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Understanding healthcare utilisation for aboriginal people in New South Wales prisons with histories of self-harm and suicidal behaviour: a retrospective cohort study

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1 Title page

2 **Understanding Healthcare Utilisation for Aboriginal People in New**
3 **South Wales Prisons with Histories of Self-Harm and Suicidal Behaviour:**
4 **A retrospective cohort study**

5

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33 ## Abstract

34 ### Background

35 People in prison are at increased risk of suicide. Aboriginal people are
36 overrepresented in Australian prisons, and their self-harm/suicide risk may be
37 complicated by experiences of trauma, colonisation, loss of land and culture, and
38 social injustices. This study aims to investigate mental health morbidities and in-
39 prison service utilisation of Aboriginal people with histories of self-harm and/or
40 suicidality.

41 ### Methods

42 Historical cohort study utilising Justice Health and Forensic Mental Health
43 Network routinely collected data, including records of Aboriginal people entering
44 NSW public prisons from 2015 to mid-2024. Records included Reception
45 Screening Assessments (RSA), Patient Administration System appointments and
46 alerts, and patient transfers to external hospitals.

47 Descriptive statistics were produced for people’s characteristics, appointments,
48 type of professional/clinician seen, alerts, and hospital transfers. Multivariable
49 logistic regression was used to investigate the association between self-harm

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and/or suicidal behaviour (SHSB) reported at reception and mental health appointments.

Results

The study includes 42,161 RSAs for 15,583 Aboriginal people. A history of SHSB was reported in 10,253 RSAs. Of the study population, 2152 people reported having ever attempted self-harm/suicide at one reception without disclosing this information in a later reception. Depression and anxiety were the most prevalent mental health conditions reported by people with a history of SHSB.

Of all appointments booked within four weeks of reception for people reporting SHSB, only 447 appointments (0.3%) were with an Aboriginal Health Worker. People who reported SHSB were 37% more likely to have a mental health appointment booked within four weeks of reception compared to people who did not report SHSB. Of mental health appointments booked within four weeks, 51.2% involved individuals under Risk Intervention Team management, with 59.0% following RSAs where SHSB was reported. There were 452 hospital transfers due to self-harm or suspected suicide attempts, with 20.1% occurring within four weeks of reception.

Conclusion

Self-reporting self-harm/suicide at reception, on its own, is an unreliable predictor of future risk. Better identification of people with SHSB histories could support delivery of safer care for Aboriginal people. Establishing a therapeutic environment and offering comprehensive, culturally sensitive healthcare can help lower the risk of self-harm and suicide among people in prison.

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Keywords

Self-harm, suicide, Aboriginal people, prisons, service utilisation, Australia, real-world data

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76 ## Introduction

77 Suicide is a global public health problem, with around 720,000 deaths occurring
78 annually due to suicide (1). In Australia, the age-standardised rate of death due
79 to suicide in 2023 was 11.8 per 100,000 population, representing 1.8% of all
80 causes of death (2). In New South Wales (NSW), the age standardised rate of
81 suicide deaths in 2023 was 9.9 per 100,00; and the rate of Aboriginal deaths by
82 suicide in 2023 was 28.2 per 100,000 (3, 4). Although suicide affects all
83 population groups, suicide risk is highly varying and disproportionately affects
84 the most marginalised and disadvantaged populations (5, 6). People in contact
85 with the justice system are at higher risk of death by suicide than the general
86 population (6, 7). People in prison are 2.2 times more likely to die by a self-
87 inflicted injury compared to the general population (8). In Australia, the
88 proportion of deaths in custody due to suicide over a 5-year period decreased
89 from 38.9% between 1992 and 1997 to 10.4% between 2017 and 2022 (2).
90 Despite this decrease, the proportion of deaths in custody due to suicide is still
91 more than five times that of the Australian general population (10.4% vs 1.8%).

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92 Suicide in prison is associated with several risk factors. Suicidal ideation is the
93 strongest risk factor associated with suicide in prison, with around 50% of people
94 with suicidal ideation subsequently attempting suicide (5, 9-12). Additionally,
95 people with recent suicidal ideation are 16 times more likely to attempt suicide
96 in prison (13). Other risk factors include having a history of suicide attempts and
97 non-suicidal self-harm, with each contributing to a six-fold increase in the
98 likelihood of suicide attempts (odds ratio [OR] = 5.95, 95% confidence interval
99 [CI] 3.17–11.16) and (OR = 6.16, 95% CI 4.98–7.62), respectively (13). Among
100 adults in NSW prisons, one third reported having ever thought about committing
101 suicide and 17.8% reported actual suicide attempts (14). Additionally, one in five
102 (21%) people entering prison reported self-harm behaviour at some stage in

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103 their life (15). Previous research has explained the increased risk of suicide
104 behaviour and self-harm among people in prison by two main factors:

105 1) **Factors related to people in contact with the justice system**: People in
106 prison are affected by social and health inequalities. Factors such as poor and
107 unstable housing, lower education levels and lack of employment are
108 associated with an increased risk of suicidal behaviour and drive contact with
109 the justice system (5, 16). A history of childhood sexual, physical, and
110 emotional abuse, which is more prevalent among people in prison, is also
111 associated with an increased risk of suicide in prison, with people who
112 experience child abuse being at three-fold increased risk of committing
113 suicide in prison (5, 13, 16). Additionally, people in prison are at higher risk of
114 psychiatric disorders, which are strongly associated with self-harm and
115 suicidal behaviour in prison (13, 16). People who receive psychiatric
116 treatment in prison or those who had such treatment prior to prison entry are
117 eight and five times more likely, respectively, to commit suicide in prison
118 (13). Substance use disorder is another factor which is highly prevalent
119 among people in contact with the justice system and associated with suicide
120 risk (5, 17).

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121 2) **Factors related to the prison environment and stressors:** Factors such
122 as solitary confinement, physical and sexual victimisation, and lack of social
123 support are associated with an increased risk of self-harm and suicide
124 attempts (5, 13, 16). In addition to the prison environment, certain stressors
125 and periods are associated with an increased risk of self-harm and suicide,
126 specifically
127 the early weeks after prison reception and the remand period, when people
128 feel separated from their family and friends, go through repeated court visits,
129 at sentencing time, and are uncertain about their future (5, 18).

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130 Aboriginal and/or Torres Strait Islander people (hereafter, respectfully referred to
131 as Aboriginal people) are overrepresented in the prison population, representing
132 36% of the Australian prison population compared to only 3.8% of the Australian
133 general population (19, 20). An Aboriginal investigator led study (Dudgeon et al,
134 2017) discussed the context and the causes of suicide among Aboriginal people
135 concluded that in addition to the risk factors associated with suicide in the
136 general prison population, Aboriginal people are at risk of suicide due to a
137 complex web of factors including the biological, personal and social effects of
138 trauma (21), intergenerational impacts of colonisation, loss of land and culture,
139 discrimination, social exclusion and disadvantage, and denial of social justice
140 (21-23). Arguably, colonial models of health care likely compound risk.

141 In Australia, between 1 July 2022 and 30 June 2023 there were 21 Aboriginal
142 deaths in prison custody representing the highest number of deaths in prison
143 custody since 1979-1980 (24). The number of Aboriginal deaths in 2022-2023
144 account for 30% of all deaths in custody over this period, which is higher than
145 the average 18% recorded since 1979-1980 (24). Of the 21 deaths in prison
146 custody that occurred in 2022-2023, cause of death was recorded and able to be
147 ascertained in 13 cases, 5 (38.5%) of which were self-inflicted deaths (24). In
148 NSW, based on the report by the NSW State Coroner into first Nations People's
149 Deaths in Custody in NSW: 2008-2018, there were 34 Aboriginal deaths in
150 custody in NSW (25). Intentional self-harm accounted for 29% (n=10) of these
151 deaths, with the majority occurring while people were on remand (25).

152 In NSW, the prison system comprises 33 publicly operated and 3 privately
153 operated correctional centres. This study includes data from all public prisons,
154 which are managed by Corrective Services NSW (CSNSW). Currently,
155 approximately 6500 staff are employed in CSNSW correctional centres, of whom
156 3.2% identify as Aboriginal or Torres Strait Islander (26).

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157 According to the NSW Crimes (Administration of Sentences) Regulation 2014,
158 people in public prisons are entitled to at least two hours of outdoor exercise per
159 day, except for those confined to their cells, who must be allowed at least one
160 hour of exercise daily (27). People in NSW prisons spend an average of 8.3 hours
161 out of cells each day (28).

162 People held on remand are permitted two visits per week, while visiting
163 arrangements for sentenced people vary by facility and are determined by the
164 Governor of each correctional centre (29). In addition to in-person visits, people
165 in NSW prisons have routine access to phone calls with friends and family,
166 including increasingly frequent use of this facility via in-cell digital tablets since
167 their introduction in recent years (30).

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168 CSNSW offers a range of programs tailored to the needs of people in custody.
169 These include programs specifically designed for people on remand and those
170 serving short sentences, as well as general programs accessible to all people in
171 prison. In addition, targeted interventions are available, such as: drug and
172 Alcohol programs, aggression/ violence programs, countering Violent Extremism
173 programs, sex offender programs, young adult offender programs and safe
174 driving programs (31).

175 The management of people in NSW prisons identified as at risk of self-harm or
176 suicide, upon reception to prison or during their time in custody, includes the
177 mandatory notification of such risk to all relevant staff and development of a risk
178 management plan appropriate to the level of risk. In response to a notification of
179 self-harm or suicide risk, the Risk Intervention Team (RIT) convenes to formulate
180 a management plan, which includes the appropriate cell-placement and
181 observation schedule. The RIT is responsible for the ongoing assessment of risk

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182 and review of management plans, and referral to specialist assessment or
183 treatment services, where appropriate.

184 The Justice Health and Forensic Mental Health Network (Justice Health NSW)
185 provides health care for people (adults and young people) in public prisons (32).
186 It is a state-wide specialty health network that provides multidisciplinary health
187 services to more than 30,000 people annually in several settings, including
188 correctional centres, youth justice centres, police cells, courts, inpatient and
189 community settings (32). Understanding how Aboriginal people with a history of
190 self-harm or suicidal behaviour use services is essential for achieving zero
191 suicides and reducing the disparities in health outcomes between Aboriginal and
192 non-Aboriginal people in custody, in accordance with the National Agreement on
193 Closing the Gap. These are key objectives of the Justice Health NSW 10-year
194 Strategic Plan 2023-32 (32). By identifying gaps in service provision and usage,
195 we can develop a more supportive and effective system.

196 Previous studies investigating self-harm and suicide among Aboriginal people in
197 prison have focused on self-harm and suicide rates, risks and protective factors
198 (22, 33-37). To the authors' knowledge, this is the first real-world study that
199 investigates the service utilisation of Aboriginal people in prison with histories of
200 self-harm and/or suicidal behaviours (SHSB).

201 This study aims to investigate mental health morbidities and in-prison service
202 utilisation of Aboriginal people with histories of self-harm and/or suicidality. We
203 aim to address the gap in the literature on the in-prison health care provided for
204 this at-risk population. We believe the findings of this study will provide
205 evidence-based insights to support the planning and delivery of culturally
206 informed healthcare for populations with complex and unmet health needs.

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207 ## Method

208 This paper was led by two Aboriginal and eight non-Aboriginal co-authors, whose
209 expertise in Aboriginal health, mental health, and the health of people in prison
210 shaped its development. Additionally, the results of this paper were presented
211 and discussed with the People in NSW Public Prisons: Heath Status and Service
212 Utilisation project Aboriginal Community Reference Group. This work has been
213 approved for publication by the Aboriginal Health and Medical Research Council
214 Human Research Ethics Committee.

215 ### Study population and duration:

216 Records of Aboriginal people who entered NSW public prisons from 1 January
217 2015 to 30 June 2024. Multiple records for each person were included in the
218 study. Self-report of Aboriginal identity at reception was used to identify records
219 of Aboriginal people. As multiple receptions per person were used in this study, if
220 a person is self-identified as Aboriginal in any reception all their other reception
221 records were included in the analysis.

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222 ### Data Source:

223 Three real-world routinely collected administrative data sets were used for the
224 analysis of this study. These data sets are part of Justice Health NSW electronic
225 data systems.

226 1. *Reception Screening Assessment (RSA)* is part of Justice Health electronic
227 Health System (JHeHS). It is a health assessment conducted for all adults
228 upon entry into custody (i.e., within 24 hours of reception). If the RSA is
229 unable to be completed within 24 hours of a person entering custody, a
230 reason must be provided. The RSA form is a structured screening tool
231 completed by a registered or enrolled nurse. The aim of the RSA is to
232 identify immediate health related needs for people entering custody with

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233 the focus on physical and mental health including self-harm and suicide
234 risk assessment, alcohol and drug use, women's health, as well as
235 population and preventative health risks.

236 2. *Patient Administration System (PAS)* is an electronic system where
237 patients' interactions are recorded and managed. It is used by Justice
238 Health NSW to manage outpatient appointments and inpatient information
239 such as admissions, transfers, and discharges. PAS appointment data up
240 to 31 July 2024 was included in this data set to allow for a follow-up period
241 of at least four weeks. Medical alerts are flags created in PAS. Alerts can
242 be clinical, created for certain conditions, allergy, medication or risks, non-
243 clinical alerts can be administrative alerts or initiated for patient involved
244 in certain programs. If an alert has an end date it considered in-active
245 alert. PAS alert data up to November 2024 was included in the analysis for
246 the study.

247 3. *Daily Update – Patient Transfer to an External Hospital data* is part of
248 JHeHS and is available from October 2020. It includes all unplanned
249 patient transfers to an external hospital. Planned outpatient appointments
250 are not included in these data.

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251 ## Study group and comparison group:

252 The study group includes RSA episodes where people self-report a history of
253 SHSB. As part of the RSA suicide risk assessment section, people entering
254 custody were asked 1) Have you ever tried to hurt yourself? and 2) Have you
255 ever tried to end your life? An RSA was included in the study group if "yes" was
256 the answer to one or both questions (SHSB = yes). An RSA was included in the
257 comparison group if "no" was the answer for both questions (SHSB = no). If
258 information on both questions was missing, or one of the questions had missing

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259 data and the other was "no", then self-harm/suicidal behaviour was considered
260 to be "not stated".

261 **Self-harm/suicide attempts within one month prior to prison reception**:
262 People who reported previous self-harm and/or suicide attempts were asked
263 about the time of the last attempt. As part of the change in the RSA form on 1
264 February 2021, this question was changed from a free text response format to a
265 categorical format. Prior to 1 Feb 2021, the authors flagged any episode where
266 people indicated their last attempt occurred within one month prior to their
267 prison reception. Phrases such as "a few days ago", "a couple of weeks ago",
268 "last month", and "1 month ago" were considered as self-harm and/or suicide
269 attempts within one month prior to prison reception. From 1 February 2021, RSA
270 episodes where people who reported a self-harm and/or suicide attempt
271 indicated that their last attempt was "in the past week" or "1-4 weeks ago" were
272 flagged as self-harm/suicide attempts within one month prior to prison reception.

273 Measurements and Calculations

274 **Sociodemographic characteristics:** Presented for people who reported SHSB
275 at least once and those who did not report SHSB in any of their RSAs. Age was
276 based on the first RSA completed in a public prison within the study duration.

277 **Mental health comorbidities**: Based on self-reported data at reception. People
278 can report more than one mental health condition in one RSA. The mental health
279 section of the RSA form was changed in February 2021. As a result, mental
280 health morbidities were produced for two separate periods: prior to 1 February
281 2021, and from 1 February 2021 onwards.

282 **Mental health appointments within four weeks after reception:** Includes
283 booked mental health appointments where the appointment date is at, or within
284 28 days of, the reception date.

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285 **Type of professional carer**: Produced for all booked appointments (i.e., all
286 appointment types) within four weeks of reception.

287 **Self-harm/suicide alerts:** Any patient who is identified as at risk of self-harm is
288 flagged using an "alert" placed in the PAS. These alerts are visible in both PAS
289 and JHeHS. There are five self-harm and suicide alerts. Self-harm alerts include
290 self-harm risk, threats, or deliberate self-harm. Suicide alerts include a history of
291 suicide attempts and current suicide attempts. Alert were included in the
292 analysis when 1) the alert's start date is at or after the assessment date of an
293 RSA episode and before the assessment date of the next RSA episode (new alert)
294 or 2) the alert's start date is within a previous RSA episode and missing an alert
295 end date (active old alert).

296 **Risk Integration Team (RIT) alert:** A Mandatory Notification (RIT) alert with
297 start date at or after the assessment date of an RSA episode and before the next
298 RSA episode (new alert).

299 **RIT appointments:** are managed by the RIT which consists of two CSNSW
300 members and one Justice Health NSW staff. Three types of RIT appointments are
301 recorded in PAS data: 1) RIT new, where patient placed under RIT management;
302 2) RIT review, where the risk is reviewed by the RIT; and 3) RIT termination,
303 where patient is no longer under RIT management.

304 **Transfer to an external hospital:** Any unplanned transfer to an external
305 hospital where the external hospital transfer date is at or after the assessment
306 date of an RSA episode and before the assessment date of the next RSA episode.
307 Transfer to an external hospital for a self-harm or suspected suicide attempt was
308 determined using four variables: 1) incident type; 2) provisional diagnosis; 3)
309 other provisional diagnosis; 4) discharge diagnosis. If self-harm or a suspected

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310 suicide attempt were recorded in any of the four variables the cause of the
311 transfer was flagged as a transfer for a self-harm or suspected suicide attempt.

312 **Hospital stay:** Calculated for hospital admissions only. Hospital admission date
313 and discharge date were used to calculate number of days in hospital. If hospital
314 admission date was missing, hospital assessment date was used as a proxy for
315 hospital admission date.

316 Statistical analysis

317 Descriptive statistics (number and proportions) were produced for people's
318 characteristics, mental health appointments, type of professional carer, alerts,
319 and transfer to an external hospital. Chi Square test was used to compare the
320 proportions of sex and age groups, unplanned hospital transfer and unplanned
321 hospital transfer within four weeks between those who ever reported SHSB and
322 those who didn't. Mann- Whitney U test was used to compare the median time
323 from reception to the RIT appointments. Multivariable logistic regression was
324 used to investigate the association between self-harm/suicidal behaviour
325 reported at reception and booked mental health appointments. Odds Ratios and
326 95% CI were produced.

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327 Variables with $p < 0.20$ were included in the initial logistic regression model (38).
328 Following backward elimination, the final model retained only those variables
329 that remained statistically significant ($p < 0.05$).

330 The final logistic regression model includes the following covariates: age groups,
331 sex, referral to RIT at RSA, reported mental health conditions - depression,
332 anxiety, schizophrenia, bipolar disorder, drug-induced psychosis, post-traumatic
333 stress disorder, oppositional defiant disorder, and attention deficit hyperactivity
334 disorder.

335 ### Ethics

336 This study is part of the People in NSW Public Prisons: Heath Status and Service
337 Utilisation project. This project is undertaken in accordance with the National
338 Statement on Ethical Conduct in Human Research 2023, which outlines ethical
339 principles for studies involving human participants in Australia and is
340 underpinned by the Declaration of Helsinki. Ethics approval for the project was
341 granted from Justice Health and Forensic Mental Health Network Human
342 Research Ethics Committee (Reference number: 2020/ETH01927) and the
343 Aboriginal Health and Medical Research Council Human Research Ethics
344 Committee (Reference number: 1719/20).

345 ## Results

346 Between January 2015 and June 2024, there were 42,161 receptions (RSAs) for
347 15,583 Aboriginal people, with 58.6% of people entering custody more than once
348 during this period. More than one third (37.7%, n = 5868) of Aboriginal people
349 entering custody reported SHSB on at least one reception occasion (22.1%
350 reported self-harm and 26.9% reported suicide attempts), with such behaviours
351 reported in almost a quarter (24.3%, n = 10,253) of the RSAs (Figure 1). Of
352 those, 2152 people reported having ever attempted self-harm and/or suicide at
353 one reception and did not disclose this information in a later reception into
354 custody. Out of 10,253 RSAs where people reported SHSB, 1889 (18.4%)
355 attempts were made within the month prior to prison reception.

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356 **Figure 1: Self-harm/suicidal behaviour among the study population**

357 ### Sociodemographic characteristics and mental health (co)morbidities

358 Table 1 shows the sociodemographic characteristics of the study population,
359 based on the first reception episode during the study period. Twenty-four
360 percent (23.5%) of people who reported SHSB at least once during the study

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361 period were women. This proportion is higher than the proportion of women
362 among all prison entrants across the study period (19.2%). More than one third
363 (36.0%) of those who reported SHSB were younger than 25 years, a higher
364 proportion than that of young people entering prisons across the study period
365 (29.8%) (Table 1). The proportion of young people was similar among men and
366 women who reported SHSB at least once (36.5% and 34.5%, respectively).

367 **Table 1: Sociodemographic characteristics of study population**

	Reported SHSB at least once								
	Yes		**No**		**Not stated**		**All**		**P value[a]**
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	
Sex									
Female	1376	23.5	1588	16.5	20	23.8	2984	19.2	P < 0.001
Male	4492	76.6	8040	83.5	64	76.2	12,595	80.8	
Not stated	0	0	3	0.0	0	0.0	3	0.0	
Age groups (years) at first reception									
Less than 20	690	11.8	767	8.0	5	6.0	1463	9.4	P < 0.001
20 to 24	1424	24.3	1739	18.1	11	13.1	3173	20.4	
25 to 29	1161	19.8	1720	17.9	13	15.5	2894	18.6	
30 to 34	927	15.8	1676	17.4	14	16.7	2615	16.8	

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35 to 39	701	12.0	1365	14.2	18	21.4	2085	13.4
40 to 44	470	8.0	981	10.2	6	7.1	1456	9.3
45 to 49	296	5.0	727	7.6	9	10.7	1033	6.6
50 to 54	136	2.3	375	3.9	4	4.8	515	3.3
55 and over	63	1.1	280	2.9	4	4.8	348	2.2
Not stated	0	0.0	1	0.0	0	0.0	1	0.0
Total	**5868**	**100**	**9631**	**100.0**	**84**	**100**	**15,583**	**100.0**

368 a) Excluding not stated values

369 SHSB: Self-harm and/or suicidal behaviour

370 **Note:** Age based on first reception (first RSA) in public prisons within the scope of the study period

371 Tables 2a and 2b explore the mental health morbidities reported at reception
372 during the study period by Aboriginal people with a history of SHSB.

373 For the period from 1 January 2015 to 31 January 2021, ever having treatment
374 for a mental health condition was reported in 78.1% of the RSA episodes, with
375 depression being the most commonly reported mental health condition to have
376 been treated (Table 2a).

377 For RSA episodes between 1 February 2021 and 30 June 2024 where people
378 reported SHSB, the most frequently reported mental health condition was
379 depression (76.2%), followed by anxiety (69.2%) and schizophrenia (32.3%). Of
380 those RSAs 2854 (79.1%) where people reported more than one mental health
381 condition. Of RSA episodes where people reported SHSB, more than half of
382 people undergoing assessment reported receiving medication for their mental
383 health condition and 30% had been admitted to hospital for a mental health
384 problem. No mental health condition was reported in only 7.3% of episodes
385 where people reported SHSB (Table 2b).

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386 **Table 2a: Mental health comorbidities (1 Jan 2015-31 Jan 2021)**

RSAs where people reported SHSB (total =6643)	**N**	**%**
RSA with reported treatment for a mental health condition		
Yes	5187	78.1
Mental health condition treated		
Depression	*2871*	*55.4*
Anxiety	*1458*	*28.1*
Schizophrenia	*1209*	*32.3*
Bipolar disorder	*856*	*16.5*
Post-traumatic stress disorder	*516*	*10.0*
No	1345	20.3
Not stated	111	1.7
Total	**6643**	**100.0**

387 SHSB: Self-harm and/or suicidal behaviour

388 **Notes:** For RSAs where people reported self-harm/suicidal behaviour

389 More than one mental health condition can be reported in one RSA

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390 **Table 2b: Mental health comorbidities (1 Feb 2021-30 Jun 2024)**

RSAs where people reported SHSB (total =3610) RSAs with reported mental health condition	**N**	**%**
Depression	2750	76.2
Had depression symptoms in the month before prison entry	*2136*	*77.7*
Anxiety	2499	69.2
Had anxiety symptoms in the month before prison entry	*2025*	*81.0*
Schizophrenia	1171	32.4
Had schizophrenia symptoms in the month before prison entry	*828*	*70.1*

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Bipolar disorder	824	22.8
Had bipolar disorder symptoms in the month before prison entry	*606*	*73.5*
Substance Induced Psychosis	629	17.4
Had drug Substance Induced Psychosis symptoms in the month before prison entry	*223*	*35.5*
Other	1483	41.1
Had other mental health condition symptoms in the month before prison entry	*1006*	*67.8*
No mental health condition	264	7.3
RSAs with reported treatment for a mental health problem		
Medication	2132	59.1
Therapy or Counselling	813	22.5
Seen by a psychiatrist	1278	35.4
Seen by community mental health team	518	14.4
Been under a Community Treatment Order	183	5.1
Admitted to hospital for a mental health problem	1098	30.4

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391 SHSB: Self-harm and/or suicidal behaviour
392 **Notes:** For RSAs where people reported SHSB
393 More than one mental health condition can be reported in one RSA
394 More than one mental health treatment can be reported in one RSA
395
396 As part of the reception screening assessment and if indicated based on the
397 results of their mental health and self-harm/suicide risk assessment, people may
398 be placed under RIT management (commonly known in the custodial setting and
399 hereafter referred to as (on RIT)), referred to a mental health nurse, or both. Of
400 RSAs where people reported SHSB, 30.03% were placed on RIT. Where data on
401 referrals to a mental health nurse is available (from 2021 onwards), records
402 show that 88.5% were referred to a mental health nurse and 35.4% were placed

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403 on RIT and referred to a mental health nurse. These proportions were 4.1%,
404 56.1% and 4.4%, respectively, for RSAs where people did not report SHSB.

405 Mental health appointments within four weeks after reception

406 Of the reception episodes included in this study, 40.9% (n=17,242) were
407 episodes where people had at least one mental health appointment booked
408 within four weeks of reception. Of episodes where people reported SHSB, more
409 than half (63.9%) had at least one mental health appointment within four weeks
410 of reception. In comparison, 32.4% of reception episodes where people did not
411 report SHSB were followed by a mental health appointment booking within four
412 weeks.

413 In total there were 60,834 mental health appointments booked within four weeks
414 after reception, representing 10.5% of all booked medical appointments in PAS
415 within four weeks for Aboriginal people who entered NSW public prisons during
416 the study period. Seventeen percent (16.7%) of all appointments for Aboriginal
417 people with a SHSB history were mental health appointments: for people who did
418 not report SHSB, 7.3% of all appointments were for mental health appointments.

419 Table 3 presents the results of the multivariable logistic regression. It shows that
420 people who reported SHSB were 37% more likely to have mental health
421 appointments booked within four weeks of the reception date compared to
422 people who did not report SHSB (AOR 1.37, 95% CI 1.34 – 1.40) (Table 3). Sub-
423 analysis to compare booked mental health appointments within four weeks of
424 reception for people who reported self-harm and/or suicide attempts within four
425 weeks prior to prison entry compared to those who report SHSB but with no
426 attempts within four weeks prior to prison entry did not show a significant
427 difference (AOR 1.01, 95% CI 0.98 – 1.04).

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428 **Table 3: Multivariable logistic regression analysis of booked mental**
429 **health appointments within 4 weeks**

Reported SHSB at reception	Mental health appointments		Univariable analysis		Multivariable analysis	
	N	**%**	**Unadjusted OR**	**95% CI**	**AOR [a]**	**95% CI**
Yes	27,610	16.71	2.54	2.50 - 2.59	1.37	1.34 - 1.40
No	28,914	7.32	**Reference group**			

430 a) Adjusted for sex, age groups, reported mental health conditions (depression, anxiety,
431 schizophrenia, bipolar disorder, drug-induced psychosis, post-traumatic stress disorder,
432 oppositional defiant disorder, and attention deficit hyperactivity disorder), Mandatory
433 Notification Form (MNF)-RIT at reception
434 AOR: Adjusted odds ratio, SHSB: Self-harm and/or suicidal behaviour
435

436 More than half (51.2%) of mental health appointments booked within four weeks
437 for people who reported self-harm and/or suicidality at reception were RIT
438 appointments. These appointments include new RIT appointments, RIT reviews,
439 and RIT termination (meaning patients are discharged from this close monitoring
440 process). Mental health reviews and mental health new assessments represented
441 26.0% and 9.2% of all booked mental health appointments within four weeks,
442 respectively.

443 The majority (86.2%) of mental health appointments were attended, 7.3% were
444 not attended, and only 4.2% were cancelled. Of the 1172 cancelled
445 appointments, 19.7% were cancelled because the patient was released from
446 custody and 16.0% because the patient was transferred to another correctional
447 centre at the time of the appointment. Thirty-nine appointments (3.3%) were
448 cancelled by a health professional and 38 (3.2%) were cancelled by CSNSW.

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449 Data for delivery mode is available from 2018: face-to-face appointments
450 represented 80.1% of the attended mental health appointments and 6.4% were
451 audio or audiovisual appointments. The majority (91.7%) of the mental health
452 intake appointments were face-to-face. For mental health new assessment
453 appointments, 69.9% were face-to-face and 15.0% were audiovisual. Among
454 mental health appointments completed by primary health professional, 74.2%
455 were face-to-face appointments, 6.7% were audiovisual, and 18.5% were without
456 a client.

457 Of all appointments booked for people who reported SHSB within four weeks of
458 reception, mental health-related or otherwise, the majority (92.2%) were with
459 nurses (Table 4). A small number of appointments were with medical
460 professionals (7314, 4.4%), 2440 (1.5%) appointments were with psychiatrists
461 and psychologists, and only 447 appointments (0.3%) were with an Aboriginal
462 Health Worker.

463 **Table 4: Type of professional carer seen for appointments within 4**
464 **weeks of reception**

Professional carer type	Number	Percent
Aboriginal Community Health Worker	426	0.3
Aboriginal Health Practitioner	21	0.0
Addiction Medicine Specialist	1220	0.7
Community Worker	867	0.5
Psychiatrist	2365	1.4
Psychologist[a]	75	0.0
Nurse[b]	152,368	92.2
Other Allied Health Specialist[c]	678	0.4
General Practitioner	4638	2.8

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Healthcare Practitioner	6	0.0
Infectious Disease Specialist	44	0.0
Medical Practitioner	1406	0.9
Midwife	170	0.1
Specialist Physician	809	0.5
Social Worker	10	0.0
Non-clinical service provider	39	0.0
Not stated	99	0.1
Total	**165,238**	**100.0**

465 a) CSNSW Psychologists
466 b) Includes Enrolled nurse, Nurse practitioner, Registered Nurse
467 c) Includes Diagnostic Radiography, Dietitian, Diversional Therapist, Occupational Therapist,
468 Optometrist, Physiotherapist, Podiatrist, Speech Pathologist, and other Allied Health
469 specialist
470 **Note**: Appointments for people who reported SHSB
471
472 Table 5 shows the number of active (i.e., alert started within a previous RSA
473 episode and still active) or new self-harm/suicide alerts and the number of RIT
474 alerts started during the RSA episodes. Of the 42,161 RSAs included in the study,
475 there were 3255 (7.7%) RSAs with at least one active or new self-harm/suicide
476 alert, and 4775 (11.3%) RSAs where at least one new RIT alert was started. Of
477 the episodes with active or new self-harm/suicide alerts, 55.1% were episodes in
478 which people reported SHSB. Forty-one percent of the self-harm/suicide alerts
479 and 42.1% of RIT alerts were for people who did not report SHSB at reception. Of
480 the active or new self-harm/suicide alerts (n=1794) and new RIT alerts (n=2513)
481 from RSAs where people reported SHSB, at least one quarter (25.5% and 35.2%,
482 respectively) were for episodes where attempts within one month prior to
483 reception were reported (Table 5).

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484 **Table 5: PAS self-harm/suicide and RIT alerts**

Reported SHSB at reception	At least one active or new self-harm/suicide alert		At least one new RIT alert		Both	
	N	%	N	%	N	%
Yes	1794	55.1	2513	52.6	694	63.3
Attempts within one month prior to prison reception	*458*	*25.5*	*884*	*35.2*	*265*	*38.2*
No	1333	41.0	2008	42.1	345	31.5
Not stated	128	3.9	254	5.3	57	5.2
All	**3255**	**100.0**	**4775**	**100**	**1096**	**100.0**

485 **Note:** based on number of RSAs
486 PAS: Patient Administration System, RIT: Risk Integration Team, SHSB: Self-harm and/or suicidal
487 behaviour
488

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489 During the study period, there were 5446 new RIT and 30,607 RIT review
490 appointments. The number of new RIT or RIT review appointments within four
491 weeks after reception are presented in Table 6. In total, there were 21,753 new
492 RIT and RIT review appointments where the date of appointments is at or within
493 four weeks of the reception date. Of these, 59.0% (n = 12,839) were following
494 RSAs where people reported SHSB. Over a third (33.8%) were following RSAs
495 where people did not report SHSB (Table 6). For episodes with at least one new
496 RIT appointment, the median days from reception to the first new RIT was three
497 days (IQR = 1) for RSAs where people reported SHSB and five (IQR =5) days for
498 RSAs where people did not report SHSB ($P < 0.001$). The median number of RIT
499 review appointments within four weeks of reception was two appointments for

both RSAs where people reported SHSB and those where people did not report SHSB.

Table 6: RIT appointments within 4 weeks after reception[a]

Reported SHSB at reception	New RIT appointments		RIT review appointments		All RIT appointments	
	N	%	N	%	N	%
Yes	1946	54.3	10,893	60.0	12,839	59.0
Attempts within one month prior to prison reception	751	38.6	4682	43.0	5433	42.3
No	1423	39.7	5924	32.6	7347	33.8
Not stated	214	6.0	1353	7.4	1567	7.2
All	3583	100.0	18,170	100.0	21,753	100.0

a) Excludes appointments for RIT termination

RIT: Risk Integration Team, SHSB: Self-harm and/or suicidal behaviour

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Unplanned transfer to an external hospital

Unplanned transfers to an external hospital are presented in Table 7. For the period from October 2020 to September 2024, there were 3247 unplanned transfers to an external hospital. Of these, 452 (13.9%) were patients transferred following incidents of self-harm or suspected suicide attempts. A quarter (24.8%) of the transfers for self-harm or suspected suicide attempts resulted in the patient being admitted. Of these admissions, 58.0% were admitted for less than 24 hours and 30.4% were admitted for one day. Of the transfers for incidents of

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514 self-harm or suspected suicide attempts, 67.3% were people who had reported
515 SHSB at reception and 28.1% were during episodes where people did not report
516 a history SHSB ($p < 0.001$) (Table 7).

517 **Table 7: Unplanned transfer to an external hospital**

All unplanned hospital transfers	**N=3247**	**%**
Unplanned hospital transfers for self-harm or suspected suicide attempt	**452**	13.9
Admitted	112	24.8
Non-admitted	300	66.4
Not stated	40	8.8
Length of stay[a]		
Median stay	< 24 hours	
< 24 hours	65	58.0
1 day	34	30.4
2 – 4 days	7	6.3
5 or more days	6	5.4
Reported SHSB at reception		
Yes	304	67.3
No	127	28.1
Not stated	21	4.7

518 a) Admitted only
519 SHSB: Self-harm and/or suicidal behaviour
520 Note: Data available from October 2020

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521

522 There were 91 (20.1%) unplanned hospital transfers due to self-harm or
523 suspected suicide attempts that occurred within four weeks of receptions. Of
524 these transfers, 65 (71.4%) occurred among people who reported SHSB at
525 reception and almost a quarter (23.1%, n=21) involved people who did not
526 report SHSB at reception. This difference in the proportions of the unplanned
527 hospital transfers within four weeks of receptions was not statically different
528 ($p=0.251$).

529 Of the 65 unplanned hospital transfers for people who reported past SHSB at
530 reception 38 were for people who had self-harmed or attempted suicide four
531 weeks prior to prison entry, representing 41.8% of all hospital transfers within
532 four weeks of reception and 58.5% of those transferred to hospital who had
533 reported past self-harm/ suicidality and had their last attempt four weeks prior to
534 prison entry.

535 There were 114 unplanned hospital transfers due to self-harm or suicide
536 attempts occurring at or within seven days of a new RIT or RIT review
537 appointments. Of these, 73 (64%) transfers occurred on the same day of the RIT
538 appointment, with 78.1% of these transfers occurring during an RSA episode
539 where people reported SHSB.

540 Discussion

541 Key results

542 Results from our study show that people reported SHSB in 24.3% of the RSAs,
543 with over one third (37.7%) of Aboriginal people entering custody reporting SHSB
544 on at least one reception occasion. At reception, depression and anxiety were
545 the most reported mental health conditions among people who disclosed a
546 history of self-harm or suicidal behaviours. Of RSAs where people reported past

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547 SHSB, 30.0% were placed on RIT, suggesting the risk of self-harm or suicidal
548 behaviour wasn't regarded as current. People who reported SHSB were 37%
549 more likely to have a mental health appointment booked within four weeks of
550 their reception date, compared to people who did not report self-harm or suicidal
551 behaviour, which is consistent with increased rates of self-harm/suicide among
552 those with unmet mental health needs. Of all appointments (i.e., all appointment
553 types) booked within four weeks of reception for people who reported self-harm
554 or suicidal behaviour, only 1.5% and 0.3% were with psychiatrists and an
555 Aboriginal Health Worker, respectively.

556 There were 21,753 new RIT and RIT review appointments where the appointment
557 date was on or within four weeks of the reception date. Of these, 59.0% were
558 following RSAs where people reported SHSB. There were 452 unplanned
559 transfers to an external hospital due to self-harm or suspected suicide attempts.
560 Of these hospital transfers, 91 (20.1%) occurred within four weeks of reception. A
561 high proportion of these transferees (71.4%) had reported past self-harm and/or
562 suicide attempts; among whom 38 (58.5%) reported self-harm or suicide
563 attempts four weeks prior to prison entry. As in previous research, these findings
564 highlight the first four weeks of incarceration as a period of increased risk,
565 especially among those who have reported past self-harm or suicidality (5, 39).

566 **Reported history of self-harm and/or suicidal behaviour**

567 The proportion of our study population that reported a history of SHSB (37.7%) is
568 comparable with the proportion reporting past suicide and/or self-harm attempts
569 (38.7%) in a study conducted in NSW prisons by Browne et al. (40). However, the
570 rate of reported self-harm among our study population was higher than the rate
571 among First Nations prison entrants reported in the Australian Institute of Health
572 and Welfare (AIHW) 2022 report on the health of people in Australia's prisons

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573 (22.1% vs 15%) (15). The self-harm and suicide attempts among our study
574 population were higher than those published by Marr et al (2025) (22.1% vs
575 19.8% and 26.9% vs 16.0%) (41). Our study result is also higher than the history
576 of self-harm published by Borrschmann et al. in a study conducted in Queensland
577 prisons (42). Self-report of SHSB on its own has been found to be of low
578 sensitivity in indicating prior and predicting future SHSB (40, 42). Borrschmann
579 et al. conducted a sensitivity analysis to assess the consistency between people
580 in prison's self-reported history of self-harm and their retrospective health
581 records and found that only 38% of participants with at least one medically
582 verified self-harm event disclosed a history of self-harm (42). Our study results
583 show that, among our population, 2152 people have reported ever attempting
584 self-harm and/or suicide in one RSA and did not disclose this information in a
585 later RSA. This result adds further evidence that reporting for SHSB at prison
586 reception is not reliable.

587 People in prison may be reluctant to report a history of SHSB due to several
588 factors, which may include fear of the stigma associated with reporting self-harm
589 or suicidality, especially among an Aboriginal population, which also contributes
590 to hesitancy to seek health care (42-46). Additionally, people at reception are
591 highly distressed and can be intoxicated or in withdrawal which can affect their
592 ability to report histories of SHSB.

593 Another factor is the fear of being placed under RIT management, which can
594 result in conditions analogous to segregation, special cell placement, intense
595 monitoring, and the perception that disclosing self-harm may negatively affect
596 their incarceration or delay their release (40, 42). This particularly affects people
597 who have previously been in prison and know the effect of reporting SHSB.

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598 Our results show that people who report a history of SHSB are more likely to
599 have mental health appointments scheduled, indicating that those with
600 unreported SHSB are less likely to receive timely mental health evaluation and
601 treatment—ultimately contributing to unmet mental health needs within this
602 population. However, it is important to note that 71% those who were transferred
603 to hospital following self-harm or suspected suicide attempts within four weeks
604 of incarceration, had self-reported previously engaging in these behaviours at
605 reception. Therefore, where Aboriginal people do self-report these behaviours at
606 reception, safeguards ought to be more readily arranged within the first month of
607 imprisonment.

608 In NSW prisons, self-reported SHSB is currently the primary means of identifying
609 individuals at risk of self-harm or suicide. This reliance on self-reporting is largely
610 due to two key system limitations: health records for people in custody are not
611 linked to their community hospital or emergency department records, and each
612 Australian state and territory operates its own prison system without health data
613 sharing between jurisdictions (47). These disconnected systems prevent access
614 to potentially critical health information that could support more accurate risk
615 assessments.

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616 In March 2026, NSW Health will begin implementing the Single Digital Patient
617 Record (SDPR) system. By the end of 2028, the SDPR is expected to integrate
618 electronic patient records across all local health districts and specialty networks
619 in the state (48). This will enable Justice Health NSW staff to access community
620 health records, potentially improving the identification of individuals who have
621 presented to hospitals or emergency departments for self-harm or suspected
622 suicide attempts. **Mental health morbidities**

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623 Aboriginal people in contact with the justice system often have intricate health
624 and social care needs. They are affected by multiple traumatic life events such
625 as social exclusion, discrimination, death of family or friends – including by
626 suicide - and physical and sexual assaults (22, 49). Added to such trauma are
627 stressors related to the prison environment such as solitary confinement,
628 victimisation and lack of social support (13, 16). These stressors are associated
629 with psychological distress, mental health issues, loneliness and suicidality (49-
630 51). Among the study population who entered prison between January 2015 to
631 January 2021 and reported a history of SHSB, over three quarters (78.1%) had
632 prior treatment for a mental health condition. Of those, more than half (55.4%)
633 reported a history of depression. Of those who entered prisons between February
634 2021 and June 2024, 76.2% reported having had depression and 77.7% of those
635 had experienced depressive symptoms within the month prior to prison entry.
636 The second most prevalent mental health condition among those studied who
637 reported a history of SHSB was anxiety disorder, followed by schizophrenia and
638 bipolar affective disorder. It is important to note; however, that people can report
639 more than one mental health condition in one RSA. Of the RSAs of people who
640 entered prisons between February 2021 and June 2024 and reported SHSB,
641 79.1% reported multiple mental health conditions. The rate of mental health
642 (co)morbidity among those who reported SHSB is indicative of a compounding
643 risk of suicide. A study conducted by Horváthné Pato et al. (2024) revealed that
644 among people in prison, depression accounts for 31% of the variance in suicidal
645 ideation (11). Additionally, Horváthné Pato et al. showed that the combination of
646 depression and a history of SHSB was associated with an even greater increase
647 in this risk, indicating a need for urgent tailored intervention (11). Mental health
648 disorders characterised by agitation and anxiety, and poor impulse-control, have
649 been associated with a progression from suicidal ideation to suicide attempts (9,

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650 52), perhaps demonstrating that risk of suicide can increase when multiple
651 factors associated with this behaviour (including co-morbid mental health
652 conditions) are present. The combination of these risk factors has also been
653 shown to be associated with an increased likelihood of suicide attempts after
654 release from prison, where necessary supports and controls may not be available
655 (11). Rates of suicide on release from prison have been found to be even higher
656 than in-custody, with the first four to 12 weeks post release being an especially
657 vulnerable time (53).

658 **Care for people with a history of self-harm and/or suicidal behaviour in**
659 **NSW public prisons**

660 Risk assessment and management planning for people at risk of self-
661 harm/suicide in NSW public prisons is based on a complete clinical picture
662 including history, risk and protective factors. At Justice Health NSW when an
663 Aboriginal person is assessed as at risk of self-harm/suicide, they are referred to
664 safety planning supports alongside Justice Health NSW Aboriginal Service
665 provider, wherever possible. In addition, all non-Aboriginal Justice Health NSW
666 staff are responsible for maintaining Aboriginal cultural awareness by completing
667 the organisation's mandatory training.

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668 Management of people who are identified as at risk of suicide or self-harm relies
669 on a collaboration between Justice Health NSW and CSNSW (54). If a person is
670 identified as at risk of self-harm or suicide, they may be referred to the review of
671 a RIT. The RIT consists of two CSNSW members (Custodial Officer- RIT
672 Coordinator and Offender Services and Programs staff) and one Justice Health
673 NSW staff (Registered Nurse – Primary Health or Mental Health Nurse). When a
674 RIT convenes, it is responsible for ongoing review of risk and risk management
675 by way of a reductive approach, by limiting access to means of suicide and/or

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676 self-harm. While subject to review by a RIT, individuals may also be referred for
677 clinical assessment or treatment as needed. RIT may also refer individuals to
678 support services when discharged from the safety conditions imposed by the RIT
679 (54). For the study population, more than half (59%) of new RIT and RIT review
680 appointments were booked within four weeks of the reception date for people
681 who self-reported a history of SHSB. For those people the median days to the
682 first new RIT appointment was three days.

683 Although RIT management aims to minimise suicide risk by restricting people's
684 access to means of suicide, previous literature shows that conditions of isolation,
685 which may be experienced similarly to solitary confinement, increases risk of
686 suicide (39, 55). Our study found that 25% of unplanned hospital transfers for
687 self-harm or suspected suicide attempts occurred at or within 7 days of new RIT
688 or RIT review appointments. This suggests that an at-risk population has been
689 identified for RIT review and placement, however, the reductive approach of RIT
690 may not be sufficiently therapeutic because a quarter of people are engaging in
691 this behaviour despite the intention of RIT placement is to manage the risk of
692 self-harm and suicide. Additionally, RIT is not a health intervention and is not
693 intended to address people's underlying risk factors for self-harm/suicide. Justice
694 Health NSW is currently piloting a new model of care where people at risk of self-
695 harm/suicide have access to health-led risk assessment and planning through
696 the Suicide Prevention Outreach Team (SPOT). SPOT is a multidisciplinary service
697 that supports people who are at-risk of suicide. This service is implemented in
698 Justice Health NSW as part of the NSW Health Towards Zero Suicides program
699 (56, 57).

700 **Risk reduction**

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701 The prison setting offers a unique environment to provide a holistic health care
702 to people who have complex health needs and may not have the opportunity to
703 receive health care in the community (58). However, non-urgent health care in
704 prison is secondary to security and control (59). People can only be seen for a
705 short period of time during the day, and the movement of people between
706 correctional centres, and in and out of prison, affects health care planning and
707 intervention (59, 60). Moreover, the traumatic nature of the correctional system
708 adds significant barriers to the provision of culturally safe health care. The prison
709 environment, characterised by surveillance, restriction, and loss of autonomy can
710 not only induce trauma but also exacerbate existing trauma, which is highly
711 prevalent among incarcerated populations (60).

712 Previously published literature on suicide risk reduction among Aboriginal people
713 highlights the importance of trauma-informed, Aboriginal-led interventions and
714 programs, and care provided by Aboriginal health workers in reducing the risk of
715 suicide and improving the mental health of Aboriginal people in prison and the
716 community (35, 61-64). Trauma-informed care acknowledges that individuals'
717 maladaptive behaviours are expressions of distress and trauma, making it crucial
718 to avoid causing further trauma or reactivating past traumatic experiences (64).
719 Additionally, engaging Aboriginal people in programs and healthcare ensures
720 that interventions are designed and delivered by those who understand the
721 needs and strengths of the Aboriginal community (64). Our results show only
722 0.3% of all appointments within four weeks of reception for people who reported
723 a history of self-harm/suicidal behaviour were for an Aboriginal Health Worker. As
724 of April 2024, Justice Health NSW, has only 7 Aboriginal health workers/clinicians
725 representing 0.3% of Justice Health NSW staff in stark contrast to the 32.3% of
726 Aboriginal people among NSW prison population. The low proportion of
727 appointments for an Aboriginal Health Worker highlights a critical gap in

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728 culturally appropriate care. Aboriginal Health Workers play a vital role in
729 delivering holistic, trauma-informed support that aligns with Aboriginal concepts
730 of social and emotional wellbeing (65).

731 Additionally, the immediate period when people enter prison is crucial in
732 reducing suicide risk. Previous literature shows that the immediate period of
733 prison entry is a distressing time and associated with an increased risk of suicide
734 (39, 66, 67) . The current study results show that one in five unplanned hospital
735 transfers due to self-harm or suspected suicide attempts occurred at or within
736 four weeks of prison reception. This highlights the importance of suicide risk
737 assessments being booked within four weeks of reception for people who report
738 SHSB.

739 The Living Is For Everyone (LIFE) Framework highlights the significance of early
740 intervention when people are distressed and show signs and symptoms of
741 suicidal risk (68). *The health of people in Australia's prisons 2022* report by AIHW
742 shows that one third of Aboriginal prison entrants were at high or very high
743 levels of distress at reception (69).

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744 However, it is important to note that while the immediate period after prison
745 entry is crucial for identifying and intervening to prevent self-harm/suicide,
746 ongoing risk assessment throughout the incarceration period, especially around
747 the time of significant court dates including sentencing, are similarly indicated
748 (12, 39).

749 Strength and limitations

750 This is the first study that explores health care provided in NSW public prisons for
751 Aboriginal people who reported SHSB at reception. While previous studies
752 conducted in Australian prisons investigated self-report of SHSB at reception and
753 subsequent incidents of SHSB, our study results added information on utilisation

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754 of services to reduce the risk of incidents of SHSB such as mental health
755 appointments and admission to RIT. In this study we utilised real-world data
756 extracted from Justice Health NSW electronic data systems. The use of PAS data
757 provides information based on health care activities recorded by health
758 professionals which provide more accurate information than self-reported data
759 used in other studies.

760 One limitation of this study is that we are unable to determine the timing of an
761 individual's release from prison from the health data alone, which may
762 underestimate the number of events such as mental health appointments;
763 however, focusing on the first four weeks following reception may reduce this
764 bias. Another limitation is the lack of the unplanned transfer to an external
765 hospital data prior to October 2020, which is likely to underestimate the number
766 of hospital transfers that occurred for our population during the study period.

767 Conclusion and future directions

768 Self-reporting a history of self-harm/suicide at prison reception has only modest
769 reliability for indicating subsequent suicide/self-harm risk whilst in prison, as
770 highlighted by the 23.1% of unplanned hospital transfers following a self-harm
771 episode where the patient did not have a reported history of self-harm/suicide. A
772 higher proportion of people who disclosed a history of self-harm or suicide
773 attempts had mental health appointments organised for them, were referred to a
774 mental health nurse and/or placed on RIT compared to those who did not,
775 underscoring the importance of suicide/self-harm risk assessment both at
776 reception and while a person is in custody. Better identification of people with
777 self-harm/suicide behaviour, early intervention, creating a safe environment and
778 providing multifaceted and culturally informed health care may contribute to
779 reduce the risk of self-harm and suicide among people in prison.

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780 Whilst our study is based on a quantitative data analysis which allowed us to
781 investigate patterns service utilisation of people with a history of self-harm and
782 suicide among Aboriginal people in custody, further research is needed to reflect
783 the deeper impacts of colonisation, cultural disconnection, and trauma. A more
784 holistic, Aboriginal-led approach—grounded in community engagement and
785 centred on cultural healing and lived experience—is essential for meaningful
786 understanding of the health care needs of Aboriginal people in prison.
787
788 **List of abbreviations**

CSNSW	Corrective Services NSW
JHeHS	Justice Health electronic Health System
Justice Health NSW	Justice Health and Forensic Mental Health Network
NSW	New South Wales
PAS	Patient Administration System
RIT	Risk Integration Team
RSA	Reception Screening Assessment
SHSB	Self-harm and/or suicidal behaviour

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789
790
791 ## Declarations
792
793 **Ethics approval and consent to participate**
794 This study is part of the People in NSW Public Prisons: Heath Status and Service
795 Utilisation project. Ethics approval and waiver of consent for the project was
796 granted from Justice Health and Forensic Mental Health Network Human
797 Research Ethics Committee (Reference number: 2020/ETH01927) and the

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798 Aboriginal Health and Medical Research Council Human Research Ethics
799 Committee (Reference number: 1719/20).

800 **Consent for publication**

801 Not applicable

802 **Availability of data and materials**

803 Datasets utilised for the analysis of this study is not for sharing as ethical
804 approvals for this project require that the data used in this analysis not be
805 shared to protect privacy and confidentiality.

806 **Competing interests**

807 The following authors (RZ, SK, JB, GC, RS, GN, VN, AE and WH) are employed by
808 Justice Health NSW.

809 All authors declared no competing interest.

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812 **Authors' contributions**

813 RZ contributed to the conception and design of the study, data acquisition, analysis,
814 and drafting of the manuscript.

815 SK and JB contributed to the study's conception, design, interpretation of results, and
816 development and review of the manuscript.

817 GC and RS provided cultural guidance and contributed to the interpretation of the
818 results.

819 MH, VN, and AE provided subject matter expertise, including clinical input and critical
820 review of the manuscript.

821 GN and WH contributed to the interpretation of the results and manuscript review.

822

823 All co-authors have reviewed the final manuscript and approved it for submission
824 and have agreed to be personally accountable for their own contributions, as well as

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825 to ensure that any questions related to the accuracy or integrity of any part of the
826 work—even those in which they were not personally involved—are appropriately
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829

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836

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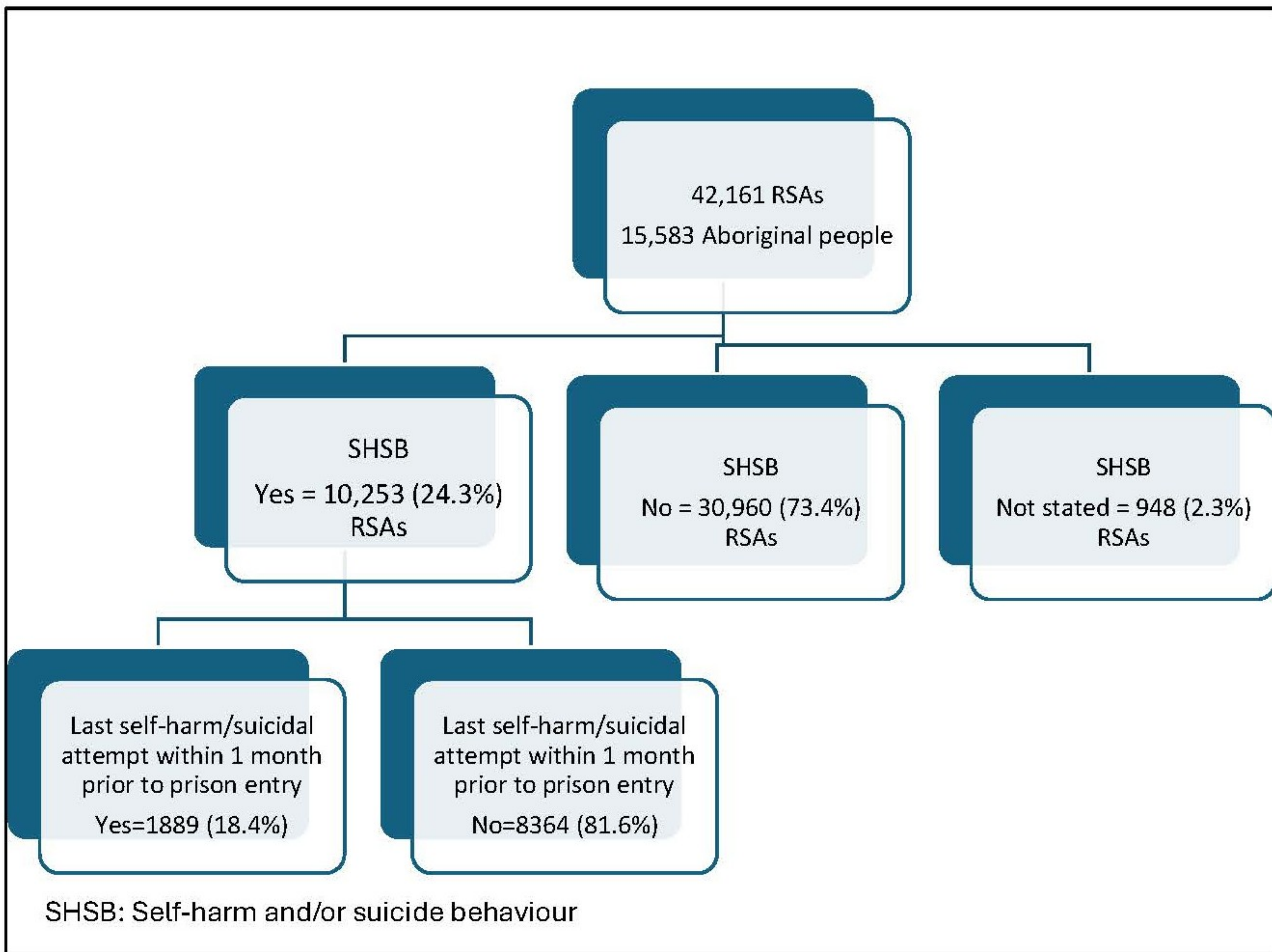

42,161 RSAs
15,583 Aboriginal people
SHSB
Yes = 10,253 (24.3%)
RSAs
SHSB
No = 30,960 (73.4%)
RSAs
SHSB
Not stated = 948 (2.3%)
RSAs
Last self-harm/suicidal attempt within 1 month prior to prison entry
Yes=1889 (18.4%)
Last self-harm/suicidal attempt within 1 month prior to prison entry
No=8364 (81.6%)
SHSB: Self-harm and/or suicide behaviour