

## **Supplementary Material for**

### **Young people in Australian residential aged care: evaluating trends from 2008 to 2018**

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## File S1

### Congruency

Documentation for the National Aged Care Data Clearinghouse database implies (but does not explicitly claim) that PRAC enrolment, admission, and separations data are congruent, such that, for all age groups combined:

$$\text{Enrolments}_{\text{YEAR X}} - \text{Enrolments}_{\text{YEAR X-1}} = \text{Admissions}_{\text{YEAR X}} - \text{Separations}_{\text{YEAR X}}$$

Table Suppl.1 presents a check of this assumption. It is seen that, in aggregation, there is a very close match between Enrolment CHANGE and Admissions minus Separations. On average, Admissions minus Separations underestimates Enrolment CHANGE by 0.03%. The discrepancy per year ranged from 0 to 13 people (SD = 4.45). On this basis, it seems reasonable to treat the three data sets as congruent. Therefore, for people aged 0-64 as at 30 June each year:

$$\text{Enrolments}_{\text{YEAR X}} - \text{Enrolments}_{\text{YEAR X-1}} = \text{Admissions}_{\text{YEAR X}} - \text{Separations}_{\text{YEAR X}} - \text{Ageing Out}_{\text{YEAR X}}$$

This means that:

$$\text{Ageing Out}_{\text{YEAR X}} = \text{Enrolments}_{\text{YEAR X}} - \text{Enrolments}_{\text{YEAR X-1}} + \text{Admissions}_{\text{YEAR X}} - \text{Separations}_{\text{YEAR X}}$$

**Table Suppl.1. Congruence of annual enrolment change and admissions minus separations (PRAC, All Ages, Australia, 2008-2018)**

| Year ending 30 June | Enrolments | Enrolment CHANGE | Admissions | Separations | Admissions minus Separations | Error |
|---------------------|------------|------------------|------------|-------------|------------------------------|-------|
| 2008                | 157215     |                  | 68815      | 66178       | 2637                         |       |
| 2009                | 158858     | 1643             | 69171      | 67529       | 1642                         | -1    |
| 2010                | 162578     | 3720             | 69363      | 65643       | 3720                         | 0     |
| 2011                | 165046     | 2468             | 69341      | 66874       | 2467                         | -1    |
| 2012                | 166960     | 1914             | 69205      | 67294       | 1911                         | -3    |
| 2013                | 168989     | 2029             | 71148      | 69123       | 2025                         | -4    |
| 2014                | 173930     | 4941             | 74415      | 69482       | 4933                         | -8    |
| 2015                | 172802     | -1128            | 66768      | 67907       | -1139                        | -11   |
| 2016                | 175993     | 3191             | 72132      | 68944       | 3188                         | -3    |
| 2017                | 178713     | 2720             | 73100      | 70393       | 2707                         | -13   |
| 2018                | 180923     | 2210             | 71928      | 69721       | 2207                         | -3    |

#### **Transfers between PRAC services**

The analyses assume that for every separation recorded at one service as an ‘exit to other residential aged care’, there is a PRAC admission recorded at another service. Moreover, it is assumed that the corresponding admission typically occurs within the same year and state. Although this assumption cannot be directly tested without person-level data, a minimum expectation is that transfers are no greater than admissions within each cross-classification. This was checked for YEAR (11) X AGE (16 x 5-year groups, 0-64 years of age) X STATE (8) cross-classification. This check passed for all but six of the 1408 cross-classifications; Table Suppl.2 presents the failing cases. It is seen that even in these cases, ‘exit to other residential aged care’ exceeds admissions by no more than 2. It was more common for there to be one or more transfers and an equal number of admissions; this

occurred in 15 cross-classifications. On this basis, it seems reasonable to conclude that transfers typically have a corresponding admission recorded within the same year and state.

**Table Suppl.2. Cross-classifications where ‘exit to other residential aged care’ exceeds admissions**

| Year ending<br>30 June | State | Age   | Admissions | Exit to other<br>residential aged care |
|------------------------|-------|-------|------------|--|
| 2011                   | ACT   | 35-39 | 0          | 1                                      |
| 2018                   | ACT   | 45-49 | 0          | 1                                      |
| 2008                   | NSW   | 20-24 | 0          | 1                                      |
| 2009                   | NT    | 60-64 | 0          | 2                                      |
| 2015                   | Vic   | 20-24 | 0          | 1                                      |
| 2011                   | Vic   | 20-24 | 0          | 1                                      |