
English	35%	18
Vietnamese	13%	7
Cantonese	10%	5
Others below five	42%	22

base n = 52; total n = 5681; 5629 missing

4.1.4 Health conditions and disabilities

Between them, the DOH and NDIA hold a wealth of data on the health conditions and disabilities of YPIRAC reported during the ACAT assessment process. Individuals can have more than one ACAT assessment, and data from multiple assessments was included in the data provided.

Health condition data reported in this section use data drawn from the NSAF which was completed for ACAT assessments from 2015/2016. Prior assessments under the previous Aged Care Assessment Program (ACAP) are held separately and were not available for this analysis.

Health conditions are recorded during ACAT assessments; assessors are told to record conditions which: "…have an impact on [the client's] activities of daily living and social participation". Health conditions are recorded using a code list provided with the NSAF User Guide.[9] ACAT assessment teams also seek to align reported health condition with the client's medical history or consultation with medical professionals or carers. Health conditions can be reported as the primary health conditions and also as more general health conditions.

There are 214 unique health condition codes. These codes are also grouped into broader categories. Both individual codes and categories are provided in this report. A list of health condition codes is provided at Section 8.2 Appendix B.

Disabilities are recorded by the NDIA as either primary or secondary. Only one primary disability can be recorded whereas multiple secondary disabilities may be recorded. The NDIA data provided to this project has disabilities recorded in broad categories.

At least one health condition is recorded for 3,358 younger people (59 percent) within the analysed cohort.

Primary disability is recorded for all eligible NDIS participants (3,496) and a further six of the 473 YPIRAC with a draft or in progress status, who have been excluded from the disability analysis.

4.1.4.1 Health conditions

As discussed in 3.4.4, we have NSAF health condition data from multiple ACAT assessments for 26 percent of the population. The health conditions below have been aggregated from all assessments with NSAF data; however, the frequencies reported are calculated at the case level, meaning that each person can only contribute once to each health condition count. For example, if hypertension was recorded during multiple assessments of the same individual then it would only count once to the total below.

One health condition from each assessment is designated as the 'primary' health condition. The analysis in this section reports on all health conditions, regardless of whether they were considered primary or not.

The most common health conditions in the analysed YPIRAC cohort are presented in Table 20, below.

[9] Department of Health, *NSAF User Guide: A guide to the information required to be considered and recorded during the My Aged Care assessment process: Home Support Assessors and Comprehensive Assessors* (October, 2018) https://www.health.gov.au/resources/publications/my-aged-care-national-screening-and-assessment-form-user-guide.

Table 20. Most common health conditions (all assessments)

	%	n
TOTAL	**100%**	**3358**
Hypertension (high blood pressure)	19%	639
Depression/Mood affective disorders	18%	621
Diabetes mellitus—Type 2 (NIDDM)	16%	553
Schizophrenia	13%	452
Chronic lower respiratory diseases	13%	432
Abnormalities of gait & mobility	12%	408
Stroke (CVA)—cerebrovascular accident unspecified	12%	394
Falls (frequent with unknown aetiology)	10%	345
Epilepsy	10%	341
Pain	10%	335
Kidney & urinary system (bladder) disorders	8%	276
High cholesterol	7%	251
Injuries to the head	7%	246
Phobic & anxiety disorders	7%	244
Dementia in Alzheimer's disease with early onset (<65 yrs)	7%	240
Other diseases of the digestive system n.o.s or n.e.c	7%	239
Other diseases of the nervous system n.o.s or n.e.c	7%	231
Intellectual & developmental disorders	6%	217
Diseases of the liver	6%	216
Mental and behavioural disorders due to alcohol & other psychoactive substance use	6%	216
Bowel/faecal incontinence	6%	199
Obesity	5%	182
Amnesia (memory disturbance, lack or loss)	5%	178
Diseases of the intestine	5%	177
Stress/urinary incontinence	5%	170
Disorders of the thyroid gland	5%	157
Cognitive impairment n.o.s	5%	154
Others under 5%	81%	2724

base n = 3358; total n = 5681; 2323 missing

Health conditions are also coded into broader categories. The frequencies of these categories can be seen in Table 21. Mental and behavioural disorders are by far the most common category of health conditions experienced by the analysed YPIRAC cohort. Table 20, shows that Depression/Mood affective disorders and Schizophrenia are the most common of these.

Table 21. Health condition categories (all assessments)

	%	n
TOTAL	**100%**	**3358**
Mental & behavioural disorders	64%	2158
Symptoms & signs n.o.s or n.e.c	41%	1372
Diseases of the circulatory system	38%	1290
Diseases of the nervous system	33%	1103
Endocrine, nutritional & metabolic disorders	32%	1083
Injury, poisoning & certain other consequences of external causes	18%	615
Diseases of the musculoskeletal system & connective tissue	18%	597
Diseases of the digestive system	17%	563
Diseases of the respiratory system	16%	546
Diseases of the genitourinary system	16%	535
Neoplasms (tumours/cancers)	11%	383
Diseases of the skin & subcutaneous tissue	7%	221
Diseases of the eye & adnexa	6%	206
Diseases of the blood & blood forming organs & immune mechanism	4%	133
Certain infectious & parasitic diseases	4%	124
Congenital malformations, deformations & chromosomal abnormalities	4%	122
Disease of the ear & mastoid process	4%	120
No health conditions present	0%	3

base n = 3358; total n = 5681; 2323 missing

Health condition categories have been used to facilitate investigation of specific cohorts in Section 6, below.

4.1.4.2 Disabilities

Given that disabilities are coded quite broadly in the NDIA dataset, it is possible for a participant to have the same disability listed as primary and secondary disabilities. In order to give a better sense of the overall prevalence of particular disabilities, we have recoded primary and secondary disabilities into total disabilities (Table 24). Total disabilities has been used for all demographic comparisons.

Neurological disabilities are the most common primary disabilities and the most common overall. Psychosocial disabilities are prevalent as both primary and secondary disabilities and are the second most common overall.

This analysis excludes the 455 draft and 18 in progress NDIS applicants for whom disability information was not available in the dataset provided.

Analysis of supports provided to the NDIS participant cohort is described in 5.2.2.1.

Table 22. Primary disability (NDIS cohort only, excludes draft and in progress)

	%	n
TOTAL	**100%**	**3496**
Other Neurological	28%	979
ABI	18%	637
Intellectual Disability	13%	452
Stroke	12%	415
Psychosocial disability	10%	348
Multiple Sclerosis	5%	187
Other Physical	5%	169
Down Syndrome	3%	104
Cerebral Palsy	3%	88
Spinal Cord Injury	1%	45
Visual Impairment	1%	26
Autism	1%	21
Others below five	0%	6
Other (NDIA code)	1%	19

base n = 3496; total n=3969; 473 missing

Because multiple secondary disabilities can be listed, the percentages in the table below sum to more than the total of 45 percent.

Table 23. Secondary disability (NDIS cohort only, excludes draft and in progress)

	%	n
TOTAL	**45%**	**1087**
Other Physical	15%	350
Psychosocial disability	13%	310
Other Neurological	13%	316
Intellectual Disability	7%	168
Other	3%	79
Visual Impairment	3%	75
Stroke	3%	62
ABI	2%	49
Hearing Impairment	2%	48
Other Sensory/Speech	1%	33
Autism	1%	18
Cerebral Palsy	1%	13
Down Syndrome	1%	16
Multiple Sclerosis	0%	9
Spinal Cord Injury	0%	7
Developmental delay	0%	1

base n =2402; total n=3496; 1094 missing

Because multiple secondary disabilities can be listed, the percentages in the table below sum to more than the total of 100 percent.

Table 24. All disabilities (NDIS cohort only, excludes draft and in progress)

	%	n
TOTAL	**100%**	**3496**
Other Neurological	35%	1215
Psychosocial disability	18%	627
Other Physical	14%	503
ABI	19%	676
Intellectual Disability	17%	593
Stroke	13%	469
Multiple Sclerosis	6%	196
Other	3%	98
Visual Impairment	3%	101
Down Syndrome	3%	120
Cerebral Palsy	3%	101
Hearing Impairment	1%	51
Other Sensory/Speech	1%	35
Spinal Cord Injury	1%	52
Autism	1%	39
Developmental delay	0%	1

base n = 3496; total n=3969; missing 473

4.2 Their pathways into residential aged care

Pathways into RAC were to be explored primarily through fieldwork. Given that fieldwork was not possible (see Section 2.4), there are two remaining avenues to understand pathways into RAC for the YPIRAC cohort: the circumstances that triggered their first recorded ACAT assessment and analysis of touchpoints leading up to their admission into RAC.

4.2.1 Circumstances triggering ACAT assessment

As part of the ACAT assessment process, assessors are asked to record the circumstance(s) that triggered the assessment.

Table 25. Circumstances triggering initial (earliest recorded) ACAT assessment

	%	n
TOTAL	**56%**	**3205**
Medical conditions	41%	2305
Change in care needs	40%	2285
Hospital discharge	29%	1672
Change in cognitive status	24%	1362
Frailty	17%	967
Falls	13%	736
Change in living arrangements	12%	694
Change in caring arrangements	11%	598
Risk of vulnerability	11%	598
Change in mental health status	3%	160
Other	2%	129

base n = 3205; total n = 5681; 2476 missing

4.2.2 Time series analysis of entry into residential aged care

This sub-chapter analyses the time between admission and ACAT assessment.

Admission dates cannot be directly linked to corresponding ACAT assessments as there is no ID variable linking the two relevant datasets. In order to facilitate the analysis, we have restricted it to cases with only one ACAT assessment and only one admission into residential aged care on record. This increases the likelihood that the assessment and admission processes are related. There are 4,078 such records.

However, even with this condition in place, there are many cases where the time between ACAT assessment and admission is thousands of days. In order to focus the analysis on the majority of the population, in consultation with the DOH, it was agreed to limit the analysis of time between assessment and admission to within a five-year period.

In addition, there are several cases where the admission date preceded the ACAT assessment date, these are also considered out-of-scope for analysis but are noted in Table

26, below. While in emergency circumstances it is permitted for people to be admitted to RAC prior to having an ACAT assessment, they were excluded for the purposes of this analysis.

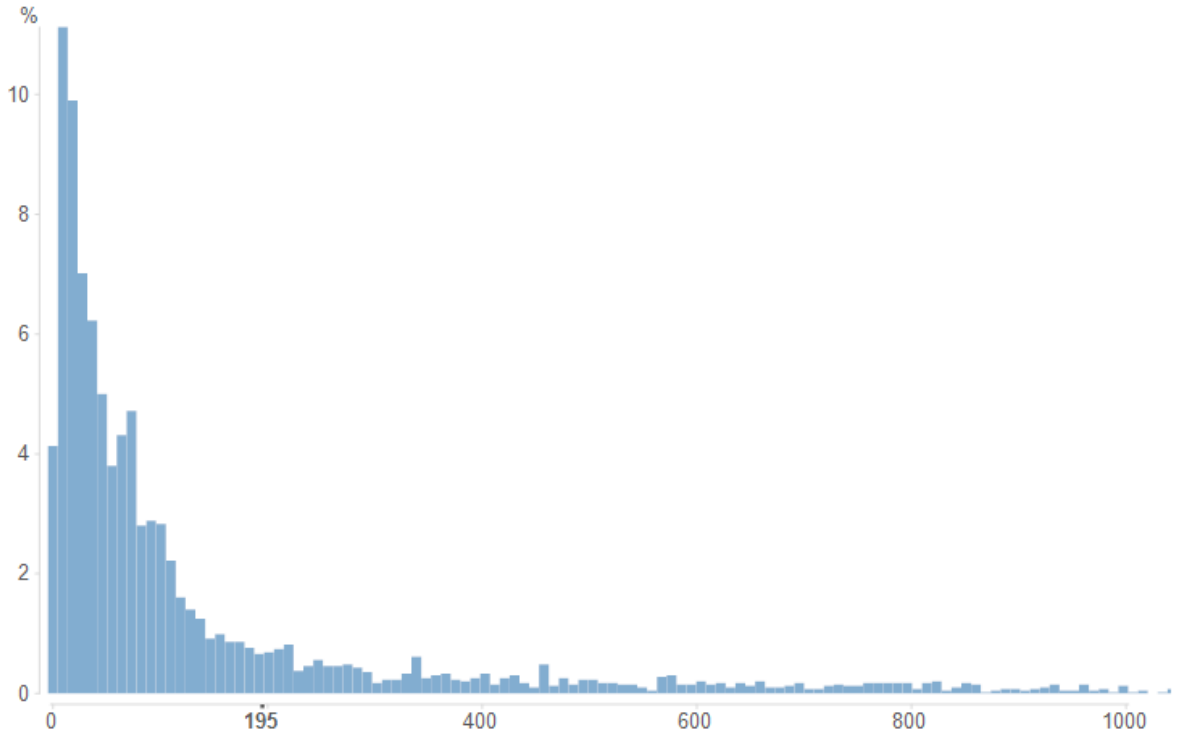
Table 26. Time series analysis – cases in- and out- of scope

	%	n
TOTAL	**100%**	**4078**
Admissions came before assessment	1%	25
Up to five years	96%	3919
More than five years	3%	134

base n = 4078; total n = 5681; 1603 missing

The distribution of the time periods between assessment and admission dates for cases considered in-scope is shown in Figure 6. Histogram of days between assessment date and admission date for residents with only one assessment and one admission, below.

Figure 6. Histogram of days between assessment date and admission date for residents with only one assessment and one admission



base n = 3919

Given the distribution above, the median is perhaps the best measure of centrality and is presented alongside the mean and trimmed mean in Table 27, below. The trimmed mean excludes the top 5% and bottom 5% of values.

Table 27. Days between assessment date and admission date for residents with only one assessment and one admission

	Average	Minimum	Median	Maximum	Trimmed Average
Days between assessment and admission dates	195	0	65	1821	143

base n = 4053; 1628 missing

4.3 Inability to assess aspirations to leave residential aged care

Without the opportunity to interview YPIRAC, the information available on a person's aspirations to leave RAC is very limited.

The only information available in the data provided is sourced from a 'flag' variable indicating whether or not goals relating to where residents live in the future are present in their most recent NDIS Plan. This flag does not indicate any preference for where that younger person wishes to reside and whether it involves leaving RAC or staying in RAC. This flag is present for approximately half of NDIS participants.

Table 28. Does the latest NDIS Plan include goal(s) for where resident lives in the future (NDIS participants only)

	%	n
TOTAL	**100%**	**3496**
Yes	53%	1861
No	47%	1635

base n = 3496; (NDIS pathway status of 'eligible')

4.4 Summary of cohort

The mean age of the YPIRAC cohort is 58.5 years old and within this cohort males are over-represented compared to the Australian population (54 percent compared to 49 percent).[10] This gender bias is concentrated in the states of New South Wales, Victoria and Western Australia and although male over-representation is seen across all age ranges it is particularly pronounced amongst the youngest residents, i.e. those aged 45 years or under.

Of YPIRAC, those under the age of 40 years are more likely to identify as being culturally and linguistically diverse (CALD). However, it is important to note that CALD status is only

[10] ABS, "Population."

available for 62 percent of YPIRAC cohort (as this data is only collected for those receiving, or applying for, NDIS support).

Indigenous Australians are also over-represented in the YPIRAC cohort comparative to the Australian population of equivalent ages.[11]

In this report, a younger person's pathways into RAC was analysed using both the circumstances that triggered their first recorded ACAT and analysis of the time between assessment and admission into RAC.

With respect to communication needs, preferred language is known for nearly all YPIRAC, of whom 6 percent have a preferred language other than English.

Understanding of communication difficulties is much more complex with information held being both incomplete and inconsistent, as such caution should be used in interpretation. Table 17 indicates that 27 percent of YPIRAC need help to communicate and 1 percent would benefit from or have already used either the translating and interpreting service or the national relay service.

An important indicator of care needs is the person's reported health conditions and disabilities; however, this information is only known for 59 percent (Table 21) and 88 percent (Table 22) respectively of the analysed YPIRAC cohort. In addition, this information reflects the most significant health condition for the individual at the time of assessment and so does not reflect all health conditions. Table 20 and Table 21 show the diverse range of health conditions reported.

Mental and behavioural disorders are by far the most common category of health conditions reported by the YPIRAC cohort analysed. Table 19 shows that depression/mood affective disorders and schizophrenia are the most common specific health conditions. Table 21 shows that hypertension is the most common health condition reported overall.

Knowledge of younger people's aspirations to leave residential aged care is extremely limited in the analysed data. Data only indicates which residents have goals in their most recent NDIS plan that relate to where they live in the future, but no information as to the nature of these goals is available or whether the goal includes leaving RAC or staying in RAC. Table 28 shows that this indicator is present for approximately half of the NDIS cohort with a plan; it is not present for any of the 473 YPIRAC with a draft or in progress NDIS status.

[11] ABS, "Estimates."

5 YPIRAC with NDIS support

5.1 Who are Younger People in Residential Aged Care who are part of the NDIS cohort?

This section gives an outline of YPIRAC for whom both NDIA and DOH data is available, who resided in RAC between 1 July 2019 and 28 February 2020 (inclusive) and who are NDIS participants or whose status is draft or in progress. It focuses on their demographic characteristics.

There are 3,969 YPIRAC within the analysed YPIRAC cohort who could be matched to the data from the NDIA. Of these, 3,496 were identified as having an NDIS record which showed them as either having a status of 'Access Met' in regards to NDIS eligibility, or having 'Access Met' status as well as an NDIS Plan. The data provided by NDIA also included people whose status was listed as 'draft' (n= 455) or 'in progress' (n=18). This means that their claim for NDIS eligibility was still being considered.

For the purposes of this analysis, all 3,969 have been considered together as the "NDIS cohort" except where noted otherwise.

5.1.1 Basic demographic profile

Table 29, below, shows the demographic profile of the NDIS cohort for average age.

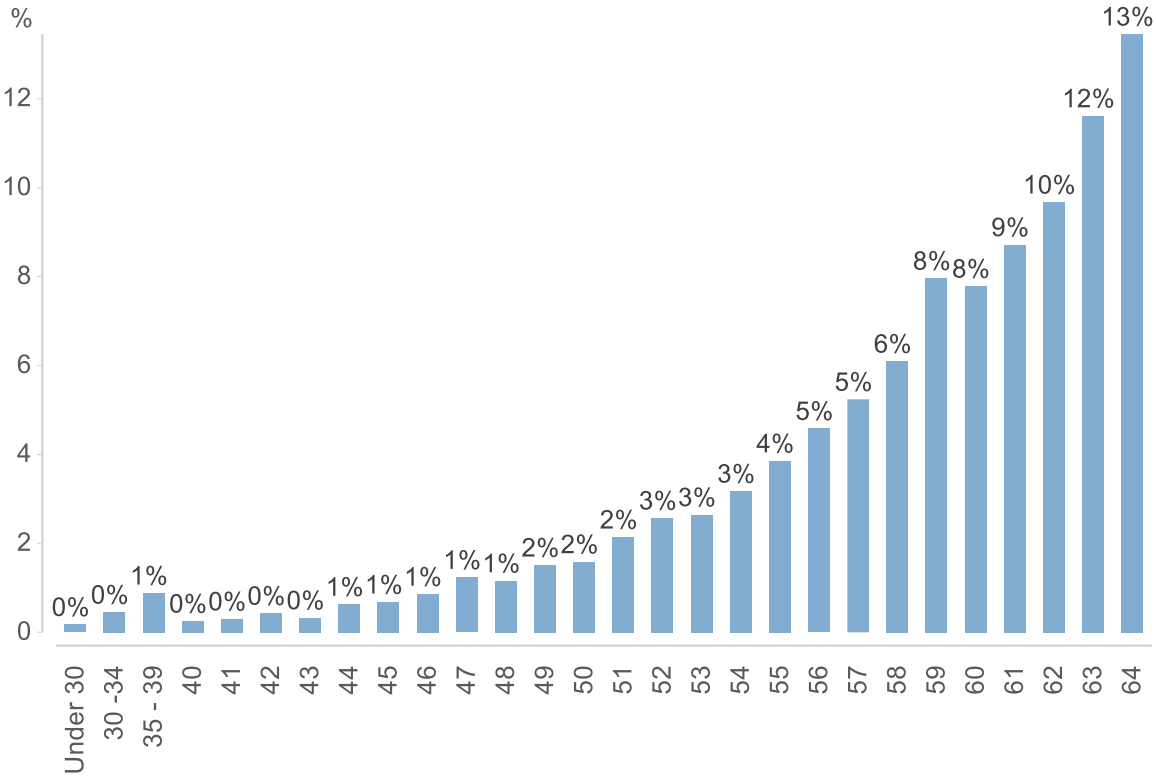
Table 29. Age (numeric)

	Average
Age	58.1

base n = 3969

Figure 7 below, shows the age distribution of the NDIS cohort.

Figure 7. Age (disaggregated)



base n = 3969
Note: percentages rounded to nearest integer.

As shown in Table 30 below, as for all YPIRAC, males make up a slightly higher proportion of the NDIS cohort than females.

Table 30. Gender

	%
TOTAL	**100%**
Female	46%
Male	54%
Column n	3969

base n = 3969

Table 31, below, shows the composition of the Indigenous status of the NDIS cohort. As stated previously, YPIRAC who identify as Indigenous are over-represented in the NDIS cohort when compared to Australian population statistics for equivalent age groups.[12] For more information about YPIRAC who identify as Indigenous see section 6.1.

[12] ABS, "Population."

Table 31. Indigenous status (composite)

	%
TOTAL	**100%**
Aboriginal, Torres Strait Islander or both	8%
Neither	90%
Not stated	2%

base n = 3969

As seen in Table 32 below, 12 percent of the NDIS cohort are CALD.

It is also worth noting that CALD status was recorded as "Not stated" for 446 of the NDIS cohort, this is presented as missing data in Table 32.

Table 32. CALD status

	%	n
TOTAL	**100%**	**3523**
CALD	12%	421
Not CALD	88%	3102

base n = 3523; total n = 3969; 446 missing

5.1.2 Jurisdiction

The distribution of the NDIS cohort across jurisdictions is shown below in Table 33.

Table 33. Jurisdiction (composite)

	%	n
TOTAL	**100%**	**3969**
NSW	35%	1387
VIC	28%	1114
QLD	19%	771
WA	8%	303
SA	6%	247
TAS	2%	86
NT	1%	41
ACT	1%	20
Column n	3969	

base n = 3969

5.2 What are their needs?

5.2.1 Communication

Table 34 below shows preferred language of the NDIS cohort, including those whose status is draft or in progress. Six percent prefer a Language Other Than English (LOTE).

Table 34. Preferred language - LOTE

	%
English	94%
Language Other Than English	6%
Column n	3920

base n = 3920; total n = 3969; 49 missing

Communication difficulties are recorded in two different ways during the ACAT assessment process: a flag variable that assessors are instructed to use (see Table 35) and open-text variables used to describe the nature of the communication difficulties (see Table 36). Further details of the way this data is recorded are provided in section 4.1.3.3. Just over one in three (31 percent) of the NDIS cohort who have this flag available are recorded as needing help to communicate at least some of the time.

Table 35. Does the client need help to communicate?

	%
TOTAL	**100%**
Yes - Always	19%
Yes - Sometimes	12%
TOTAL Yes	31%
No	69%
Column n	745

base n = 745; total n = 3969; 3224 missing

Table 36 below, shows the types of communication difficulties experienced by the NDIS cohort. It is worth noting again that this information has been collected sporadically and inconsistently during the ACAT process. Analysis of the descriptions of communication difficulties is somewhat limited by the variability in the text recorded. Text analytics have been used to identify frequently appearing 'categories' in the data. The most frequent categories are presented in Table 36, below.

Table 36. Summary of communication difficulties

	%
TOTAL	**100%**
Cognitive decline / impairment	18%
Aphasia / dysphasia	16%
Memory decline / impairment	13%
Slurred / stuttered/ mumbled speech	12%
Non verbal	12%
Difficult to understand	7%
No / poor English	7%
No issues	7%
Confusion	7%
Hearing	7%
Intellectual disability	4%
Column n	382

base n = 382; total n = 3969; 3587 missing

5.2.2 Health conditions and disabilities

As discussed in 3.4.4, we have data from multiple ACAT assessments for 26 percent of the YPIRAC population. The health conditions below have been aggregated from all assessments; however, the frequencies reported are calculated at the case level, meaning that each person can only contribute once to each health condition count. For examples, if hypertension was recorded during multiple assessments of the same individual then it would only count once to the total below.

The most common health conditions for the NDIS cohort are presented in Table 37, below.

Table 37. Health conditions – all assessments

	%	n
TOTAL	**100%**	**2011**
Others under 5%	78%	1578
Hypertension (high blood pressure)	17%	341
Depression/Mood affective disorders	17%	340
Schizophrenia	15%	307
Diabetes mellitus—Type 2 (NIDDM)	14%	286
Abnormalities of gait & mobility	12%	249
Stroke (CVA)—cerebrovascular accident unspecified	11%	218
Epilepsy	11%	215
Chronic lower respiratory diseases	9%	184
Falls (frequent with unknown aetiology)	9%	177
Pain	9%	174
Injuries to the head	8%	167
Dementia in Alzheimer's disease with early onset (<65 yrs)	8%	158
Intellectual & developmental disorders	8%	152
Kidney & urinary system (bladder) disorders	7%	143
Bowel/faecal incontinence	7%	134
Mental and behavioural disorders due to alcohol & other psychoactive substance use	7%	131
High cholesterol	6%	129
Other diseases of the nervous system n.o.s or n.e.c	6%	122
Amnesia (memory disturbance, lack or loss)	6%	118
Other diseases of the digestive system n.o.s or n.e.c	6%	117
Phobic & anxiety disorders	6%	115
Stress/urinary incontinence	5%	105
Diseases of the intestine	5%	101
Diseases of the liver	5%	92

base n = 2011; total n = 3969; 1958 missing (majority due to pre-NSAF ACAT data not being available)

Table 38. Categories of health conditions – all assessments (by category)

	%
TOTAL	**100%**
Mental & behavioural disorders	65%
Symptoms & signs n.o.s or n.e.c	38%
Diseases of the circulatory system	34%
Diseases of the nervous system	33%
Endocrine, nutritional & metabolic disorders	28%
Injury, poisoning & certain other consequences of external causes	18%
Diseases of the musculoskeletal system & connective tissue	15%
Diseases of the digestive system	14%
Diseases of the respiratory system	12%
Diseases of the genitourinary system	15%
Neoplasms (tumours/cancers)	6%
Diseases of the skin & subcutaneous tissue	6%
Diseases of the eye & adnexa	7%
Diseases of the blood & blood forming organs & immune mechanism	3%
Certain infectious & parasitic diseases	3%
Congenital malformations, deformations & chromosomal abnormalities	4%
Disease of the ear & mastoid process	3%
No health conditions present	0%
Column n	2011

base n = 2011; total n = 3969; 1958 missing (majority due to pre-NSAF ACAT data not being available)

Table 39 below illustrates the average number of health conditions recorded among the NDIS cohort.

Table 39. Count of health conditions across all assessments

	Average
Count of health conditions coded	4.7
Column n	2011

base n = 2011; total n = 3969; 1958 missing

Table 40 shows the average number of ACAT assessments for the NDIS cohort.

Table 40. Mean assessment count

	Average
Count of assessments (numeric)	1.4
Column n	3969

base n = 3969

Given that disabilities are coded quite broadly in the NDIA dataset, it is possible for a participant to have the same disability listed as primary and secondary disabilities. In order to give a better sense of the overall prevalence of particular disabilities, we have recoded primary and secondary disabilities into total disabilities (Table 24). Total disabilities has been used for all demographic comparisons.

Neurological disabilities are the most common primary disabilities and the most common overall. Psychosocial disabilities are prevalent as both primary and secondary disabilities and are the second most common overall.

This analysis excludes the 455 draft and 18 in progress NDIS applicants for whom disability information was not available in the dataset provided.

Table 41. Primary disability (NDIS participants only, excludes draft and in progress)

	%	n
TOTAL	**100%**	**3496**
Other Neurological	28%	979
ABI	18%	637
Intellectual Disability	13%	452
Stroke	12%	415
Psychosocial disability	10%	348
Multiple Sclerosis	5%	187
Other Physical	5%	169
Down Syndrome	3%	104
Cerebral Palsy	3%	88
Spinal Cord Injury	1%	45
Visual Impairment	1%	26
Autism	1%	21
Others below five	0%	6
Other (NDIA code)	1%	19

base n = 3496

As multiple secondary disabilities can be listed, the percentages in the table below sum to more than the NET (i.e. any recorded secondary disabilities) of 45 percent.

Table 42. Secondary disability (NDIS participants only, excludes draft and in progress)

	%	n
TOTAL	**45%**	**1087**
Other Physical	15%	350
Psychosocial disability	13%	310
Other Neurological	13%	316
Intellectual Disability	7%	168
Other	3%	79
Visual Impairment	3%	75
Stroke	3%	62
ABI	2%	49
Hearing Impairment	2%	48
Other Sensory/Speech	1%	33
Autism	1%	18
Cerebral Palsy	1%	13
Down Syndrome	1%	16
Multiple Sclerosis	0%	9
Spinal Cord Injury	0%	7
Developmental delay	0%	1

base n =2402; total n = 3496; 1094 missing

As multiple secondary disabilities can be listed, the percentages in the table below sum to more than the total of 100 percent.

Table 43. NET Disabilities (NDIS participants only, excludes draft and in progress)

	%	n
TOTAL	**100%**	**3496**
Other Neurological	35%	1215
Psychosocial disability	18%	627
Other Physical	14%	503
ABI	19%	676
Intellectual Disability	17%	593
Stroke	13%	469
Multiple Sclerosis	6%	196
Other	3%	98
Visual Impairment	3%	101
Down Syndrome	3%	120
Cerebral Palsy	3%	101
Hearing Impairment	1%	51
Other Sensory/Speech	1%	35
Spinal Cord Injury	1%	52
Autism	1%	39
Developmental delay	0%	1

base n = 3496

5.2.2.1 NDIS supports

In the data provided by the NDIA, NDIS supports are listed in both broad budget categories (Core, Capital, Capacity) and more specific supports (e.g. Assistive Technology) that sit within those categories. NDIS participants commonly have multiple supports included in their plans so the below table sums to more than 100 percent.

This analysis excludes the 455 draft and 18 in progress NDIS applicants for whom plan support information was not yet available.

Table 44. Latest NDIS Plan Supports (NDIS participants only, excludes draft and in progress)

	%	n
TOTAL	**100%**	**3496**
Core supports	96%	3362
Capacity Building supports	96%	3348
Support Coordination	95%	3333
Capital supports	54%	1905
Assistive Technology	54%	1898
SIL supports	3%	103
Home Modification supports	2%	87
SDA supports	2%	64
None of these	4%	134

base n = 3496

5.3 Their pathways into residential aged care

5.3.1 Circumstances triggering ACAT assessment(s)

Table 45 below shows the prevalence of circumstances triggering earliest recorded ACAT assessments for YPIRAC within the NDIS cohort (this includes participant, draft and in progress statuses). It is not possible to say whether YPIRAC had NDIS support at the time of their assessment.

Table 45. Circumstances triggering (earliest recorded) ACAT assessment

	%
TOTAL	**100%**
Medical conditions	34%
Change in care needs	34%
Hospital discharge	23%
Change in cognitive status	22%
Frailty	14%
Falls	11%
Change in living arrangements	11%
Change in caring arrangements	9%
Risk of vulnerability	10%
Change in mental health status	2%
Other	2%
None of these	52%
Column n	3969

base n = 3969

Table 46 below shows the prevalence of each circumstance as a proportion of all circumstances triggering the earliest recorded ACAT assessment of the NDIS cohort.

Table 46. NET Circumstances triggering (earliest recorded) ACAT assessment

	%
TOTAL	**48%**
Medical conditions	34%
Change in care needs	34%
Hospital discharge	23%
Change in cognitive status	22%
Frailty	14%
Falls	11%
Change in living arrangements	11%
Change in caring arrangements	9%
Risk of vulnerability	10%
Change in mental health status	2%
Other	2%
Column n	1919

base n = 3969

5.3.2 Time series analysis of entry into residential aged care

This sub-chapter analyses the time between admission and ACAT assessment.

Admission dates cannot be directly linked to corresponding ACAT assessments as there is no ID variable linking the two relevant datasets. In order to facilitate the analysis, we have restricted it to cases with only one ACAT assessment and only one admission into RAC on record. This increases the likelihood that the assessment and admission processes are related.

However, even with this condition in place, there are many cases where the time between ACAT assessment and admission is thousands of days. In order to focus the analysis on the majority of the population, in consultation with the DOH, it was agreed to limit the analysis of time between assessment and admission to within a five-year period. In addition, there are several cases where the admission date preceded the ACAT assessment date, these are also considered out-of-scope for analysis.

Table 47 below shows the mean time taken between ACAT assessment and admission into RAC for the NDIS cohort.

Table 47. Days between assessment and admission dates for cases with only one of each for the NDIS cohort

	Average	Minimum	Median	Maximum	Trimmed Average
Days between assessment and admission dates	215	0	70	1821	161
Column n	2677				

base n = 2677; total n = 3969; 1292 missing

5.4 Inability to assess aspirations to leave residential aged care

Without the opportunity to interview YPIRAC, the information available on a person's aspirations to leave RAC is very limited.

The only information available in the data provided is sourced from a 'flag' variable indicating whether or not goals relating to where residents live in the future are present in their most recent NDIS Plan. This flag does not indicate any preference for where that younger person wishes to reside and whether it involves leaving RAC or staying in RAC. This flag is present for approximately half of the NDIS cohort.

Table 48. Does the latest NDIS Plan include goal(s) for where resident lives in the future?

	%	n
TOTAL	**100%**	**3969**
Yes	47%	1861
No	53%	2108

base n = 3969 (includes 455 people whose NDIS status is draft and another 18 whose status is in progress, who cannot have a flag until they are deemed eligible)

5.5 Summary of cohort

There are 3,969 YPIRAC who form the NDIS cohort (including 455 with a draft and 18 with an 'in progress' status). They have a mean age of 58.1. Just over half (54 percent) are male. As with the wider YPIRAC cohort, 8 percent of YPIRAC NDIS participants identify as Indigenous.

The NDIS cohort of YPIRAC are present in all states, with the largest numbers being in states with the largest populations – 1,387 in New South Wales, 1,114 in Victoria, and 771 in Queensland.

With respect to communication needs, preferred language is known for nearly all NDIS-participating YPIRAC, of whom 6 percent have a preferred language other than English.

64 percent of YPIRAC who are NDIS participants report mental and behavioural disorders, representing the most common category of health conditions reported by this cohort (Table 21). Of these, depression/mood affective disorders and schizophrenia are the most common specific health conditions reported (Table 20). Hypertension is the most common health condition reported overall.

Categorised disabilities, including those recorded as primary disabilities and secondary disabilities, are available for all of the NDIS cohort who are currently participants, therefore excluding those with draft or in progress status. Neurological disabilities make up the single largest grouping of disabilities recorded (35 percent of NDIS participants have undefined neurological disabilities, with the next largest category being 18 percent with "psychosocial disability").

The vast majority of NDIS-participating YPIRAC receive support in the core, capacity building and support coordination categories (96, 96 and 95 percent respectively). Just over half receive capital or assistive technology support (54 percent each).

6 Other cohorts of interest

6.1 Younger People in Residential Aged Care identifying as Indigenous

6.1.1 Who are they?

For aged care services, a younger person is generally considered to be under the age of 65, or 50 for Aboriginal and Torres Strait Islander (Indigenous) people.[13] In this analysis, data reflecting a person's status as Indigenous was drawn from the DOH data set (note discussion at 4.1.1.3). It should be noted that this report considers all persons aged under 65 in the analysed YPIRAC cohort as YPIRAC regardless of whether they identify as Indigenous.

As discussed in section 4.1.1.3, YPIRAC who identify as Indigenous are over-represented in the analysed YPIRAC cohort when compared to Australian population statistics for equivalent age groups.

6.1.1.1 Age

The mean age of YPIRAC identifying as Indigenous is lower than that of their non-Indigenous counterparts in the analysed YPIRAC cohort.

Table 49. Age of Younger People in Residential Aged Care identifying as Indigenous

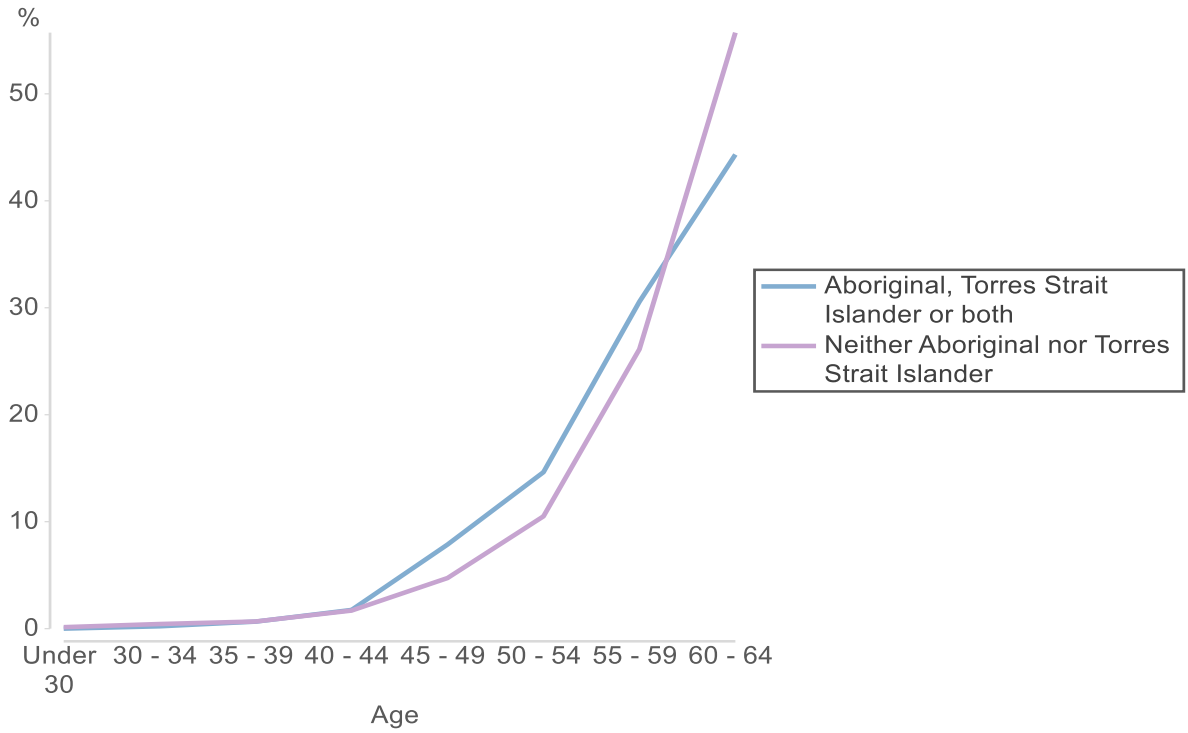
Average	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	**TOTAL**
Age	57.6 ↓	58.6 ↑	**58.5**

base n = 5553; total n = 5681; 128 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

[13] Department of Health, *My Aged Care Assessment Manual: For Regional Assessment Services and Aged Care Assessment Teams,* Version 1.1, Section 12.3 (June 2018), 54, https://www.health.gov.au/sites/default/files/documents/2020/01/my-aged-care-assessment-manual.pdf.

A comparison of the age distributions of the two populations is shown below in Figure 8. Age of Younger People in Residential Aged Care identifying as Indigenous. Of YPIRAC identifying as Indigenous: 49 (10 percent) are aged under 50 and the remainder of the cohort are aged 50-65.

Figure 8. Age of Younger People in Residential Aged Care identifying as Indigenous

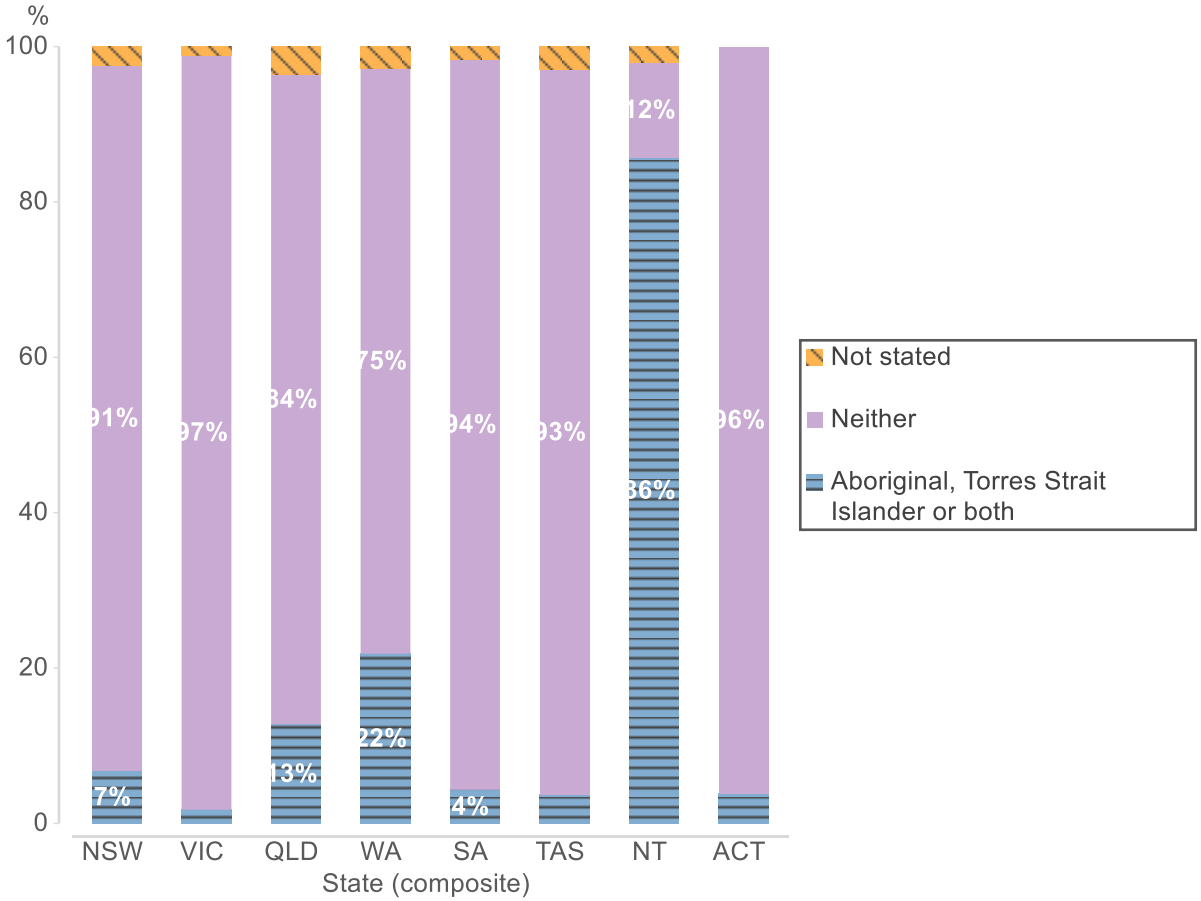


base n = 5553; total n = 5681; 128 missing

6.1.1.2 Jurisdiction

The overwhelming majority of YPIRAC who live in the Northern Territory identify as Indigenous. There are also relatively high proportions in Western Australia and Queensland. Analysis of YPIRAC identifying as indigenous within state or territory is shown below in Figure 9. State or territory of Younger People in Residential Aged Care identifying as Indigenous

Figure 9. State or territory of Younger People in Residential Aged Care identifying as Indigenous



base n = 5680; total n = 5681; 1 missing

6.1.1.3 Health conditions, disabilities and support needs

As explained in 4.2.2 health condition data reported in this section use data drawn from the NSAF which was completed for ACAT assessments from 2015/2016. Prior assessments under the previous Aged Care Assessment Program (ACAP) are held separately and were not available for this analysis. At least one health condition is recorded for 3,111 younger people (55 percent) within the analysed cohort.

The health conditions experienced by YPIRAC identifying as Indigenous are often different from those experienced by the rest of the analysed YPIRAC cohort. The assessment of health condition data reporting in the analysed cohort found that YPIRAC identifying as Indigenous are more likely than the rest of the cohort to experience a range of health conditions, including:

- hypertension,
- type 2 diabetes,
- chronic lower respiratory diseases,
- kidney and urinary system disorders,
- high cholesterol,
- diseases of the digestive system,
- diseases of the liver, and
- mental and behavioural disorders precipitated by alcohol and other substance use.

Early onset Alzheimer's is less likely to be experienced by YPIRAC identifying as Indigenous cohort analysed.

Table 50. Health Conditions of Younger People In Residential Aged Care identifying as Indigenous

Column %	**TOTAL**	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander
TOTAL	**100%**	**100%**	**100%**
Others under 5%	**81%**	77%	82%
Hypertension (high blood pressure)	**19%**	31% ↑	18% ↓
Depression/Mood affective disorders	**19%**	15%	19%
Diabetes mellitus—Type 2 (NIDDM)	**17%**	35% ↑	15% ↓
Schizophrenia	**13%**	16%	13%
Chronic lower respiratory diseases	**13%**	19% ↑	12% ↓
Abnormalities of gait & mobility	**12%**	16%	12%
Stroke (CVA)—cerebrovascular accident unspecified	**12%**	16%	11%
Falls (frequent with unknown aetiology)	**10%**	7%	10%
Epilepsy	**10%**	12%	10%
Pain	**10%**	7%	10%
Kidney & urinary system (bladder) disorders	**8%**	21% ↑	7% ↓
High cholesterol	**8%**	14% ↑	7% ↓
Phobic & anxiety disorders	**7%**	4%	8%
Dementia in Alzheimer's disease with early onset (<65 yrs)	**7%**	2% ↓	8% ↑
Injuries to the head	**7%**	8%	7%
Other diseases of the digestive system n.o.s or n.e.c	**7%**	12% ↑	7% ↓
Other diseases of the nervous system n.o.s or n.e.c	**7%**	4%	7%
Intellectual & developmental disorders	**6%**	5%	7%
Diseases of the liver	**6%**	12% ↑	6% ↓
Mental and behavioural disorders due to alcohol & other psychoactive substance use	**6%**	14% ↑	6% ↓
Bowel/faecal incontinence	**6%**	4%	6%
Obesity	**5%**	7%	5%
Amnesia (memory disturbance, lack or loss)	**5%**	6%	5%
Diseases of the intestine	**5%**	3%	5%
Stress/urinary incontinence	**5%**	3%	5%
Disorders of the thyroid gland	**5%**	5%	5%
Cognitive impairment n.o.s	**5%**	7%	4%

base n = 3111
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

There are also statistically significant differences in the categories of health conditions experienced:

Table 51. Categories of health conditions of Younger People In Residential Aged Care identifying as Indigenous

Column %	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	**TOTAL**
TOTAL	**100%**	**100%**	**100%**
Mental & behavioural disorders	59%	65%	**64%**
Symptoms & signs n.o.s or n.e.c	41%	41%	**41%**
Diseases of the circulatory system	52% ↑	37% ↓	**38%**
Diseases of the nervous system	24% ↓	34% ↑	**33%**
Endocrine, nutritional & metabolic disorders	51% ↑	31% ↓	**32%**
Injury, poisoning & certain other consequences of external causes	16%	18%	**18%**
Diseases of the musculoskeletal system & connective tissue	16%	18%	**18%**
Diseases of the digestive system	22%	16%	**17%**
Diseases of the respiratory system	22%	16%	**16%**
Diseases of the genitourinary system	26% ↑	15% ↓	**16%**
Neoplasms (tumours/cancers)	9%	12%	**11%**
Diseases of the skin & subcutaneous tissue	5%	7%	**6%**
Diseases of the eye & adnexa	9%	6%	**6%**
Diseases of the blood & blood forming organs & immune mechanism	9% ↑	4% ↓	**4%**
Certain infectious & parasitic diseases	5%	4%	**4%**
Congenital malformations, deformations & chromosomal abnormalities	0% ↓	4% ↑	**4%**
Disease of the ear & mastoid process	7% ↑	3% ↓	**4%**
No health conditions present	0%	0%	**0%**
Column n	276	3035	**3311**

base n = 3111

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Disabilities are recorded by the NDIA and can be categorised as either primary or secondary. There are fewer differences in the primary disability of the Indigenous cohort, but they are more likely to have suffered a stroke or a spinal cord injury and less likely to be experiencing Multiple Sclerosis.

Table 52. Primary disability of Younger People In Residential Aged Care identifying as Indigenous (NDIS cohort only, excludes draft and in-progress)

Column %	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	**TOTAL**
TOTAL	**100%**	**100%**	**100%**
Other Neurological	21%	29%	**28%**
ABI	20%	18%	**18%**
Intellectual Disability	11%	13%	**13%**
Stroke	19% ↑	11% ↓	**12%**
Psychosocial disability	13%	10%	**10%**
Multiple Sclerosis	1% ↓	6% ↑	**5%**
Other Physical	7%	5%	**5%**
Down Syndrome	0%	3%	**3%**
Cerebral Palsy	1%	3%	**2%**
Spinal Cord Injury	3% ↑	1% ↓	**1%**
Visual Impairment	2%	1%	**1%**
Autism	1%	1%	**1%**
Others below five	0%	0%	**0%**
Other (NDIA code)	1%	1%	**1%**
Column n	261	3167	**3428**

base n = 3428; total n= 3496; 68 missing (due to unknown indigenous status)
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Table 53. Secondary disability of Younger People In Residential Aged Care identifying as Indigenous (NDIS cohort only, excludes draft and in-progress)

Column %	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	TOTAL
TOTAL	**43%**	**45%**	**45%**
Other Physical	15%	14%	**14%**
Psychosocial disability	12%	13%	**13%**
Other Neurological	13%	13%	**13%**
Intellectual Disability	7%	7%	**7%**
Other	3%	3%	**3%**
Visual Impairment	4%	3%	**3%**
Stroke	4%	2%	**3%**
ABI	2%	2%	**2%**
Hearing Impairment	3%	2%	**2%**
Other Sensory/Speech	2%	1%	**1%**
Autism	0%	1%	**1%**
Cerebral Palsy	0%	1%	**1%**
Down Syndrome	1%	1%	**1%**
Multiple Sclerosis	1%	0%	**0%**
Spinal Cord Injury	1%	0%	**0%**
Developmental delay	0%	0%	**0%**

base n = 2363; total 3496; 1133 missing

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

When looking at disabilities overall, we can see that the Indigenous cohort are less likely to have a neurological disability.

Table 54. NET disabilities of Younger People In Residential Aged Care identifying as Indigenous (NDIS cohort only, excludes draft and in-progress)

Column %	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	TOTAL
TOTAL	**100%**	**100%**	**100%**
Other Neurological	28%	35%	**35%**
Psychosocial disability	20%	18%	**18%**
Other Physical	16%	14%	**14%**
ABI	21%	19%	**19%**
Intellectual Disability	15%	17%	**17%**
Stroke	21% ↑	13% ↓	**13%**
Multiple Sclerosis	1% ↓	6% ↑	**6%**
Other	3%	3%	**3%**
Visual Impairment	5%	3%	**3%**
Down Syndrome	1%	4%	**3%**
Cerebral Palsy	1%	3%	**3%**
Hearing Impairment	2%	1%	**1%**
Other Sensory/Speech	1%	1%	**1%**
Spinal Cord Injury	4% ↑	1% ↓	**1%**
Autism	1%	1%	**1%**
Developmental delay	0%	0%	**0%**

base n = 3428; total 3496; 68 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

There are no substantial differences in the NDIS plan supports of the Indigenous cohort, when compared to the total analysed cohort.

Table 55. NDIS plan supports of Younger People In Residential Aged Care identifying as Indigenous (NDIS cohort only, excludes draft and in-progress)

Column %	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	**TOTAL**
TOTAL	**100%**	**100%**	**100%**
Core supports	96%	96%	**96%**
Capacity Building supports	96%	96%	**96%**
Support Coordination	96%	95%	**95%**
Capital supports	52%	54%	**54%**
Assistive Technology	52%	54%	**54%**
SIL supports	3%	3%	**3%**
Home Modification supports	1%	3%	**3%**
SDA supports	1%	2%	**2%**
None of these	4%	4%	**4%**
Column n	261	3167	**3428**

base n = 3428; total 3496; 68 missing

6.1.1.4 Pathways into residential aged care

Analysis of the circumstances triggering the initial ACAT assessments of the Indigenous cohort within the analysed YPIRAC cohort show that assessments are more likely to have been triggered by a risk of vulnerability.

Table 56. Circumstances - initial ACAT assessment for Younger People In Residential Aged Care identifying as Indigenous

Column %	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	TOTAL
TOTAL	**100%**	**100%**	**100%**
Medical conditions	41%	41%	**41%**
Change in care needs	34% ↓	41% ↑	**41%**
Hospital discharge	28%	30%	**30%**
Change in cognitive status	19%	25%	**24%**
Frailty	19%	17%	**17%**
Falls	11%	13%	**13%**
Change in living arrangements	16%	12%	**12%**
Change in caring arrangements	9%	11%	**11%**
Risk of vulnerability	18% ↑	10% ↓	**11%**
Change in mental health status	3%	3%	**3%**
Other	3%	2%	**2%**
None of these	46%	43%	**43%**
Column n	458	5095	**5553**

base n = 5553; total n = 5681; 128 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Admission dates cannot be directly linked to corresponding ACAT assessments as there is no ID variable linking the two relevant datasets. In order to facilitate analysis, we have restricted it to cases with only one ACAT assessment and only one admission into RAC on record.

However, even with this condition in place, there are many cases where the time between ACAT assessment and admission is thousands of days. In order to focus the analysis on the majority of the population, in consultation with the DOH, it was agreed to limit the analysis of time between assessment and admission to within a five year period.

There are only relatively minor differences in the mean length of time of entry YPIRAC identifying as Indigenous cohort (as shown in Table 57).

Table 57. Time between assessment and admission for Younger People In Residential Aged Care identifying as Indigenous

Average Median Trimmed Average	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander	**TOTAL**
Days between assessment and admission dates	223	193	**195**
	91	64	**65**
	176	141	**143**
Column n	250	3611	**3861**

base n = 3861; total n = 5681; 1820 missing

6.1.2 Summary of cohort

The YPIRAC identifying as Indigenous cohort of the analysed YPIRAC cohort is on average younger and reside primarily in the Northern Territory, Queensland and Western Australia.

The health conditions and disabilities experienced by the YPIRAC identifying as Indigenous cohort are noticeably different whilst their NDIS plan supports are very similar.

It is more likely to have taken a younger Indigenous person living in RAC a relatively longer time to be admitted following their ACAT assessment

6.2 People under the age of 45 living in residential aged care

6.2.1 Who are they?

As noted above (4.1.1.1, Table 3) the analysis of the cohort showed that there were 164 people aged under age 45 within the analysed YPIRAC cohort, representing 3 percent of the total cohort of 5,681 people.

People under the age of 45 within the analysed YPIRAC cohort are statistically significantly more likely to be NDIS participants than those in the 45 to 64 cohort.

Table 58. NDIS participation of people under the age of 45 living in residential aged care

Column %	**TOTAL**	Under 45	45-64
TOTAL	**100%**	**100%**	**100%**
NDIS	**70%**	84% ↑	69% ↓
Non-NDIS	**30%**	16% ↓	31% ↑
Column n	**5681**	164	5517

base n = 5681
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

The proportion of people under the age of 45 who prefer a language other than English is noticeably higher than in the rest of the cohort. The difference shown in Table 59 below, is not statistically significant (p = 0.012) but is notable.

Table 59. Preferred language of people under the age of 45 living in residential aged care

Column %	**TOTAL**	Under 45	45-64
English	**94%**	89%	94%
Language Other Than English	**6%**	11%	6%
Column n	**5621**	158	5463

base n = 5621; total n: 5681; 60 missing

As described at section 4.1.3.3, text descriptions of communication difficulties are variable in their nature. Text analytics have been used to identify frequently appearing 'categories' in the data. The most frequent categories are presented in Table 60 below. Please note that the under 45 column of this table comprises only 14 people, so care needs to be taken when reporting this figure.

Table 60. Communication difficulties experienced by people under the age of 45 living in residential aged care

Column %	**TOTAL**	Under 45	45-64
TOTAL	**100%**	**100%**	**100%**
Cognitive decline / impairment	**19%**	29%	19%
Aphasia / dysphasia	**15%**	7%	15%
Memory decline / impairment	**12%**	0%	12%
Slurred / stuttered/ mumbled speech	**12%**	0%	12%
Non-verbal	**11%**	7%	11%
Difficult to understand	**8%**	21%	7%
No / poor English	**8%**	21%	7%
No issues	**7%**	14%	7%
Confusion	**7%**	7%	7%
Hearing	**6%**	0%	7%
Intellectual disability	**5%**	0%	5%
Column n	**535**	14	521

base n = 535; total n = 5681; 5146 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

6.2.1.1 Jurisdiction

When compared with the over 45 analysed YPIRAC cohort, there are no statistically significant differences in the states and territories in which the under 45 cohort live.

Table 61. State or territory of people under the age of 45 living in residential aged care

Column %	**TOTAL**	Under 45	45 or older
TOTAL	**100%**	**100%**	**100%**
NSW	**34%**	34%	34%
VIC	**29%**	36%	29%
QLD	**19%**	17%	19%
WA	**8%**	3%	8%
SA	**6%**	5%	7%
TAS	**2%**	4%	2%
NT	**1%**	1%	1%
ACT	**0%**	0%	0%
Column n	**5680**	164	5516

base n = 5680; total n = 5681; 1 missing

6.2.1.2 Health conditions, disabilities and support needs

Epilepsy, head injuries and incontinence are all more likely to be experienced by those under the age of 45 than those aged between 45 and 64. We can see from the smaller TOTAL in Table 62 that the under 45 cohort have fewer reported health conditions overall than their older counterparts.

Table 62. Health conditions of people under the age of 45 living in residential aged care

Column %	**TOTAL**	Under 45	45 or older
TOTAL	**59%**	**53%**	**59%**
Others under 5%	**48%**	47%	48%
Hypertension (high blood pressure)	**11%**	4% ↓	11% ↑
Depression/Mood affective disorders	**11%**	8%	11%
Diabetes mellitus—Type 2 (NIDDM)	**10%**	5%	10%
Schizophrenia	**8%**	6%	8%
Chronic lower respiratory diseases	**8%**	2%	8%
Abnormalities of gait & mobility	**7%**	8%	7%
Stroke (CVA)—cerebrovascular accident unspecified	**7%**	3%	7%
Falls (frequent with unknown aetiology)	**6%**	2%	6%
Epilepsy	**6%**	12% ↑	6% ↓
Pain	**6%**	7%	6%
Kidney & urinary system (bladder) disorders	**5%**	2%	5%
High cholesterol	**4%**	1%	5%
Injuries to the head	**4%**	12% ↑	4% ↓
Phobic & anxiety disorders	**4%**	2%	4%
Dementia in Alzheimer's disease with early onset (<65 yrs)	**4%**	1%	4%
Other diseases of the digestive system n.o.s or n.e.c	**4%**	4%	4%
Other diseases of the nervous system n.o.s or n.e.c	**4%**	4%	4%
Intellectual & developmental disorders	**4%**	7%	4%
Mental and behavioural disorders due to alcohol & other psychoactive substance use	**4%**	1%	4%
Diseases of the liver	**4%**	1%	4%
Bowel/faecal incontinence	**4%**	9% ↑	3% ↓
Amnesia (memory disturbance, lack or loss)	**3%**	2%	3%
Diseases of the intestine	**3%**	1%	3%
Stress/urinary incontinence	**3%**	9% ↑	3% ↓
Column n	**5681**	164	5517

base n = 5681

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Table 63. Categories of health conditions of people under the age of 45 living in residential aged care

Column %	TOTAL	Under 45	45 or older
TOTAL	**59%**	**53%**	**59%**
Mental & behavioural disorders	**38%**	32%	38%
Symptoms & signs n.o.s or n.e.c	**24%**	24%	24%
Diseases of the circulatory system	**23%**	12%	23%
Diseases of the nervous system	**19%**	29%	19%
Endocrine, nutritional & metabolic disorders	**19%**	10%	19%
Injury, poisoning & certain other consequences of external causes	**11%**	15%	11%
Diseases of the musculoskeletal system & connective tissue	**11%**	5%	11%
Diseases of the digestive system	**10%**	7%	10%
Diseases of the respiratory system	**10%**	6%	10%
Diseases of the genitourinary system	**9%**	12%	9%
Neoplasms (tumours/cancers)	**7%**	7%	7%
Diseases of the skin & subcutaneous tissue	**4%**	2%	4%
Diseases of the eye & adnexa	**4%**	5%	4%
Diseases of the blood & blood forming organs & immune mechanism	**2%**	1%	2%
Certain infectious & parasitic diseases	**2%**	4%	2%
Congenital malformations, deformations & chromosomal abnormalities	**2%**	4%	2%
Disease of the ear & mastoid process	**2%**	2%	2%
No health conditions present	**0%**	0%	0%
Column n	**5681**	164	5517

base n = 5681

Disabilities are recorded by the NDIA and can be categorised as either primary or secondary. Several disabilities are more prevalent amongst the under 45 cohort than the 45 to 64 cohort. These include acquired brain injuries (ABI), cerebral palsy and autism.

Table 64. Primary disability of people under the age of 45 living in residential aged care (NDIS cohort only, excludes draft and in-progress)

Column %	**TOTAL**	Under 45	45 or older
TOTAL	**100%**	**100%**	**100%**
Other Neurological	**28%**	20%	28%
ABI	**18%**	34% ↑	18% ↓
Intellectual Disability	**13%**	11%	13%
Stroke	**12%**	4%	12%
Psychosocial disability	**10%**	4%	10%
Multiple Sclerosis	**5%**	4%	5%
Other Physical	**5%**	5%	5%
Down Syndrome	**3%**	2%	3%
Cerebral Palsy	**3%**	8% ↑	2% ↓
Spinal Cord Injury	**1%**	2%	1%
Visual Impairment	**1%**	0%	1%
Autism	**1%**	4% ↑	0% ↓
Others below five	**0%**	0%	0%
Other (NDIA code)	**1%**	1%	1%
Column n	**3496**	136	3360

base n = 3496

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Table 65. Secondary disability of people under the age of 45 living in residential aged care (NDIS cohort only, excludes draft and in-progress)

Column %	**TOTAL**	Under 45	45 or older
TOTAL	**45%**	**49%**	**45%**
Other Physical	**15%**	15%	15%
Psychosocial disability	**13%**	17%	13%
Other Neurological	**13%**	16%	13%
Intellectual Disability	**7%**	6%	7%
Other	**3%**	1%	3%
Visual Impairment	**3%**	3%	3%
Stroke	**3%**	5%	2%
ABI	**2%**	1%	2%
Hearing Impairment	**2%**	1%	2%
Other Sensory/Speech	**1%**	0%	1%
Autism	**1%**	1%	1%
Cerebral Palsy	**1%**	0%	1%
Down Syndrome	**1%**	0%	1%
Multiple Sclerosis	**0%**	0%	0%
Spinal Cord Injury	**0%**	2%	0%
Developmental delay	**0%**	0%	0%
Column n	**2402**	98	2304

base n = 2402; total n = 3496; 1094 missing

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Table 66. NET Disabilities of people under the age of 45 living in residential aged care (NDIS cohort only, excludes draft and in-progress)

Column %	TOTAL	Under 45	45 or older
TOTAL	**100%**	**100%**	**100%**
Other Neurological	**35%**	30%	35%
Psychosocial disability	**18%**	16%	18%
Other Physical	**14%**	16%	14%
ABI	**19%**	35% ↑	19% ↓
Intellectual Disability	**17%**	15%	17%
Stroke	**13%**	7%	14%
Multiple Sclerosis	**6%**	4%	6%
Other	**3%**	1%	3%
Visual Impairment	**3%**	2%	3%
Down Syndrome	**3%**	2%	3%
Cerebral Palsy	**3%**	8% ↑	3% ↓
Hearing Impairment	**1%**	1%	1%
Other Sensory/Speech	**1%**	0%	1%
Spinal Cord Injury	**1%**	4%	1%
Autism	**1%**	5% ↑	1% ↓
Developmental delay	**0%**	0%	0%
Column n	**3496**	136	3360

base n = 3496

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

All NDIS supports are more prevalent in the plans of the under 45 cohort than in the plans of the 45 to 64 cohort.

Table 67. Latest NDIS plan supports of people under the age of 45 living in residential aged care (NDIS cohort only, excludes draft and in-progress)

Column %	TOTAL	Under 45	45 or older
TOTAL	**100%**	**100%**	**100%**
Core supports	**96%**	99%	96%
Capacity Building supports	**96%**	99%	96%
Support Coordination	**95%**	99%	95%
Capital supports	**54%**	78% ↑	54% ↓
Assistive Technology	**54%**	78% ↑	53% ↓
SIL supports	**3%**	6%	3%
Home Modification supports	**2%**	8% ↑	2% ↓
SDA supports	**2%**	7% ↑	2% ↓
None of these	**4%**	1%	4%
Column n	**3496**	136	3360

base n = 3496

6.2.1.3 Pathways into residential aged care

There are few differences, and none that are statistically significant, between the pathways into care for the under 45 age cohort compared to the 45 to 64 cohort.

Table 68. Circumstances triggering initial ACAT assessment for people under the age of 45 living in residential aged care

Column %	**TOTAL**	Under 45	45 or older
TOTAL	**56%**	**51%**	**57%**
Medical conditions	**41%**	39%	41%
Change in care needs	**40%**	32%	40%
Hospital discharge	**29%**	29%	29%
Change in cognitive status	**24%**	17%	24%
Frailty	**17%**	12%	17%
Falls	**13%**	10%	13%
Change in living arrangements	**12%**	9%	12%
Change in caring arrangements	**11%**	12%	10%
Risk of vulnerability	**11%**	8%	11%
Change in mental health status	**3%**	4%	3%
Other	**2%**	5%	2%
Column n	**5681**	164	5517

base n = 5681
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Table 69. Time between ACAT assessment and admission for people under the age of 45 living in residential aged care

Average Median Trimmed Average	**TOTAL**	Under 45	45 or older
Days between assessment and admission dates	**195**	166	196
	65	54	65
	143	122	143
Column n	**3919**	111	3808

base n = 3919; total n = 5681; 1762 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

6.2.2 Summary of cohort

The vast majority of people under the age of 45 living in RAC, included in the analysed YPIRAC cohort, are NDIS participants. Although they have fewer health conditions overall, the analysed YPIRAC aged under 45 are more likely to have disabilities and a greater number and breadth of supports in their NDIS plans.

They are more likely to have (acquired and congenital) health conditions and disabilities related to brain function.

Reasons for their entry into RAC appear to be similar to the 45 to 64 cohort.

6.3 People reporting specific health conditions or disabilities

6.3.1 Neoplasms (tumours/cancers)

Following delivery of the Interim Report, additional analysis of the health conditions data was undertaken. As detailed at 3.5.6, text analytics algorithms were employed to try and extract some value from important free text fields present in the datasets.

In the Interim Report, analysis focused on the reported primary health condition only listed in the most recent ACAT assessment. This identified 1,987 people with a primary health condition listed (35 percent of the full cohort of 5,681). Of this 1,987, 25 people reported neoplasms (tumours/cancers) in the NDIS cohort and 152 people not in the NDIS cohort for a total of 177.

In this report, a broader assessment was undertaken where all health condition data was analysed regardless of whether or not they were classified as primary. The results of this analysis showed there are 383 YPIRAC who have a health condition coded as neoplasms (tumours/cancer).

Younger people living in RAC, within the analysed YPIRAC cohort, who have neoplasms (tumours/cancers) are significantly less likely than others to be in the NDIS cohort.

Table 70. NDIS participation of YPIRAC reporting neoplasms (tumours/cancer)

Column %	Neoplasms	No neoplasms	**TOTAL**
TOTAL	**100%**	**100%**	**100%**
NDIS	32% ↓	73% ↑	**70%**
Non-NDIS	68% ↑	27% ↓	**30%**
Column n	383	5298	**5681**

base n = 5681
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

YPIRAC who have neoplasms are more likely to have had only one ACAT assessment.

Table 71. Count of ACAT assessments of YPIRAC reporting neoplasms (tumours/cancer)

Column %	Neoplasms	No neoplasms	TOTAL
TOTAL	**100%**	**100%**	**100%**
1	84% ↑	73% ↓	**74%**
2	13% ↓	19% ↑	**19%**
3	2%	5%	**4%**
4	1%	2%	**2%**
5	0%	0%	**0%**
6	0%	0%	**0%**
7	0%	0%	**0%**
8	0%	0%	**0%**
Column n	383	5298	**5681**

base n = 5681

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

6.3.2 Mental and behavioural disorders

2,158 YPIRAC report mental and behavioural disorders as a health condition. Mental and behavioural disorders considered in this section included both psychological conditions and a range of conditions causing dementia.

YPIRAC reporting mental and/or behavioural disorders who are NDIS participants are less likely to have Capital supports or Assistive technology as a support in their latest plan.

Table 72. Latest NDIS plan supports of YPIRAC reporting mental and/or behavioural disorders (NDIS cohort only, excludes draft and in-progress)

Column %	Have mental and/or behavioural disorders	No mental or behavioural disorders	TOTAL
TOTAL	**100%**	**100%**	**100%**
Core supports	96%	96%	**96%**
Capacity Building supports	96%	96%	**96%**
Support Coordination	95%	95%	**95%**
Capital supports	41% ↓	61% ↑	**54%**
Assistive Technology	41% ↓	61% ↑	**54%**
SIL supports	4%	2%	**3%**
Home Modification supports	3%	2%	**2%**
SDA supports	2%	2%	**2%**
None of these	4%	4%	**4%**
Column n	1144	2352	**3496**

base n = 3496

Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

The mean age of the cohort with mental and/or behavioural disorders is higher than the remainder of the analysed YPIRAC cohort.

Table 73. Average age of YPIRAC reporting mental and/or behavioural disorders

Average	Have mental and/or behavioural disorders	No mental or behavioural disorders	**TOTAL**
Age	58.8 ↑	58.3 ↓	**58.5**
Column n	2158	3523	**5681**

base n = 5681
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

YPIRAC reporting mental and/or behavioural disorders are significantly more likely to live in Victoria and significantly less likely to live in Queensland than the overall cohort.

Table 74. Jurisdiction of YPIRAC reporting mental and/or behavioural disorders

Column %	Have mental and/or behavioural disorders	No mental or behavioural disorders	**TOTAL**
TOTAL	**100%**	**100%**	**100%**
NSW	34%	35%	**34%**
VIC	33% ↑	26% ↓	**29%**
QLD	16% ↓	21% ↑	**19%**
WA	8%	7%	**8%**
SA	6%	7%	**6%**
TAS	3%	2%	**2%**
NT	1%	1%	**1%**
ACT	0%	1%	**0%**
Column n	2157	3523	**5680**

base n = 5680; total n = 5681; 1 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Despite being older, on average, they are more likely to have had only a single ACAT assessment.

Table 75. Count of ACAT assessments of YPIRAC reporting mental and/or behavioural disorders

Column %	Have mental and/or behavioural disorders	No mental or behavioural disorders	**TOTAL**
TOTAL	**100%**	**100%**	**100%**
1	78% ↑	72% ↓	**74%**
2	15% ↓	21% ↑	**19%**
3	5%	4%	**4%**
4	2%	2%	**2%**
5	1%	0%	**0%**
6	0%	0%	**0%**
7	0%	0%	**0%**
8	0%	0%	**0%**
Column n	2158	3523	**5681**

base n = 5681
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

6.3.3 Neurodegenerative diseases

The health condition category that most closely aligns with neurodegenerative diseases is 'diseases of the nervous system' and we have used that code as a proxy for this analysis.

There are 1,103 YPIRAC who report having a disease, or diseases, of the nervous system.

YPIRAC who report having diseases of the nervous system are, on average, younger than those who do not report these diseases.

Table 76. Average age of YPIRAC reporting diseases of the nervous system

Average	Diseases of the nervous system	No diseases of the nervous system	**TOTAL**
Age	57.9 ↓	58.6 ↑	**58.5**
Column n	1103	4578	**5681**

base n = 5681
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

They are less likely than those without to be part of the NDIS cohort.

Table 77. NDIS participation of YPIRAC reporting diseases of the nervous system

Column %	Diseases of the nervous system	No diseases of the nervous system	TOTAL
TOTAL	**100%**	**100%**	**100%**
NDIS	60% ↓	72% ↑	**70%**
Non-NDIS	40% ↑	28% ↓	**30%**
Column n	1103	4578	**5681**

base n = 5681
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

The cohort reporting diseases of the nervous system are more likely to have several supports listed in their latest NDIS plan.

Table 78. Latest NDIS plan supports of YPIRAC reporting diseases of the nervous system (NDIS cohort only, excludes draft and in-progress)

Column %	Diseases of the nervous system	No diseases of the nervous system	TOTAL
TOTAL	**100%**	**100%**	**100%**
Core supports	97%	96%	**96%**
Capacity Building supports	96%	96%	**96%**
Support Coordination	96%	95%	**95%**
Capital supports	64% ↑	53% ↓	**54%**
Assistive Technology	63% ↑	52% ↓	**54%**
SIL supports	4%	3%	**3%**
Home Modification supports	3%	2%	**2%**
SDA supports	2%	2%	**2%**
None of these	3%	4%	**4%**
Column n	612	2884	**3496**

base n = 3496
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

The cohort are more likely to live in Victoria.

Table 79. State or territory of YPIRAC care reporting diseases of the nervous system

Column %	Diseases of the nervous system	No diseases of the nervous system	TOTAL
TOTAL	**100%**	**100%**	**100%**
NSW	33%	35%	**34%**
VIC	36% ↑	27% ↓	**29%**
QLD	16%	20%	**19%**
WA	5%	8%	**8%**
SA	6%	7%	**6%**
TAS	3%	2%	**2%**
NT	0%	1%	**1%**
ACT	0%	1%	**0%**
Column n	1102	4578	**5680**

base n = 5680; total n = 5681; 1 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

Lastly, they are less likely to be Aboriginal, Torres Strait Islander or both.

Table 80. Indigenous status of YPIRAC reporting diseases of the nervous system

Column %	Diseases of the nervous system	No diseases of the nervous system	TOTAL
TOTAL	**100%**	**100%**	**100%**
Aboriginal, Torres Strait Islander or both	6% ↓	9% ↑	**8%**
Neither Aboriginal nor Torres Strait Islander	94% ↑	91% ↓	**92%**
Column n	1089	4464	**5553**

base n = 5553; total n = 5681; 128 missing
Multiple comparison correction: False Discovery Rate (FDR) (p = 0.01)

7 Gaps in data

This report presents an analysis of data about YPIRAC provided by the DOH, including data from the aged care system and from the NDIA.

The analysis undertaken was limited by a number of factors including: the administrative nature of the data provided, successful matching for data provided from different agencies, and the extent to which data has been captured in a form that is consistent and comprehensive enough to explain YPIRAC characteristics and needs. This section presents a summary of the key issues identified during the project.

7.1 Data unavailable for analysis

We know that some data held by DOH and NDIA was not supplied as part of the provided datasets. Reasons for this include: the data was not held in a form that allowed ready access and interpretation or the data was held in historical systems that were incompatible.

For example, as detailed at section 3.4.1, health data collected as part of ACAT assessments prior to the introduction of NSAF forms was not available to be included in the analysis.

In the NDIA dataset, information on participant goals was limited to a flag about whether each participant had a goal related to where they live. Data on the nature of that goal (including, for example, whether that goal referred to leaving or remaining in RAC) was not available for this project.

7.2 Data from different sources

An important consideration is that the timeframes of the two key merged datasets – DOH data and NDIA data - differ. The DOH data covers all YPIRAC for the period 1 July 2019 to 28 February 2020. However, the NDIA data was supplied as at 31 January 2020, and covers current NDIS participants as well as those with draft or in progress status but excluded some who had exited or been found ineligible. There is, therefore, not a perfect match between the two data sources. The longer time period covered by the DOH data allows detail to be extracted about a larger number of YPIRAC. However, it is also not possible to draw conclusions about YPIRAC who did not have matched NDIA data due to the likelihood that some YPIRAC who had been NDIS participants exited during this period and therefore the NDIA records were not provided.

Section 3.3 provides details on the matching process itself, and notes that a number of variables were considered within the matching process as there were discrepancies between the two datasets.

7.3 Other data that is missing or unknown

There are small gaps and inconsistencies in data provided as detailed in each section of this report. A discussion of the missing data within the supplied dataset is provided at 3.4.6.

We are also aware that there are some areas of interest to DOH that could not be answered using the data available for this analysis alone. This analysis may have been possible if the originally planned face-to-face interviews were undertaken. Data from these interviews could have provided detail to better explain gaps and inconsistencies in the existing data, particularly for non-NDIS participants. This might include more detail on the circumstances that led to admission to RAC, interactions with NDIS before and during the period of RAC, other supports that might be available or needed, and YPIRAC preferences and goals.

8 Appendices

8.1 Appendix A – Data tables

Table 81. Accessible data table for Figure 1 – "Age distribution"

	%	n
TOTAL	**100%**	**5681**
Under 30	0%	7
30 -34	0%	23
35 - 39	1%	38
40	0%	12
41	0%	16
42	0%	20
43	0%	15
44	1%	33
45	1%	37
46	1%	46
47	1%	62
48	1%	59
49	1%	79
50	1%	82
51	2%	107
52	2%	128
53	2%	135
54	3%	168
55	4%	223
56	4%	253
57	5%	279
58	6%	330
59	7%	418
60	8%	438
61	9%	537
62	10%	590
63	13%	721
64	15%	825

base n=5681

Table 82. Accessible data table for Figure 2 – "Gender proportions of different age groups"

Column %	TOTAL	Under 30	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Female	**46%**	29%	35%	39%	51%	46%	46%	47%	45%
Male	**54%**	71%	65%	61%	49%	54%	54%	53%	55%

base n=5680; 1 missing

Table 83. Accessible data table for Figure 3 – "CALD status within age groups"

Column %	TOTAL	Under 30	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
CALD	**12%**	29%	17%	20%	10%	9%	9%	10%	14%
Not CALD	**88%**	71%	83%	80%	90%	91%	91%	90%	86%

base n=3523; 446 missing

Table 84. Accessible data table for Figure 4 "Gender distribution by jurisdiction"

Column %	TOTAL	NSW	VIC	QLD	WA	SA	TAS	NT	ACT
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Female	**46%**	43%	46%	48%	43%	52%	54%	49%	50%
Male	**54%**	57%	54%	52%	57%	48%	46%	51%	50%

base n=5679; 2 missing

Table 85. Accessible data table for Figure 5 – "Age distribution by jurisdiction"

Column %	TOTAL	NSW	VIC	QLD	WA	SA	TAS	NT	ACT
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Under 30	**0%**	0%	0%	0%	0%	0%	0%	0%	0%
30 - 34	**0%**	0%	1%	0%	0%	1%	1%	0%	0%
35 - 39	**1%**	1%	1%	0%	0%	0%	2%	0%	0%
40 - 44	**2%**	2%	2%	2%	1%	2%	1%	2%	0%
45 - 49	**5%**	5%	6%	5%	5%	4%	4%	2%	0%
50 - 54	**11%**	10%	13%	11%	10%	10%	14%	8%	4%
55 - 59	**26%**	27%	26%	27%	26%	25%	22%	37%	38%
60 - 64	**55%**	55%	53%	55%	58%	58%	55%	51%	58%

base n=5680; 1762 missing

Table 86. Accessible data table for Figure 6 - "Histogram of days between assessment date and admission date for residents with only one assessment and one admission"

	Average
Days between assessment and admission dates	195

base n=3919; 1762 missing

Table 87. Accessible data table for Figure 7 – "Age (disaggregated)"

	%
TOTAL	**100%**
Under 30	0%
30 -34	0%
35 - 39	1%
40	0%
41	0%
42	0%
43	0%
44	1%
45	1%
46	1%
47	1%
48	1%
49	2%
50	2%
51	2%
52	3%
53	3%
54	3%
55	4%
56	5%
57	5%
58	6%
59	8%
60	8%
61	9%
62	10%
63	12%
64	13%

base n=3969

Table 88. Accessible data table for Figure 8 – "Age of younger people living in residential aged care identifying as Indigenous"

Column %	**TOTAL**	Aboriginal, Torres Strait Islander or both	Neither Aboriginal nor Torres Strait Islander
TOTAL	**100%**	**100%**	**100%**
Under 30	**0%**	0%	0%
30 - 34	**0%**	0%	0%
35 - 39	**1%**	1%	1%
40 - 44	**2%**	2%	2%
45 - 49	**5%**	8%	5%
50 - 54	**11%**	15%	11%
55 - 59	**26%**	31%	26%
60 - 64	**55%**	44%	56%

base n=5553; 128 missing

Table 89. Accessible data table for Figure 9 – "State or territory of younger people living in residential aged care identifying as Indigenous"

Column %	**TOTAL**	NSW	VIC	QLD	WA	SA	TAS	NT	ACT
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Aboriginal, Torres Strait Islander or both	**8%**	7%	2%	13%	22%	4%	4%	86%	4%
Neither	**90%**	91%	97%	84%	75%	94%	93%	12%	96%
Not stated	**2%**	2%	1%	4%	3%	2%	3%	2%	0%

base n=5680; 1 missing

8.2 Appendix B – Health condition codes and categories

Category	Code	Condition
No health conditions present	0000	No health conditions present
Certain infectious & parasitic diseases	0101	Tuberculosis
	0102	Poliomyelitis
	0103	HIV/AIDS
	0104	Diarrhoea & gastroenteritis of presumed infectious origin
	0105	Chronic viral hepatitis
	0199	Other infectious & parasitic diseases n.o.s or n.e.c
Neoplasms (tumours/cancers)	0201	Head & neck cancer
	0202	Stomach cancer
	0203	Colorectal (bowel) cancer
	0204	Lung cancer
	0205	Skin cancer
	0206	Breast cancer
	0207	Prostate cancer
	0208	Brain cancer
	0209	Lymphoma
	0210	Leukaemia
	0211	Other malignant tumours n.o.s or n.e.c
	0212	Liver cancer
	0213	Gynaecological cancer
	0214	Kidney cancer
	0215	Bladder cancer
	0216	Pancreatic cancer
	0217	Myeloma
	0299	Other neoplasms
Diseases of the blood & blood forming organs & immune mechanism	0301	Anaemia
	0302	Haemophilia
	0303	Immunodeficiency disorder (excluding AIDS)
	0399	Other diseases of blood & blood forming organs & immune mechanism n.o.s. or n.e.c
Endocrine, nutritional & metabolic disorders	0401	Disorders of the thyroid gland
	0402	Diabetes mellitus—Type 1 (IDDM)
	0403	Diabetes mellitus—Type 2 (NIDDM)
	0404	Diabetes mellitus—other specified/unspecified/unable to be specified
	0405	Malnutrition

	0406	Nutritional deficiencies
	0407	Obesity
	0408	High cholesterol
	0499	Other endocrine, nutritional & metabolic disorders n.o.s or n.e.c
Mental & behavioural disorders	0500	Dementia in Alzheimer's disease
	0501	Dementia in Alzheimer's disease with early onset (<65 yrs)
	0502	Dementia in Alzheimer's disease with late onset (>65 yrs)
	0503	Dementia in Alzheimer's disease, atypical or mixed type
	0504	Dementia in Alzheimer's disease, unspecified
	0510	Vascular dementia
	0511	Vascular dementia of acute onset
	0512	Multi-infarct dementia
	0513	Subcortical vascular dementia
	0514	Mixed cortical & subcortical vascular dementia
	0515	Other vascular dementia
	0516	Vascular dementia—unspecified
	0520	Dementia in other diseases classified elsewhere
	0521	Frontotemporal dementia
	0522	Dementia in Creutzfeldt-Jakob disease
	0523	Dementia in Huntington's disease
	0524	Dementia in Parkinson's disease
	0525	Dementia in human immunodeficiency virus (HIV) disease
	0526	Dementia in other specified diseases classified elsewhere
	0530	Other dementia
	0531	Alcoholic dementia
	0532	Unspecified dementia
	0540	Delirium
	0541	Delirium not superimposed on dementia
	0542	Delirium superimposed on dementia
	0543	Other delirium
	0544	Delirium–unspecified
	0550	Psychoses & depression/mood affective disorders
	0551	Schizophrenia
	0552	Depression/Mood affective disorders
	0553	Other psychoses
	0560	Neurotic, stress related & somatoform disorders
	0561	Phobic & anxiety disorders
	0562	Nervous tension/stress
	0563	Obsessive-compulsive disorder
	0564	Other neurotic, stress related & somatoform disorders
	0570	Intellectual & developmental disorders

	0571	Mental retardation/intellectual disability
	0572	Other developmental disorders
	0580	Other mental & behavioural disorders
	0581	Mental and behavioural disorders due to alcohol & other psychoactive substance use
	0582	Adult personality & behavioural disorders
	0583	Speech impediment (i.e. stuttering/stammering)
	0584	Lewy Body dementia
	0585	Cognitive impairment n.o.s
	0586	Post-traumatic stress disorder
	0599	Other mental & behavioural disorders n.o.s or n.e.c
Diseases of the nervous system	0601	Meningitis & Encephalitis (excluding 'viral')
	0602	Huntington's disease
	0603	Motor neurone disease
	0604	Parkinson's disease
	0605	Transient cerebral ischaemic attacks (T.I.A.s)
	0606	Brain disease/disorders
	0607	Multiple sclerosis
	0608	Epilepsy
	0609	Muscular dystrophy
	0610	Cerebral palsy
	0611	Paralysis—non-traumatic
	0612	Chronic/post-viral fatigue syndrome
	0613	Shingles (Zoster) and/or postherpetic neuralgia
	0614	Peripheral Neuropathy
	0615	Normal pressure hydrocephalus
	0699	Other diseases of the nervous system n.o.s or n.e.c
Diseases of the eye & adnexa	0701	Cataracts
	0702	Glaucoma
	0703	Blindness
	0704	Poor vision
	0705	Macular degeneration
	0799	Other diseases of the eye & adnexa n.o.s or n.e.c
Disease of the ear & mastoid process	0801	Ménière's disease
	0802	Deafness/hearing loss
	0899	Other diseases of the ear & mastoid process n.o.s or n.e.c
Diseases of the circulatory system	0900	Heart disease
	0901	Rheumatic fever
	0902	Rheumatic heart disease
	0903	Angina
	0904	Myocardial infarction (heart attack)
	0905	Acute & chronic ischaemic heart disease

	0906	Congestive heart failure (congestive heart disease)
	0907	Other heart diseases
	0910	Cerebrovascular disease
	0911	Subarachnoid haemorrhage
	0912	Intracerebral haemorrhage
	0913	Other intracranial haemorrhage
	0914	Cerebral infarction
	0915	Stroke (CVA)—cerebrovascular accident unspecified
	0916	Other cerebrovascular diseases
	0920	Other diseases of the circulatory system
	0921	Hypertension (high blood pressure)
	0922	Hypotension (low blood pressure)
	0923	Abdominal aortic aneurysm
	0924	Other arterial or aortic aneurysms
	0925	Atherosclerosis
	0926	Atrial fibrillation
	0927	Venous thromboembolism (VTE)
	0928	Heart valve disorders
	0999	Other diseases of the circulatory system n.o.s or n.e.c
Diseases of the respiratory system	1001	Acute upper respiratory infections
	1002	Influenza & pneumonia
	1003	Acute lower respiratory infections
	1004	Other diseases of upper respiratory tract
	1005	Chronic lower respiratory diseases
	1006	Tracheostomy
	1099	Other diseases of the respiratory system n.o.s or n.e.c
Diseases of the digestive system	1101	Diseases of the intestine
	1102	Diseases of the peritoneum
	1103	Diseases of the liver
	1104	Gastrointestinal stoma
	1199	Other diseases of the digestive system n.o.s or n.e.c
Diseases of the skin & subcutaneous tissue	1201	Skin & subcutaneous tissue infections
	1202	Skin allergies (dermatitis & eczema)
	1299	Other diseases of the skin & subcutaneous tissue n.o.s or n.e.c
Diseases of the musculoskeletal system & connective tissue	1301	Rheumatoid arthritis
	1302	Other arthritis & related disorders
	1303	Deformities of joints/limbs—acquired
	1304	Back problems—dorsopathies
	1305	Other soft tissue/muscle disorders
	1306	Osteoporosis

	1307	Osteoarthritis
	1308	Gout
	1399	Other disorders of the musculoskeletal system & connective tissue n.o.s or n.e.c
Diseases of the genitourinary system	1401	Kidney & urinary system (bladder) disorders
	1402	Urinary tract infection
	1403	Stress/urinary incontinence
	1404	Urinary diversion (ileal conduit), urostomy
	1499	Other diseases of the genitourinary system n.o.s or n.e.c
Congenital malformations, deformations & chromosomal abnormalities	1501	Spina bifida
	1502	Deformities of joints/limbs—congenital
	1503	Down's syndrome
	1504	Other chromosomal abnormalities
	1505	Congenital brain damage/malformation
	1599	Other congenital malformations & deformations n.o.s or n.e.c
Injury, poisoning & certain other consequences of external causes	1601	Injuries to the head
	1602	Injuries to arm/hand/shoulder
	1603	Injuries to leg/knee/foot/ankle/hip
	1604	Amputation of the finger/thumb/hand/arm/shoulder—traumatic
	1605	Amputation of toe/ankle/foot/leg—traumatic
	1606	Fracture of neck
	1607	Fracture of rib(s), sternum & thoracic spine
	1608	Fracture of lumbar spine & pelvis
	1609	Fracture of shoulder, upper arm & forearm
	1610	Fracture at wrist & hand level
	1611	Fracture of femur
	1612	Fracture of lower leg & foot
	1613	Poisoning by drugs, medicaments & biological substances
	1614	Non-traumatic amputation
	1699	Other injury, poisoning & consequences of external causes n.o.s or n.e.c
Symptoms & signs n.o.s or n.e.c	1701	Abnormal blood-pressure reading, without diagnosis
	1702	Cough
	1703	Breathing difficulties/shortness of breath
	1704	Pain
	1705	Nausea & vomiting
	1706	Dysphagia (difficulty in swallowing)
	1707	Bowel/faecal incontinence
	1708	Unspecified urinary incontinence
	1709	Retention of urine
	1710	Jaundice (unspecified)

	1711	Disturbances of skin sensation
	1712	Rash & other nonspecific skin eruption
	1713	Abnormal involuntary movements
	1714	Abnormalities of gait & mobility
	1715	Falls (frequent with unknown aetiology)
	1716	Disorientation (confusion)
	1717	Amnesia (memory disturbance, lack or loss)
	1718	Dizziness & giddiness (light-headedness, vertigo n.o.s)
	1719	Restlessness & agitation
	1720	Grief and loss
	1721	Irritability & anger
	1722	Hostility
	1723	Physical violence
	1724	Slowness & poor responsiveness
	1725	Speech & voice disturbances
	1726	Headache
	1727	Malaise & fatigue
	1728	Blackouts, fainting, seizure
	1729	Oedema n.e.c
	1730	Symptoms & signs concerning food & fluid intake
	1799	Other symptoms & signs n.o.s or n.e.c
	1899	Has other health condition not elsewhere specified