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Contact with mental health services after medically verified self-harm: A prospective data linkage study

SUPPLEMENTARY MATERIAL

METHODS

Ascertaining self-harm from clinical notes

A trained graduate researcher, who was blinded to self-harm status, screened all free-text clinical notes made in ambulance and emergency department (ED) records using criteria adapted from a large epidemiological study of self-harm.²⁷ Prior to coding all free-text records, a 10% subset of ambulance and ED records was coded independently by a clinical psychologist (author RB) and inter-rater reliability was established as excellent ($\text{Kappa}=0.97$ and 0.96 for ambulance and ED records, respectively). The remaining records were coded by the graduate researcher only.

Multiple Imputation

Monte Carlo error estimates were observed to be less than 10% of the standard error of the estimated coefficients which indicated that the number of imputations was sufficient to obtain stable multiple imputation results.¹ Data were imputed for 1 participant (<1%) and the only covariate imputed was history of juvenile detention.

Sensitivity analyses

To examine whether our results were impacted by the disproportionate sampling of incarcerated women, we calculated inverse probability weights to adjust our final model without imputed values for this potential source of bias.² We restricted our outcome to mental health service contact after discharge, excluding mental healthcare contact during acute care, to assess if the predictors of mental healthcare contact differed due to the inclusion of in-reach in acute settings. To observe if our results were influenced by accessing mental healthcare through federally-subsidised primary care, we conducted analyses where we aggregated mental healthcare contact through primary care into

our primary outcome. To determine if our results were sensitive to the timing of our outcome, we examined mental healthcare contact within 48 hours and 30 days after acute care for self-harm. We investigated the possibility that return to custody may be a competing event for accessing mental healthcare in the community and conducted analyses where we excluded discharge events where the individual was reincarcerated within 7 days after acute care for self-harm. Similarly, we investigated the possibility that having a subsequent acute care episode following self-harm within 7 days of discharge would preclude accessing community mental healthcare during that time period. Finally, to determine the effect of a more conservative ascertainment of self-harm, we restricted our ascertainment of self-harm to ED and/or hospital admissions with an ICD-10-AM code for self-harm (X60-X84).

SUPPLEMENTARY TABLES

Table S1: Description of, and measures derived from, linked administrative data

Data source	Description of data capture for this study	Measures derived
Queensland Ambulance Service (QAS)	All ambulance attendances in Queensland, Australia between 1 st January, 2007 and 31 st December, 2013.	Time arrived at scene Time arrived at destination Location of the attendance If the individual was transported or treated by QAS Police co-attendance Initial Glasgow Coma Scale ³ rating Final Glasgow Coma Scale rating Administration of naloxone Case nature from the final assessment by the attending paramedic
Emergency Department Information System	All emergency departments in public hospitals Queensland, Australia between 1 st June, 2002 to 31 st July, 2012. Emergency departments in public hospitals accounted for 91.4% of all emergency department presentations during the study period. ^{4,5}	Time and date of arrival to the ED Time and date of discharge from the ED International Classification of Diseases, 10 th edition, Australian Modification (ICD-10-AM) ²⁶ diagnosis codes for the principal discharge diagnosis Mode of referral to the ED Triage category Discharge status Referral or discharge to a mental health service
Queensland Hospital Admitted Patient Data Collection	All inpatient admissions in public hospitals, licenced private hospitals, day surgery units, specialist public psychiatric hospitals, and specialist private psychiatric hospitals in Queensland, Australia between 1 st July, 1999 to 31 st July, 2012. This dataset excludes non-admitted patient contacts (i.e., outpatient contacts and emergency presentations). (see: https://www.health.qld.gov.au/data/assets/pdf_file/0033/388095/11_12_qhapdc_final.pdf)	Date of hospital admission Date of discharge from hospital ICD-10-AM code for principal diagnosis ICD-10-AM codes for secondary diagnoses (range 1-20) Mode of discharge Number of hospital bed days for each admission Number of bed days classified as psychiatric for each admission

Consumer Integrated Mental Health Application	All community mental health care contacts in Queensland, Australia between the date the participant was released from their index prison sentence and 31 st July, 2012. This captures all all ambulatory mental health care service units that are administered or funded by the Queensland Government and deliver clinical care, which include adult and forensic community mental health units. This dataset excludes non-specialised mental health care services, services provided by non-government organisations, and patients admitted to psychiatric hospitals, psychiatric units in acute care hospitals, or residential mental health services. (see http://meteor.aihw.gov.au/content/index.phtml/itemId/565694)	Start time and date of service contact Mode of contact ICD-10-AM code for principal diagnosis
Medicare Benefits Schedule (MBS)	All federally-subsidised primary care, enhanced primary care, allied health, and specialist mental health attendances in primary care beginning at the date the participant was released from their index prison sentence and ending at two years after the index prison release date.	Date of service contact MBS item code which indicates the type of primary care service subsidized (see Table S2 for a detailed description).
Queensland Corrective Services (QCS)	All correctional records in Queensland, Australia for each participant from their index prison admission date to 31 st December, 2013.	Date of prison admission Date of release from prison Parole status on release Identifier for being previously identified by QCS as at risk of self-harm Identifier of a prior adult prison sentence record Most serious offence
National Death Index	Person-level records of all deaths occurring in Australia between index the date the participant was released from their index prison sentence to 30 th June, 2013.	Date of death

Table S2: Subsidised mental health-related consultation item codes in primary care

Type of MBS Consultation	MBS item codes ^a
In-person psychiatrist	289; 291; 293; 296; 297; 299; 300; 302; 304; 306; 308; 310; 312; 314; 316; 318; 319; 320; 322; 324; 326; 328; 330; 332; 334; 336; 338; 364; 366; 367; 369; 370
In-person clinical psychologist	80000; 80005; 80010; 80015; 80020
In-person psychologist	80100; 80105; 80110; 80115; 80120
In-person psychologist contact for Indigenous Australians	81355
In-person GP mental health	2713; 2721; 2723; 2725; 2727
In-person allied professional mental health contact (occupational therapist)	80125; 80130; 80135; 80140; 80145; 80150
In-person allied professional mental health contact (social worker)	80155; 80160; 80165; 80170
In-person psychologist counselling during pregnancy	81000
In-person social worker counselling during pregnancy	81005
In-person mental health nurse counselling during pregnancy	81010
In-person mental health worker contact for Indigenous Australians	81325
In-person mental health assessment for complex needs	10956; 10968
Group psychotherapy (psychiatrist facilitated)	342; 344; 346
Group therapy (medical practitioner other than psychiatrist facilitated)	170; 171; 172
GP Mental Health Treatment Plan	2700; 2701; 2702; 2710; 2712; 2715; 2717; 2719

^aDetailed descriptions of each MBS item are available from:

<http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/Home>

MBS: Medicare Benefits Schedule; GP: General Practitioner

Table S3: Acute care contacts resulting from self-harm

Measure	Admission n(%)	Discharge n(%)
Ambulance attendances	N=86 (100.0%)	N=8 (100.0%)
Transported by QAS		
- Yes	80 (93.0%)	4 (44.4%)
- Transport not required	4 (4.7%)	3 (33.3%)
- Transport by other means	1 (1.2%)	1 (11.1%)
- Person dead on arrival	1 (1.2%)	-
Treated by QAS		
- Yes	79 (91.9%)	8 (100.0%)
- No	7 (8.1%)	0 (0.0%)
Location of QAS attendance		
- Private residence	59 (68.6%)	5 (62.5%)
- Public place	14 (16.3%)	1 (12.5%)
- Healthcare setting	8 (9.3%)	1 (12.5%)
- Criminal justice setting	5 (5.8%)	1 (12.5%)
Initial Glasgow Coma Scale (median(range))	15 (3-15) ^a	15 (15-15) ^c
Final Glasgow Coma Scale (median(range))	15 (3-15) ^{b,e}	15 (15-15) ^{d,f}
Naloxone administered	1 (1.2%)	0 (0.0%)
Police on scene	7 (8.1%)	1 (12.5%)
ED presentations	N=113 (100.0%)	N=155 (100.0%)
Referred to ED by		
- Self/Family/Friends	71 (62.8%)	108 (69.7%)
- Police	30 (26.6%)	33 (21.3%)
- Other hospital	6 (5.3%)	9 (5.8%)
- Community services	4 (3.5%)	4 (2.6%)
- Other healthcare services	2 (1.7%)	1 (0.7%)
Discharge status		
- Admitted/transferred to another health service	36 (31.9%)	53 (34.2%)
- Treatment completed – discharged	68 (60.2%)	84 (54.2%)
- Did not wait / left at own risk	9 (8.0%)	18 (11.6%)
Referred or discharged to mental health service		
- Yes	40 (35.4%)	43 (27.7%)
- No	73 (64.6%)	112 (72.3%)
Mental healthcare contact during ED presentation		
- Yes	31 (27.4%)	51 (32.9%)
- No	82 (72.6%)	104 (67.1%)
Mode of mental healthcare contact during ED presentation		
- In-person	30 (96.8%)	48 (94.1%)
- Telephone	1 (3.2%)	3 (5.9%)
	31 (100.0%)	51 (100.0%)
Triage category		
- Resuscitation (within 2 minutes)	1 (0.9%)	8 (5.2%)
- Emergent (within 10 minutes)	39 (34.5%)	53 (34.2%)
- Urgent (within 30 minutes)	60 (53.1%)	73 (47.1%)
- Semi-urgent (within 60 minutes)	12 (10.6%)	18 (11.6%)
- Non-urgent (within 120 minutes)	1 (0.9%)	3 (1.9%)
Length of ED stay		
- 0-4 hours	53 (46.9%)	64 (41.3%)
- > 4 hours	60 (53.1%)	91 (58.7%)
Time of day		
- 7:00 – 17:59	54 (47.8%)	71 (45.8%)
- 18:00 – 23:59	35 (30.1%)	51 (32.9%)
- 0:00 – 6:59	24 (21.2%)	33 (21.3%)

<i>Inpatient hospital admissions</i>	N=19 (100.0%)	N=54 (100.0%)
Mental healthcare contact during hospital stay		
- Yes ^g	2 (10.5%)	14 (25.9%)
- No	17 (89.5%)	40 (74.1%)
Mode of discharge		
- Home/usual residence	13 (68.4%)	39 (72.2%)
- Discharge at own risk	3 (15.8%)	5 (9.3%)
- Transfer to further care	1 (5.3%)	6 (11.1%)
- Custody	1 (5.3%)	2 (3.7%)
- Other	1 (5.3%)	2 (3.7%)
Number of hospital bed days (median(range))	1 (1-23)	1 (1-44)
Number of psychiatric bed days (n=13; median(range))	6 (6-6)	2 (1-15)

QAS: Queensland Ambulance Service; ED: emergency department; GCS: Glasgow Coma Scale

^an=79; ^bn=72; ^cn=7; ^dn=6

^eNo significant difference in GCS from initial to final assessment (Wilcoxon ranksum: $z = -0.422$; $p = 0.673$)

^fNo significant difference in GCS from initial to final assessment (Wilcoxon ranksum: $z = 0.000$; $p = 1.000$)

^gAll mental health evaluations during inpatient hospital admissions were conducted in-person.

Table S4: Acute and community mental healthcare contact in the 7 days preceding acute care for self-harm

Measure	Number (%)
Ambulance attendances	
N=29 (100.0%)	
Transported by QAS	
- Yes	26 (89.7%)
- No - refused	1 (3.5%)
- Transport not required	2 (6.9%)
Treated by QAS	
- Yes	27 (93.1%)
- No	2 (6.9%)
Case nature from QAS final assessment	
- Substance use related	6 (20.7%)
- Mental health and behavioural	5 (17.2%)
- Injury/trauma	8 (27.6%)
- General medical	7 (24.1%)
- Domestic problem	1 (3.5%)
- Unknown – treatment refused	2 (6.9%)
Location of QAS attendance	
- Private residence	18 (62.1%)
- Public place	7 (24.1%)
- Healthcare setting	2 (6.9%)
- Criminal justice setting	1 (3.5%)
- Other	1 (3.5%)
Initial Glasgow Coma Scale [n=28; 96.6% - median(range)]	15 (12-15)
Final Glasgow Coma Scale [n=25; 86.2% - median(range)]	15 (13-15) ^a
Naloxone administered	0 (0.0%)
Police on scene	1 (3.5%)
ED presentations	
N=40 (100.0%)	
Source of referral to ED	
- Self/Family/Friends	30 (75.0%)
- Police	7 (17.5%)
- Other hospital	2 (5.0%)
- Community services	1 (2.5%)
Discharge status	
- Admitted/transferred to another health service	10 (25.0%)
- Treatment completed – discharged	22 (55.0%)
- Did not wait / left at own risk	8 (20.0%)
Referred or discharged to mental health service	
- Yes	6 (15.0%)
- No	34 (85.0%)
Mental health evaluation during ED presentation	
- Yes ^b	12 (30.0%)
- No	28 (70.0%)
Principal diagnosis during ED presentation (n=39; 97.5%)	
- Mental illness (F00-09; F20-99)	12 (30.8%)
- Schizophrenia, schizotypal, and delusional disorders (F20-29)	5 (12.8%)
- Reaction to severe stress/adjustment disorders (F43.0-43.9)	3 (7.7%)
- Personality disorders (F60-69)	1 (2.6%)
- Unspecified mental disorder (F99)	3 (7.7%)
- Injuries (S00-T35.9)	5 (12.8%)
- Procedure not carried out, unspecified reasons (Z53.9)	5 (12.8%)
- Self-harm by unspecified means (X84)	4 (10.3%)
- Substance use disorder (F10-19)	3 (7.7%)
- Poisoning/toxic effects (T36-65)	3 (7.7%)
- Hypoglycaemia, unspecified (E16.2)	2 (5.1%)
- Other disorders of the teeth and supporting structures (K08.8)	1 (2.6%)
- Sciatica (M54.3)	1 (2.6%)
- Other chest pain (R07.3)	1 (2.6%)

- Examination and observation of other specified reasons - request for expert evidence (Z04.8)	1 (2.6%)
- Problem related to social environment, unspecified (Z60.9)	1 (2.6%)
Triage category	
- Resuscitation (within 2 minutes)	1 (2.5%)
- Emergent (within 10 minutes)	10 (25.0%)
- Urgent (within 30 minutes)	14 (35.0%)
- Semi-urgent (within 60 minutes)	10 (25.0%)
- Non-urgent (within 120 minutes)	5 (12.5%)
Length of ED stay	
- 0-4 hours	23 (57.5%)
- > 4 hours	17 (42.5%)
Time of day	
- 7:00 – 17:59	20 (50.0%)
- 18:00 – 23:59	13 (32.5%)
- 0:00 – 6:59	7 (17.5%)

Inpatient hospital admissions **N=13 (100.0%)**

Mental health evaluation during hospital stay	
- Yes ^c	5 (38.5%)
- No	8 (61.5%)

Principal diagnosis during inpatient hospital admission	
- Mental illness (F00-09; F20-99)	4 (30.8%)
- Schizophrenia, schizotypal, and delusional disorders (F20-29)	2 (15.4%)
- Mood (affective) disorders (F30-39)	1 (7.7%)
- Reaction to severe stress/adjustment disorders (F43.0-43.9)	1 (7.7%)
- Substance use disorder (F10-19)	2 (15.4%)
- Injuries (S00-T35.9)	2 (15.4%)
- Symptoms and signs involving the circulatory and respiratory systems (R00-09)	2 (15.4%)
- Hemiplegia, unspecified (G81.9)	1 (7.7%)
- Infections of the skin and subcutaneous tissue (L00-08)	1 (7.7%)
- Poisoning/toxic effects (T36-65)	1 (7.7%)

Secondary diagnoses (range 1-20) during inpatient hospital admission^d	
- Mental illness (F00-F09; F20-F99)	3 (23.1%)
- Mood (affective) disorders (F30-F39)	2 (15.4%)
- Personality disorders (F60-F69)	1 (7.7%)
- Substance use disorder (F10-F19)	4 (30.8%)
- Poisoning/toxic effects (T36-T65)	1 (7.7%)
- Bacterial, viral and other infectious agents (B95-B97)	1 (7.7%)
- Other disorders of brain (G93.0-G93.9)	1 (7.7%)
- Sequelae of injuries to the head (T90.0-T90.9)	1 (7.7%)
- Carrier of viral hepatitis (Z22.5)	1 (7.7%)
- Other problems related to primary support group, including family circumstances (Z63.0-Z63.9)	2 (15.4%)
- Problems related to lifestyle (Z72.0-Z72.9)	5 (38.5%)
- Personal history of self-harm (Z91.5)	1 (7.7%)

External cause of morbidity (n=4; 30.8%)	
- Foreign body injury (W44-W45)	1 (7.7%)
- Self-harm (X60-X84)	2 (15.4%)
- Sequelae of transport accidents (Y85.0-Y85.9)	1 (7.7%)

Mode of discharge	
- Home/usual residence	10 (76.9%)
- Discharged at own risk (against medical advice)	1 (7.7%)
- Transfer to further care	2 (15.4%)

Number of hospital bed days [median(range)] 5 (1-14)

Number of psychiatric bed days [n=5; 38.5% - median(range)] 6 (1-14)

Community mental healthcare contacts **N=32 (100.0%)**

Mode of contact	
- In-person	27 (84.4%)
- Telephone	5 (15.6%)

Principal diagnosis (n=20; 62.5%)	
- Mental illness (F00-F09; F20-F99)	12 (30.8%)

- Schizophrenia, schizotypal, and delusional disorders (F20-F29)	4 (12.5%)
- Mood (affective) disorders (F30-39)	2 (6.3%)
- Neurotic, stress-related and somatoform disorders (F40-F49)	5 (15.6%)
- Personality disorders (F60-F69)	2 (6.3%)
- Substance use disorder (F10-19)	3 (9.4%)
- General psychiatric examination (Z00.4)	3 (9.4%)
- Problems relating to unwanted pregnancy (Z64)	1 (3.1%)

QAS: Queensland Ambulance Service; ED: Emergency Department

^aNo significant difference in GCS from initial to final assessment (Wilcoxon ranksum: $z = -1.03$; $p = 0.302$)

^bAll mental health evaluations during ED presentations were conducted in-person.

^cAll mental health evaluations during hospital admissions were conducted in-person.

^dSums to more than 100% as each hospital admission can have up to 20 secondary diagnoses.

Table S5: Mental health-related service contact in the 7 days preceding acute care for self-harm

Measure	Number (%)
Diagnosis/QAS nature of case (N=63)	
- Substance use disorder	16 (25.4%)
- Mental illness	26 (41.3%)
- Any mental disorder ^a	35 (55.6%)
- Self-harm	6 (9.5%)
- Poisoning	3 (4.8%)
- Any mental health-related indication	38 (60.3%)

QAS: Queensland Ambulance Service

^aThe number of mental illness and substance use disorder diagnoses does not sum to the total of any mental disorder because these measures include secondary hospital diagnoses, of which there can be multiple in the same hospital separation.

Table S6: Type of mental healthcare contact after acute care fore self-harm

Acute health service	State-funded MH service contact N(%)	MH evaluation during acute health service episode only N(%)	Federally-subsidised MH contact only N(%)	Total with MH contact N(%) n=217
<i>Within 48 hours</i>				
-Ambulance n=8	0 (0%)	0 (0%)	0 (0%)	0 (0%)
-ED n=155	68 (43.9%)	10 (6.5%)	2 (1.3%)	80 (51.6%)
-Hospital n=54	15 (27.8%)	9 (16.7%)	1 (1.9%)	25 (46.3%)
Total				105 (48.4%)
<i>Within 7 days</i>				
-Ambulance n=8	0 (0%)	0 (0%)	0 (0%)	0 (0%)
-ED n=155	86 (55.5%)	6 (3.9%)	1 (0.7%)	93 (60.0%)
-Hospital n=54	22 (40.7%)	5 (9.3%)	1 (1.9%)	28 (51.9%)
Total				121 (55.8%)
<i>Within 30 days</i>				
-Ambulance n=8	1 (12.5%)	0 (0%)	0 (0%)	1 (12.5%)
-ED n=155	103 (66.5%)	3 (1.9%)	3 (1.9%)	109 (70.3%)
-Hospital n=54	29 (53.7%)	3 (5.6%)	3 (5.6%)	35 (64.8%)
Total				145 (66.8%)

ED: Emergency Department; MH: Mental healthcare

Table S7: Mental healthcare contact after acute care for self-harm restricted to ICD-10 codes for self-harm in ED presentations or hospital admissions only

Acute health service	State-funded MH service contact N(%)	MH contact during acute care episode only N(%)	Federally-subsidised MH contact only N(%)	Total with MH contact N(%) n=113
<i>Within 48 hours</i>				
-ED n=64	36 (56.3%)	7 (10.9%)	1 (1.6%)	44 (68.8%)
-Hospital n=49	15 (30.6%)	9 (18.4%)	0 (0.0%)	24 (49.0%)
Total				68 (60.2%)
<i>Within 7 days</i>				
-ED n=64	44 (68.8%)	3 (4.7%)	1 (1.6%)	48 (75.0%)
-Hospital n=49	21 (42.9%)	5 (10.2%)	0 (0.0%)	26 (53.1%)
Total				74 (65.5%)
<i>Within 30 days</i>				
-ED n=64	50 (78.1%)	1 (1.6%)	2 (3.1%)	53 (82.8%)
-Hospital n=49	28 (57.1%)	3 (6.1%)	1 (2.0%)	32 (65.3%)
Total				85 (75.2%)

ED: Emergency Department; MH: Mental Healthcare

Table S8: Individual characteristics for those with acute care contact for self-harm

Characteristic	MH contact N(%)	No MH contact N(%)	Total N(%)	p-value
	54 (50.5%)	53 (49.5%)	107(100.0%)	
Gender				
- Female	19 (35.2%)	10 (18.9%)	29 (27.1%)	0.058
Age in years				
- 18-24	12 (22.2%)	15 (28.3%)	27 (25.2%)	
- 25-39	30 (55.6%)	30 (56.6%)	60 (56.1%)	
- 40+	12 (22.2%)	8 (15.1%)	20 (18.7%)	0.570
Indigenous	21 (38.9%)	15 (28.3%)	36 (33.6%)	0.247
Unstable accommodation	15 (27.8%)	13 (24.5%)	28 (26.2%)	0.702
< 10 years of school completed	32 (59.3%)	21 (39.6%)	53 (49.5%)	0.042
Unemployed	30 (55.6%)	28 (52.8%)	58 (54.2%)	0.777
Not in a stable relationship	34 (64.2%)	38 (71.7%)	72 (67.9%) ^a	0.405
Living alone	17 (31.5%)	10 (18.9%)	27 (25.2%)	0.133
High/very high psychological distress (K10)	26 (48.1%)	22 (41.5%)	48 (44.9%)	0.490
SF-36v2 Physical component summary score (PCS)	52.6±10.1	54.1±11.7	53.4±10.9	0.480
Intellectual disability	7 (13.2%)	4 (7.7%)	11 (10.5%) ^a	0.356
Pre-release mental health status				
- No mental disorder	11 (20.4%)	6 (11.3%)	17 (15.7%)	
- SUD only	7 (13.0%)	16 (30.2%)	24 (22.2%)	
- MI only	4 (7.4%)	2 (3.8%)	6 (5.6%)	
- Dual diagnosis	32 (59.3%)	29 (54.7%)	61 (57.0%)	0.122
Prior engagement with mental health service	35 (64.8%)	20 (37.7%)	55 (51.4%)	0.005
Identified by correctional authorities as at risk of self-harm	30 (55.6%)	16 (30.2%)	46 (43.0%)	0.008
Self-harm by poisoning ^c	36 (65.5%)	26 (47.3%)	62 (57.9%)	
History of juvenile detention	20 (37.7%)	9 (17.0%)	29 (27.4%) ^b	0.017
Prior adult prison sentence	44 (83.0%)	44 (83.0%)	88 (83.0%) ^b	1.000
Released on parole	24 (44.4%)	27 (50.9%)	51 (47.7%)	0.501
Prior violent offence	32 (59.3%)	28 (52.8%)	60 (56.1%)	0.503
Passports intervention	25 (46.3%)	29 (53.7%)	54 (50.5%)	0.384

^aTotal participants is 105 (98.1%) due to missing data.

^bTotal participants is 106 (99.1%) due to missing data.

^cCompared to self-harm by all other methods including hanging, strangulation or suffocation (X70); burning (X77); cutting or sharp object (X78); battering or blunt object (X79); jumping or risk taking (X80-X82); caustic substances, crashing aircraft or electrocution (X83); and unspecified means (X84).

K10: 10-item Kessler Psychological Distress Scale; MH: Mental healthcare; MI: Mental illness; QCS: Queensland Corrective Services; SF-36v2 PCS: Short-Form 36 Health Survey version 2 Physical Component Summary; SUD: Substance use disorder; 95%CI: 95% confidence interval

Table S9: Sensitivity analyses

Characteristic	Adjusted RR(95%CI) with imputed values	Adjusted RR(95%CI) without imputed values	Adjusted RR(95%CI) with inverse probability weights	Excluding MH contact during acute care episode as an outcome RR(95%CI)	Including MH contact in primary care RR(95%CI)	Outcome MH contact within 48 hours RR(95%CI)	Outcome MH contact within 30 days RR(95%CI)	Excluding those reincarcerated within 7 days of self-harm (n=209) RR(95%CI)	Excluding discharge events that have subsequent self-harm within 7 days (n=202) RR(95%CI)	Restricted self-harm ascertainment to ICD-10 codes from ED or Hospital only (n=112) RR(95%CI)
Female	1.39(1.02, 1.90)	1.42(1.04, 1.94)	1.42(1.03, 1.96)	1.44(1.02, 2.03)	1.40(1.03, 1.92)	1.41(0.98, 2.03) ^a	1.40(1.11, 1.77)	1.39(1.02, 1.91)	1.48(1.07, 2.05)	1.33(0.95, 1.87) ^a
Age										
- 18-24	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref
- 25-39	1.09(0.80, 1.50)	1.08(0.79, 1.49)	1.07(0.74, 1.53)	1.28(0.87, 1.87)	1.11(0.81, 1.51)	1.04(0.71, 1.52)	1.00(0.79, 1.27)	1.10(0.80, 1.52)	1.01(0.73, 1.40)	0.99(0.73, 1.35)
- 40+	1.05(0.72, 1.54)	1.04(0.71, 1.53)	1.16(0.74, 1.80)	1.21(0.75, 1.98)	1.05(0.71, 1.54)	1.20(0.75, 1.91)	0.95(0.72, 1.26)	1.06(0.71, 1.59)	0.93(0.61, 1.43)	0.98(0.61, 1.57)
Indigenous	1.09(0.83, 1.44)	1.07(0.81, 1.42)	1.14(0.85, 1.53)	1.03(0.75, 1.41)	1.04(0.79, 1.37)	1.24(0.89, 1.73)	1.04(0.82, 1.31)	1.12(0.84, 1.49)	1.04(0.77, 1.40)	1.20(0.84, 1.72)
<10 years of school completed	1.22(0.96, 1.56)	1.22(0.95, 1.56)	1.25(0.96, 1.61)	1.26(0.95, 1.67)	1.19(0.93, 1.51)	1.21(0.90, 1.62)	1.22(1.01, 1.49) ^b	1.21(0.95, 1.56)	1.31(0.99, 1.73)	1.17(0.88, 1.57)
Living alone	1.06(0.79, 1.42)	1.06(0.79, 1.43)	1.11(0.81, 1.52)	1.09(0.78, 1.53)	1.14(0.86, 1.51)	1.23(0.86, 1.75)	1.14(0.90, 1.43)	1.07(0.80, 1.44)	1.16(0.83, 1.61)	0.91(0.62, 1.32)
Physical adaptive functioning (SF-36v2 PCS - per unit increase)	0.98(0.97, 0.99)	0.98(0.97, 0.99)	0.99(0.97, 1.00) ^a	0.99(0.97, 1.00) ^a	0.98(0.97, 0.99)	0.99(0.97, 1.00) ^a	0.98(0.97, 0.99)	0.98(0.97, 0.99)	0.98(0.97, 0.99)	0.99(0.97, 1.00) ^a
Pre-release mental health status										
- No mental disorder	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref
- MI only	0.62(0.34, 1.12)	0.64(0.35, 1.15)	0.64(0.33, 1.20)	0.59(0.31, 1.11)	0.56(0.31, 1.01)	0.65(0.34, 1.24)	0.65(0.38, 1.11)	0.68(0.37, 1.23)	0.60(0.31, 1.16)	0.57(0.26, 1.26)
- SUD only	0.48(0.27, 0.85)	0.50(0.28, 0.88)	0.60(0.32, 1.14) ^a	0.41(0.22, 0.78)	0.46(0.26, 0.81)	0.44(0.22, 0.90)	0.53(0.32, 0.88)	0.46(0.25, 0.84)	0.48(0.27, 0.85)	0.63(0.36, 1.11) ^a
- Dual diagnosis	0.58(0.41, 0.82)	0.59(0.41, 0.84)	0.65(0.43, 0.97)	0.49(0.33, 0.72)	0.53(0.38, 0.75)	0.59(0.39, 0.88)	0.64(0.46, 0.88)	0.59(0.41, 0.86)	0.55(0.38, 0.80)	0.72(0.49, 1.07) ^a
Prior connection with mental healthcare service	1.55(1.08, 2.22)	1.58(1.09, 2.29)	1.77(1.17, 2.68)	1.36(0.93, 1.97) ^a	1.60(1.11, 2.31)	1.70(1.10, 2.64)	1.90(1.34, 2.70)	1.66(1.13, 2.43)	1.53(1.03, 2.27)	1.94(1.25, 3.00)
QCS self-harm flag	1.50(1.07, 2.09)	1.51(1.08, 2.12)	1.61(1.10, 2.38)	1.48(1.02, 2.16)	1.44(1.04, 1.98)	1.44(0.98, 2.13) ^a	1.41(1.07, 1.86)	1.50(1.13, 2.10)	1.44(1.02, 2.04)	1.36(0.94, 1.96) ^a
Juvenile Incarceration History	1.19(0.91, 1.55)	1.19(0.91, 1.55)	1.11(0.84, 1.47)	1.23(0.90, 1.67)	1.22(0.94, 1.59)	1.08(0.78, 1.48)	1.19(0.96, 1.47)	1.09(0.83, 1.43)	1.20(0.90, 1.60)	1.15(0.87, 1.54)
Released on parole	0.91(0.68, 1.22)	0.90(0.67, 1.21)	0.95(0.70, 1.27)	0.81(0.58, 1.14)	0.86(0.64, 1.15)	0.98(0.70, 1.38)	0.84(0.66, 1.05)	0.90(0.67, 1.23)	0.89(0.65, 1.22)	1.01(0.67, 1.51)
Passports intervention	0.88(0.67, 1.16)	0.89(0.68, 1.18)	0.94(0.71, 1.26)	0.96(0.70, 1.30)	0.94(0.72, 1.23)	1.04(0.75, 1.43)	0.96(0.78, 1.19)	0.86(0.66, 1.14)	0.90(0.67, 1.21)	1.09(0.79, 1.49)

ED: Emergency department; MH: Mental Healthcare; MI: Mental Illness; QCS: Queensland Corrective Services; RR: Relative Risk; SF-36v2 PCS: Short-Form 36 Health Survey version 2 Physical Component Summary; SUD: Substance Use Disorder; 95%CI: 95% Confidence Interval

^aAttenuated to the null; ^bBecame significant p<0.05

SUPPLEMENTARY FIGURES

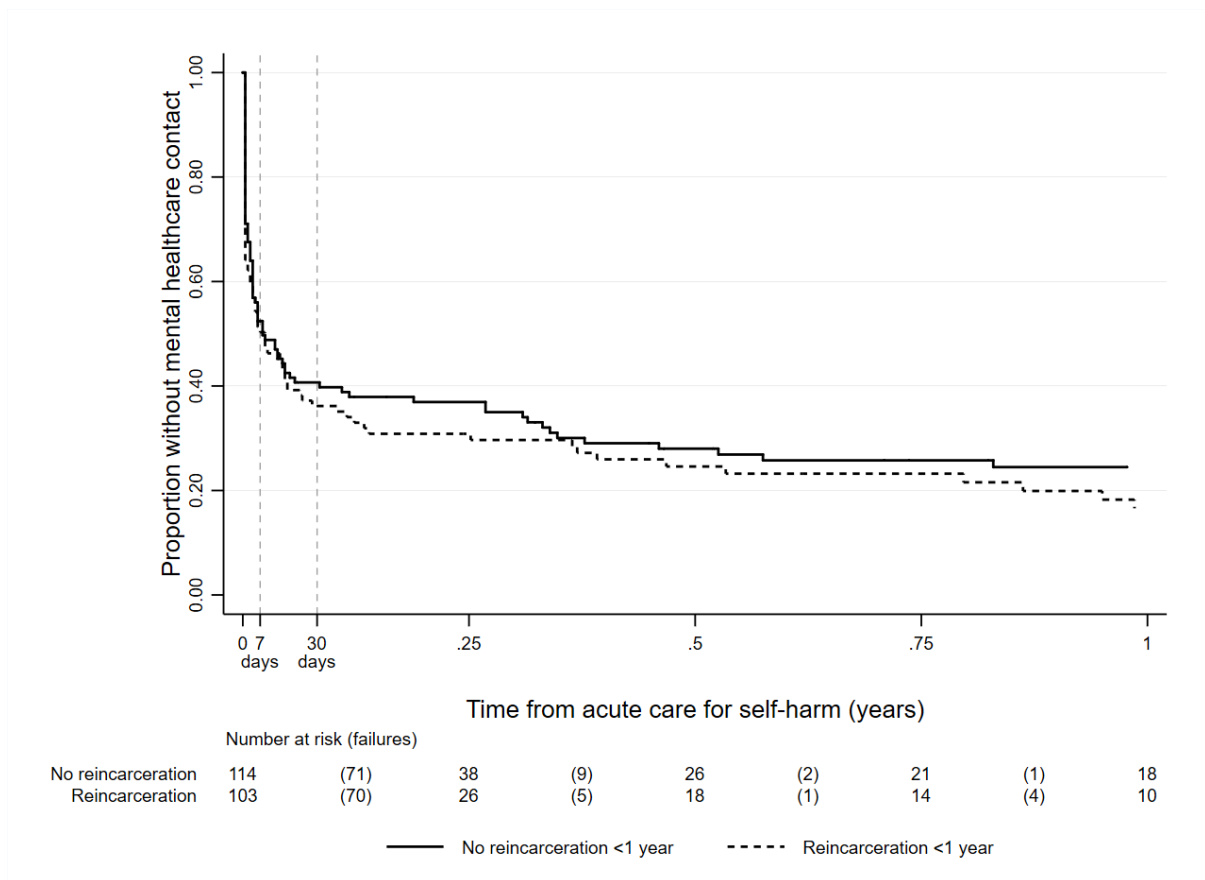


Figure S1: Kaplan-Meier survival curve of mental healthcare contact stratified by re-incarceration within 1 year after acute care for self-harm

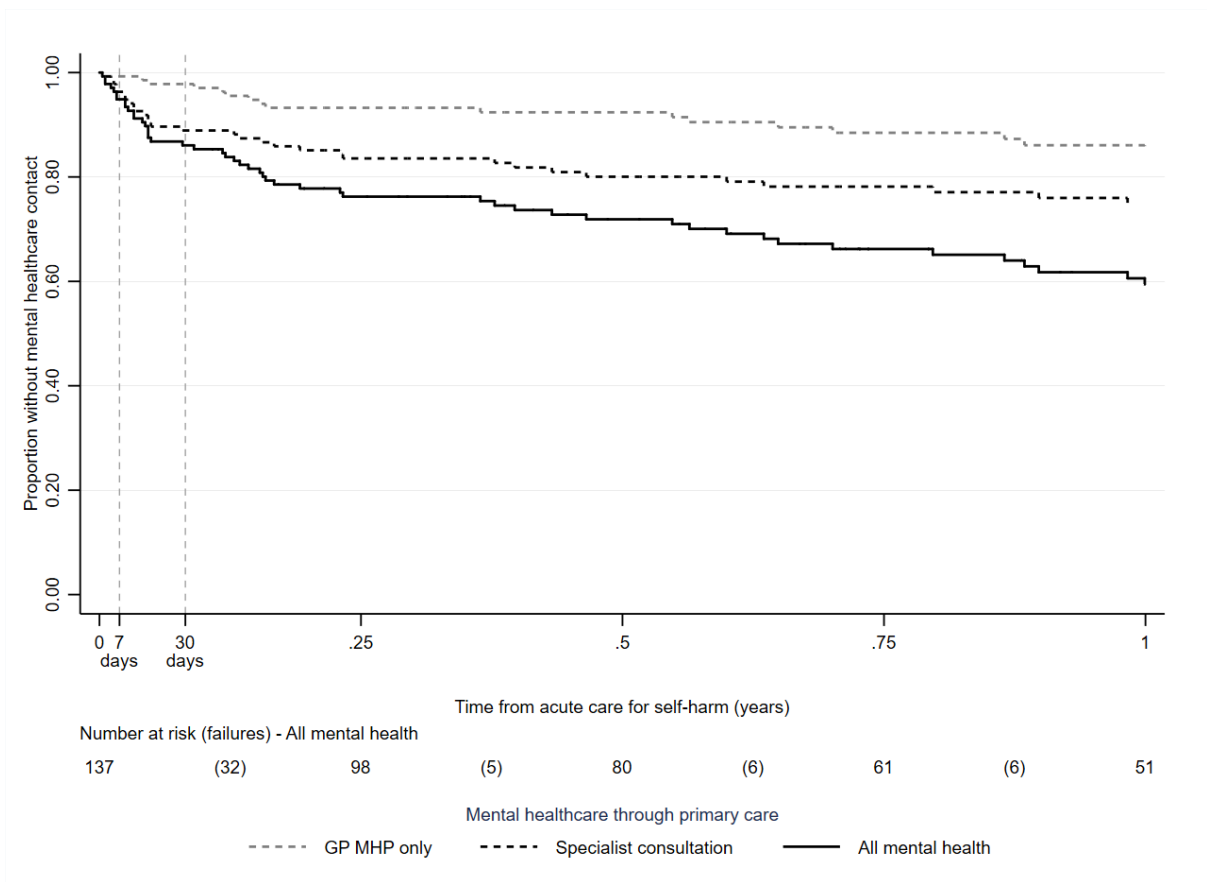


Figure S2: Kaplan-Meier survival curve of federally-subsidised mental healthcare contact after acute care for self-harm

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