

# Public mental health service use by people with intellectual disability in New South Wales and its costs

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**The known:** Rates of mental health disorders are higher among people with intellectual disability than among those without intellectual disability. Health service system identifiers for people with intellectual disability are not employed in Australia.

**The new:** People with intellectual disability make up 1% of the NSW population, but 6% of those who use publicly funded mental health services. The estimated annual cost for people with intellectual disability is \$30 418 per person, compared with \$11 727 for people without intellectual disability.

**The implications:** People with intellectual disability should be routinely considered by all tiers of Australian mental health policy and public mental health service and workforce planning.

Mental health disorders are the largest contributors to the non-fatal burden of disease in Australia<sup>1</sup> and are a leading cause of morbidity. Rates of mental health disorders are higher among people with intellectual disability than for the general population.<sup>2-5</sup> Nevertheless, the drivers of mental health service use by people with intellectual disability are unknown. Better understanding of their health needs is critical for responding to the recent finding by the Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability of “systemic neglect in the Australian health system” of people with cognitive disability.<sup>6</sup>

Personal characteristics associated with poorer access to mental health care in Australia include being female, being separated or divorced, being unemployed or receiving government support, having an affective disorder, a high level of psychological distress, several mental health disorders, or physical disorders,<sup>7-9</sup> and living in rural areas.<sup>10-12</sup> Predictors of mental health service use by people with intellectual disability, however, are relatively unexplored. Overseas research has identified predictors of emergency department presentation during a psychiatric crisis, such as milder severity of intellectual disability, living with family, not having a primary care physician or crisis plan, and having a history of emergency department visits or interactions with the criminal justice system.<sup>13</sup> Another study found that aggression and psychotropic polypharmacy predicted the number of inpatient admissions for adults with intellectual disability.<sup>14</sup> Knowing the predictors of mental health service use for people with intellectual disability in Australia could guide policy and service development.

Further, the costs of mental health services for people with intellectual disability have not been investigated in detail. In Australia, mental health service costs are driven primarily by admitted patient care and community mental health services (\$1.517 billion of the \$1.722 billion in recurrent expenditure during 2015–16 [88%]).<sup>15</sup> We have previously reported that people with intellectual disability are more likely to present to emergency departments and to be re-admitted to hospital after a psychiatric admission than those without intellectual disability,<sup>16</sup> and that they use ambulatory mental health services more

## Abstract

**Objectives:** To describe the population characteristics of people with intellectual disability in New South Wales; to quantify and compare public mental health service use and costs for people with and without intellectual disability in NSW during 2014–15.

**Design:** Retrospective cohort data linkage analysis.

**Setting, participants:** People using publicly funded in- or outpatient (admitted or non-admitted) mental health services in NSW, 2014–15.

**Main outcome measures:** Numbers of bed days (inpatient mental health services), and treatment days (ambulatory mental health); costs of publicly funded mental health services.

**Results:** People with intellectual disability comprised 1.1% of the NSW population, but 6.3% of people who used public mental health services; 12% of public mental health costs during 2014–15 were for people with intellectual disability. Compared with metropolitan local health districts (LHDs), overall public mental health service costs were lower for rural and regional LHDs (adjusted incidence rate ratio [aIRR], 0.8; 95% CI, 0.8–0.9) and higher for specialty networks (aIRR, 1.2; 95% CI, 1.1–1.3). Per person costs for people with intellectual disability were higher than for those without intellectual disability (aIRR, 2.6; 95% CI, 2.2–3.0).

**Conclusion:** People with intellectual disability use public mental health services to a greater degree than other people. They should be explicitly considered by all tiers of mental health policy and service planning in Australia. Population health planning for the needs of people with disabilities would be assisted by including disability identifiers in all health administrative data sets.

frequently,<sup>17</sup> which could increase costs. Knowing the drivers of service costs would allow development of targeted services for people with intellectual disability.

As identifiers for people with intellectual disability are not used in Australian health service systems, mental health service use and costs cannot be determined by analysing routinely collected data. We have previously described our construction of a large linked data set for identifying people in New South Wales with intellectual disability.<sup>18</sup> In this study, we describe their population characteristics, and quantify and compare public mental health service use and costs for people with and without intellectual disability in NSW during 2014–15.

## Methods

We identified people who had used publicly funded mental health services in NSW during 2014–15 in the Admitted Patient Data Collection (APDC) and Ambulatory Mental Health dataset (MH-AMB), and people with intellectual disability in the Disability Services Minimum Data Set (2005–2015), the APDC (2001–2016), the Emergency Department Data Collection (2005–2016), the MH-AMB (2001–2015), the Corrective Services NSW Disability Services Dataset (2001–2016), the Disability Programs in Public Schools dataset (2011–2015), the NSW Public Guardian dataset (1994–2016), and the NSW Ombudsman dataset (2002–2015), as

previously described.<sup>18</sup> We identified intellectual disability on the basis of Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV or International Statistical Classification of Diseases and Related Health Problems, 10th revision diagnoses (ICD-10; F70–F79).

### Outcome measures

Outcome measures were admitted (psychiatric ward) and non-admitted (ambulatory) mental health care by publicly funded providers. We calculated the number of bed-days in psychiatric units (for admitted care) and the number of non-admitted mental health treatment days (for non-admitted care) during 2014–15. A person was deemed to have one non-admitted treatment day if there was at least one record of treatment in the MH-AMB; they were deemed to have an admission bed-day if, during a given episode of care in hospital, they spent at least one day in a psychiatric unit. Non-admitted mental health care services included mental health day programs, psychiatric outpatient care, and outreach services. People who received either admitted or non-admitted mental health care were classified as being in the mental health service population. For comparison, we calculated the cost of treatment for the general population based on Australian Productivity Commission (mean cost per treatment day: \$222.22)<sup>19</sup> and Australian Institute of Health and Welfare data (mean cost of a mental health admission: \$1061 per bed-day).<sup>15</sup> We inflated the costs to March 2021 levels using the Australian Taxation Office Consumer Price Index.<sup>20</sup>

### Statistical analysis

We estimated the number and proportion (relative to the NSW general population or the mental health service population) of people with intellectual disability in NSW by their residential local health district (LHD) region, sex, and age group. LHDs were grouped by geographic region, as metropolitan, rural/regional, or specialty networks. We treated the St Vincent’s Health Network as a metropolitan LHD, and the

Sydney Children’s Hospital Network and the Justice Health and Forensic Mental Health as the two speciality networks. We reported public mental health services and costs for all people and for people with and without intellectual disability. We report the total number of admission bed-days and non-admitted treatment days and summary statistics for NSW and by LHD region.

We examined mental health care costs separately for people with and without intellectual disability (adjusted for LHD region, age, and sex) and by LHD region in Poisson regression analyses, and report adjusted incident rate ratios (aIRRs) with 95% confidence intervals (CIs). After fitting the regression models, we also estimated the mean annual costs of mental health services from the marginal effects of the Poisson regression.

### Ethics approval

The study was approved by the NSW Population and Health Services Research Ethics Committee (HREC/13/CIPHS/7; Cancer Institute NSW reference number: 2013/02/446). The NSW Centre of Health Record Linkage (CHeReL) performed the data linkage.

### Results

Overall, 81 795 people with intellectual disability comprised 1.1% of the NSW population, and 6036 people with intellectual disability comprised 6.3% of the mental health service population in 2015 (Box 1).

During 2014–15, 6839 of 124 383 people who received non-admitted mental health care (5.5%) and 1562 of 24 710 people who received admitted mental health services (6.3%) had intellectual disability. The mean numbers of treatment days (30; standard deviation [SD], 59 v 20; SD, 46) and bed-days (77; SD, 285 v 31; SD, 103) were higher for patients with than for those without intellectual disability (Box 2).

**1 People in New South Wales with intellectual disability, 2015, by local health district region\***

Characteristic	Metropolitan local health districts		Rural and regional local health districts		All local health districts	
	NSW population	Mental health service population	NSW population	Mental health service population	NSW population	Mental health service population
Total population	5 391 036	59 421	2 174 393	36 242	7 565 429	95 663
People with intellectual disability	50 386 (0.9%)	3534 (5.9%)	31 409 (1.4%)	2502 (6.9%)	81 795 (1.1%)	6036 (6.3%)
Sex						
Male	30 644 (1.1%)	2190 (7.1%)	19 027 (1.8%)	1564 (8.3%)	49 671 (1.3%)	3754 (7.5%)
Female	19 683 (0.7%)	1344 (4.7%)	12 370 (1.1%)	938 (5.4%)	32 053 (0.8%)	2282 (5.0%)
Other	59 (< 0.1%)	0	12 (< 0.1%)	0	71 (< 0.1%)	0
Age group (years)						
0–19	22 601 (1.7%)	862 (10.4%)	13 051 (2.4%)	797 (12.3%)	35 652 (1.9%)	1659 (11.2%)
20–34	12 023 (1.0%)	1030 (6.6%)	8184 (2.2%)	745 (7.2%)	20 207 (1.3%)	1775 (6.9%)
35–44	5241 (0.7%)	673 (5.6%)	3075 (1.2%)	385 (5.8%)	8316 (0.8%)	1058 (5.6%)
45–64	7944 (0.6%)	800 (5.1%)	5402 (0.9%)	459 (5.2%)	13 346 (0.7%)	1259 (5.1%)
65 or more	2577 (0.3%)	169 (2.2%)	1697 (0.4%)	116 (3.0%)	4274 (0.4%)	285 (2.5%)

\* Excludes local health districts without attached populations; ie, specialty networks and the St Vincent’s Health Network. ♦

## 2 Public mental health service use, New South Wales, 2014–15

	People without intellectual disability	People with intellectual disability	All NSW people
Non-admitted mental health care			
People treated	117 544 (94.5%)	6839 (5.5%)	124 383
Treatment days	2 295 855 (91.9%)	203 203 (8.1%)	2 499 058
Treatment days per person, mean (SD)	20 (46)	30 (59)	20 (47)
Treatment days per person, median (IQR)	6 (2–18)	10 (3–28)	6 (2–18)
Admitted mental health care			
People treated	23 148 (93.7%)	1562 (6.3%)	24 710
Bed-days	710 839 (85.6%)	119 721 (14.4%)	830 560
Bed-days per person, mean (SD)	31 (103)	77 (285)	34 (123)
Bed-days per person, median (IQR)	10 (3–30)	17 (5–50)	10 (3–31)

IQR = interquartile range; SD = standard deviation. ◆

## 3 Public mental health services costs, New South Wales, 2014–15 (Australian dollars, inflated to March 2021 level)

	People without intellectual disability	People with intellectual disability	All people
Non-admitted mental health care			
Total costs	567 996 224 (91.9%)	50 272 572 (8.1%)	618 268 796
Cost per person, mean (SD)	4832 (11 408)	7350 (14 655)	4970 (11 624)
Cost per person, median (IQR)	1484 (495–4453)	2 474 (742–6927)	1484 (495–4453)
Admitted mental health care			
Total costs	839 661 956 (85.6%)	141 417 633 (14.4%)	981 079 589
Cost per person, mean (SD)	36 274 (121 739)	90 536 (336 883)	39 703 (145 697)
Cost per person, median (IQR)	11 812 (3544–35 437)	20 081 (5906–59 061)	11 812 (3 543–36 618)
All mental health care			
Total costs	1 407 658 177 (88.0%)	191 690 206 (12.0%)	1 599 348 383
Cost per person, mean (SD)	11 786 (57 181)	27 697 (165 287)	12 658 (67 823)
Cost per person, median (IQR)	1979 (494–6679)	3216 (990–12 123)	1979 (742–6927)

IQR = interquartile range; SD = standard deviation. ◆

Total public mental health care expenditure for people with intellectual disability during 2014–15 was \$191 690 206, or 12% of overall expenditure for all non-admitted and admitted public mental health services in NSW (Box 3).

A total of 1001 people with intellectual disability were admitted to hospital for public mental health care in metropolitan LHDs (6.0% of mental health service population), 556 in rural and regional LHDs (6.9%), and 70 in specialty networks (12%). Among non-admitted health service patients, 3512 in metropolitan LHDs (5.2% of mental health service population), 2655 in rural and regional LHDs (6.0%), and 1278 in specialty networks (7.3%) had intellectual disability (Box 4).

### Public mental health costs

In metropolitan LHDs, total mental health care costs for people with intellectual disability were \$117.4 million (13.2% of total mental health care costs), \$52.6 million in rural and regional LHDs (11.5%), and \$21.6 million in the specialty networks (8.4%) (Box 5).

The estimated mean annual mental health service costs per person with intellectual disability in NSW were \$30 418 (95% CI, \$26 069–\$34 768) per person; for people without intellectual disability they were \$11 727 (95% CI, \$11 406–\$12 047) per person. The per person costs for both groups were higher in metropolitan than in rural/regional LHDs, and lower for people under 20 years of age than for people in other age groups (Box 6, Box 7).

Compared with metropolitan LHDs, overall public mental health service costs were lower for rural and regional LHDs (aIRR, 0.8; 95% CI, 0.8–0.9) and higher for specialty networks (aIRR, 1.2; 95% CI, 1.1–1.3) (Box 6). The mean cost of public health care for people with intellectual disability was higher than for those without intellectual disability (aIRR, 2.6; 95% CI, 2.2–3.0); the difference was marginally higher in metropolitan LHDs (aIRR, 2.9; 95% CI, 2.3–3.6) and slightly lower in rural/regional LHDs (aIRR, 2.3; 95% CI, 1.9–3.0). Public mental health services costs for people with intellectual disability in rural/regional LHDs (aIRR, 0.7; 95% CI, 0.5–0.9) and the

**4 Public mental health service use, New South Wales, 2014–15, by local health district (LHD) region**

	Metropolitan LHDs		Rural and regional LHDs		Specialty networks	
	People without intellectual disability	People with intellectual disability	People without intellectual disability	People with intellectual disability	People without intellectual disability	People with intellectual disability
<b>Non-admitted mental health care</b>						
People treated	63 832 (94.8%)	3512 (5.2%)	41 987 (94.0%)	2655 (6.0%)	16 312 (92.7%)	1278 (7.3%)
Treatment days	952 130 (91.8%)	85 241 (8.2%)	600 142 (92.2%)	50 752 (7.8%)	743 583 (91.7%)	67 210 (8.3%)
Treatment days per person, mean (SD)	15 (24)	24 (41)	14 (21)	19 (26)	46 (106)	53 (108)
Treatment days per person, median (IQR)	7 (3–18)	11 (4–28)	7 (3–17)	9 (3–24)	1 (1–7)	4 (2–14)
<b>Admitted mental health care</b>						
People treated	15 584 (94.0%)	1001 (6.0%)	7511 (93.1%)	556 (6.9%)	527 (88.3%)	70 (12%)
Bed-days	451 949 (84.7%)	81 567 (15.3%)	216 006 (86.4%)	33 921 (13.6%)	42 884 (91.0%)	4233 (9.0%)
Bed-days per person, mean (SD)	29 (102)	81 (320)	29 (87)	61 (208)	81 (211)	60 (72)
Bed-days per person, median (IQR)	9 (3–29)	16 (5–49)	10 (3–27)	14 (4–41)	35 (18–65)	44 (23–70)

IQR = interquartile range; SD = standard deviation. ◆

**5 Public mental health services costs, New South Wales, 2014–15 (Australian dollars, inflated to March 2021 level), by local health district (LHD) region**

	Metropolitan LHDs		Rural and regional LHDs		Specialty networks	
	People without intellectual disability	People with intellectual disability	People without intellectual disability	People with intellectual disability	People without intellectual disability	People with intellectual disability
<b>Non-admitted mental health care</b>						
Total costs	235 557 663 (91.8%)	21 088 686 (8.2%)	148 475 573 (92.2%)	12 556 082 (7.8%)	183 962 987 (91.7%)	16 627 804 (8.3%)
Cost per person, mean (SD)	3690 (5866)	6005 (10 259)	3536 (5108)	4729 (6549)	11 278 (26 117)	13 010 (26 777)
Cost per person, median (IQR)	1732 (742–4453)	2721 (990–6927)	1731 (742–4206)	2227 (742–5938)	247 (247–1732)	989 (495–3464)
<b>Admitted mental health care</b>						
Total costs	533 854 194 (84.7%)	96 349 113 (15.3%)	255 152 039 (86.4%)	40 068 388 (13.6%)	50 655 723 (91.0%)	5 000 132 (9.0%)
Cost per person, mean (SD)	34 256 (120 714)	96 253 (378 122)	33 970 (102 664)	72 065 (245 514)	96 121 (249 744)	71 430 (85 455)
Cost per person, median (IQR)	10 631 (3544–34 256)	18 900 (5906–57 880)	11 812 (3544–31 893)	16 537 (4725–48 430)	41 343 (21 262–76 780)	51 974 (27 168–82 686)
<b>All mental health care</b>						
Total costs	769 411 856 (86.8%)	117 437 799 (13.2%)	403 627 612 (88.5%)	52 624 471 (11.5%)	234 618 710 (91.6%)	21 627 936 (8.4%)
Cost per person, mean (SD)	11 774 (61 609)	32 712 (204 493)	9 448 (45 908)	19 527 (116 143)	14 314 (54 529)	16 857 (37 603)
Cost per person, median (IQR)	2227 (742–7 175)	3958 (990–13 112)	1979 (742–5 938)	2721 (742–8 906)	247 (247–1732)	990 (495–7669)

IQR = interquartile range; SD = standard deviation. ◆

## 6 Estimated mean annual public mental health services costs (per person), New South Wales, 2014–15 (Poisson regression analysis): by intellectual disability status

	All people in NSW		People with intellectual disability	
	Estimated costs (95% CI)*	aIRR (95% CI)	Estimated costs (95% CI)*	aIRR (95% CI)
Local health district region				
Metropolitan	13 135 (12 561–13 709)	1	32 020 (25 587–38 452)	1
Rural and regional	10 618 (10 098–11 138)	0.8 (0.8–0.9)	21 642 (16 820–26 463)	0.7 (0.5–0.9)
Specialty networks	16 221 (15 222–17 221)	1.2 (1.1–1.3)	26 757 (22 232–31 282)	0.8 (0.6–1.1)
Age group (years)				
0–19	5654 (5417–5891)	1	7731 (6612–8850)	1
20–34	12 699 (12 011–13 386)	2.2 (2.1–2.4)	32 872 (24 040–41 703)	4.2 (3.2–5.7)
35–44	14 449 (13 633–15 266)	2.6 (2.4–2.7)	38 303 (29 067–47 539)	5.0 (3.7–6.6)
45–64	15 052 (14 071–16 034)	2.7 (2.4–2.9)	38 631 (27 603–49 660)	5.0 (3.6–6.8)
65 or more	16 310 (14 804–17 817)	2.9 (2.6–3.2)	30 228 (14 088–46 367)	3.9 (2.2–6.8)
Sex				
Male	13 230 (12 701–13 760)	1	26 204 (21 863–30 544)	1
Female	11 953 (11 378–12 527)	0.9 (0.8–1.0)	30 114 (22 608–37 620)	1.1 (0.8–1.6)
Other	7480 (0–19 857)	0.6 (0.1–3.0)	NA	NA

aIRR = adjusted incidence rate ratio; CI = confidence interval; NA = not applicable.

\* Australian dollars, inflated to 2021 values. ◆

specialty networks (aIRR, 0.8; 95% CI, 0.6–1.1) were lower than in metropolitan LHDs (Box 6).

### Discussion

We report the first population level study in Australia of both the number of people with intellectual disability who use public mental health services and the associated costs. In 2015, people with intellectual disability comprised 1.1% of the NSW population, but 6.3% of people who had used public mental health services; 12% of public mental health costs during 2014–15 were for services for people with intellectual disability. These findings can probably be extrapolated to other states and territories, as the proportions of people with intellectual disability and the public mental health services are similar to those of NSW. The relatively high use of public mental health services by people with intellectual disability means they are of particular significance for public mental health care in Australia.

The proportion of people using mental health services who had intellectual disability was particularly large in younger age groups (eg, 0–19 years: 1.9% of population, 11.2% of service users), indicating that a lifespan perspective is needed when planning and delivering services. Boys and men with intellectual disability comprised larger proportions than girls and women of both

the NSW population (1.3% *v* 0.8%) and of users of mental health services (7.5% *v* 5.0%) (Box 1).

In regional and rural LHDs, both the population proportion of people with intellectual disability (1.4%) and their proportion of all public mental health service users (6.9%) were larger than in metropolitan LHDs (0.9% and 5.9% respectively) (Box 1). The needs of people with intellectual disability should therefore be considered when planning rural and regional mental health services, and metropolitan mental health services should have outreach activities for people in rural and regional areas.

Both non-admitted and admitted care needs were higher for people with intellectual disability than for those without intellectual disability. Although the proportion of people with intellectual disability was larger in rural and regional LHDs than in metropolitan LHDs, and their proportion of mental health service users was larger in rural and regional LHDs, their proportions of non-admitted treatment days (7.8% *v* 8.2%) and admitted bed-days (13.6% *v* 15.3%) were smaller than in metropolitan LHDs (Box 4). This discrepancy raises concern about access to mental health care in rural areas. The high levels of both non-admitted and admitted care in specialty networks reflect the needs of people in prisons and specialist children's services (Box 4).

**7 Estimated mean annual public mental health services costs (per person), New South Wales, 2014–15 (Poisson regression analysis): by local health district region**

	Metropolitan local health districts		Rural and regional local health districts		Specialty networks	
	Estimated costs (95% CI)*	aIRR (95% CI)	Estimated costs (95% CI)*	aIRR (95% CI)	Estimated costs (95% CI)*	aIRR (95% CI)
<b>Intellectual disability status</b>						
No intellectual disability	11 748 (11 278–12 217)	1	9382 (8954–9809)	1	14 106 (13 291–14 920)	1
Intellectual disability	34 157 (27 063–41 252)	2.9 (2.3–3.6)	22 012 (17 054–26 970)	2.3 (1.9–3.0)	20 790 (18 194–23 386)	1.5 (1.3–1.7)
<b>Age group (years)</b>						
0–19	5772 (5434–6109)	1	4482 (4228–4737)	1	6189 (5487–6891)	1
20–34	12 891 (11 849–13 933)	2.2 (2.0–2.5)	9500 (8552–10 448)	2.1 (1.9–2.4)	15 187 (13 828–16 546)	2.4 (2.1–2.8)
35–44	14 433 (13 163–15 703)	2.5 (2.2–2.8)	11 817 (10 625–13 009)	2.6 (2.3–3.0)	15 998 (14 973–17 023)	2.6 (2.3–3.0)
45–64	15 684 (14 157–17 211)	2.7 (2.4–3.0)	10 893 (10 125–11 660)	2.4 (2.2–2.7)	19 739 (16 837–22 641)	3.2 (2.7–3.8)
65 or more	14 791 (13 142–16 440)	2.6 (2.3–2.9)	18 862 (15 822–21 901)	4.2 (3.5–5.0)	9580 (3069–16 090)	1.5 (0.8–3.1)
<b>Sex</b>						
Male	13 449 (12 670–14 228)	1	10 774 (9966–11 583)	1	14 315 (13 501–15 129)	1
Female	12 289 (11 438–13 139)	0.9 (0.8–1.0)	9300 (8788–9811)	0.9 (0.8–0.9)	15 563 (13 067–18 059)	1.1 (0.9–1.3)
Other	804 (299–1310)	0.1 (0.0–0.1)	49 654 (42 854–56 454)	4.6 (3.9–5.5)	3021 (2823–3219)	0.2 (0.2–0.2)

aIRR = adjusted incidence rate ratio; CI = confidence interval.  
 \* Australian dollars, inflated to 2021 values. ♦

That 12% of NSW public mental health costs are associated with 1.1% of its population is important for services planning. The proportions of admitted mental health care costs for people with intellectual disability were lower in rural and regional LHDs (13.6%) and specialty networks (9.0%) than in metropolitan LHDs (15.3%), although the proportion of service users with intellectual disability was lower in metropolitan LHDs (Box 5).

The use of admitted and non-admitted mental health care services by people with intellectual disability is relatively high. Further, we have underestimated total public mental health service costs, as we could not include indirect costs (to people with intellectual disability or their carers and support agencies), specialist visits, or medication costs. The costs associated with a broader range of health care services, including emergency department presentations, specialist and allied health visits, and psychotropic medications, should be investigated.

We have previously reported the multiple barriers to access to mental health care,<sup>21</sup> deficits in Australian mental health policy,<sup>22</sup> and ineffectiveness of acute mental health care for people with intellectual disability.<sup>16</sup> To reduce the imbalance between admitted and non-admitted service use for these people, models of higher intensity mental health care with better support for transitions from inpatient to community care should be considered, including better integration of disability, community mental health, primary care, and out-of-hospital specialist support.

This could be achieved by establishing small multidisciplinary teams — including a psychiatrist, trainee psychiatrist, allied health professional and nurse practitioner — in each LHD and specialty network. Given public sector salary scales, the cost of such a team would be a small fraction of the overall annual costs associated with public sector mental health care for people with intellectual disability.

**Limitations**

Although our linkage of data from several public agencies is a robust approach to identifying people with intellectual disability, those who do not use the services managed by these agencies or who do not identify as having intellectual disability were not included in our analysis. Further, we relied on the accuracy of the classification of disability status in these datasets. Our linked dataset does not include data on primary care or out-of-hospital specialist care, so we could not assess access to mental health support in these sectors. Finally, our analysis did not examine appropriateness of care or the impact of complexity on cost of care.

**Conclusion**

Our findings indicate that people with intellectual disability should be explicitly considered by all tiers of Australian mental health policy and public mental health service and workforce planning. This could be assisted by including disability identifiers in all administrative health data sets. We

have previously summarised the consensus on strategic steps required to build an effective mental health system for people with intellectual disability.<sup>23</sup> Concerted action has not yet been undertaken at the national and state and territory levels. As prominently featured at the hearings of the Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability, the deficient preparedness of health professionals and services is a systemic problem.<sup>6</sup> Although some initiatives are promising — including the development of a national roadmap for the health of Australians with intellectual disability<sup>24</sup> and improving service capacity in some states, including NSW<sup>25</sup> — progress will be limited until people with intellectual disability are routinely considered by mental health policy and during services development and implementation.

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