Mental Health and the Public Health Interface

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Acknowledgement of Country



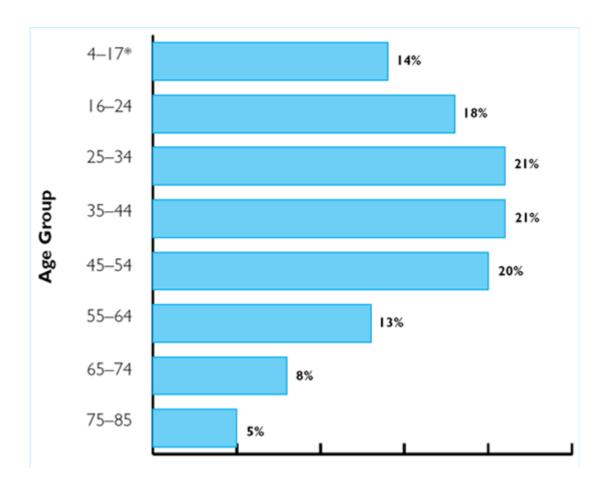


The Mental Health Landscape

What are the population health challenges of mental health?

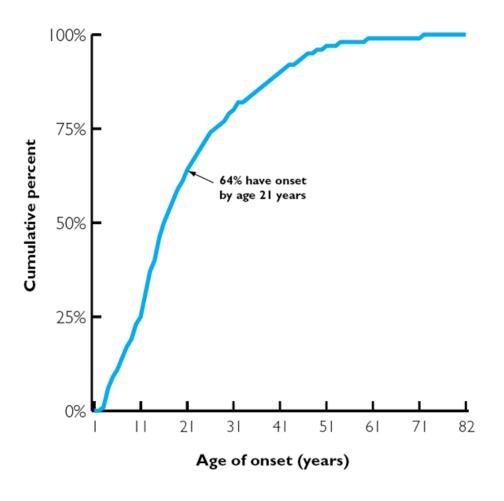


Prevalence of Mental Illness by age group





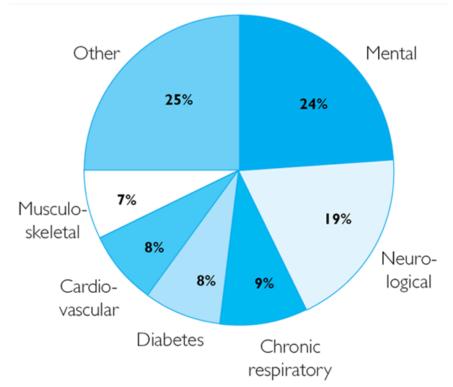
Age of onset of common mental illness-Depression and Anxiety



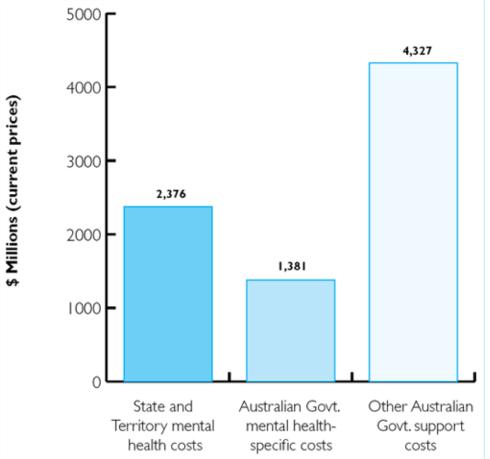


Disability and Cost

Burden of mental illnesses relative to other disorders, in terms of years lost as a result of disability



Source: Begg S et al. (2007). The burden of disease and injury in Australia 2003. PHE 82. Australian Institute of Health and Welfare: Canberra.



Source: Department of Health and Ageing (2007). National Mental Health Report 2007. Commonwealth of Australia: Canberra



Other Public Health Challenges

- Those with chronic mental health issues are more likely to suffer from chronic physical disease and metabolic risk.
- Individuals with mental illness are less likely to be working, socially engaged and integrated into community
- Early onset of mental illness and the associated functional impairments means that individuals are vulnerable in their most productive years of life: education, work, social engagement and functioning of family units.
- Those with illness are over represented in homeless and prison populations accounting for 75% and 40% respectively.



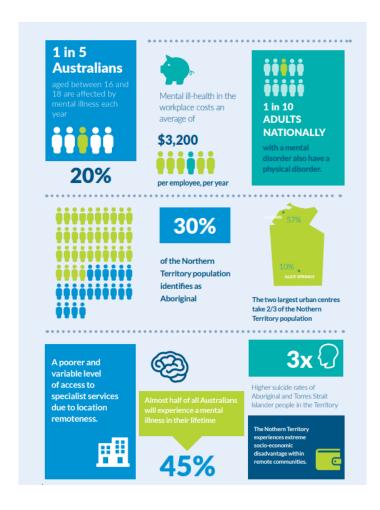
Setting the scene more specifically

Mental Health in the NT is complicated and presents several unique challenges;

- The NT has a small population of approximately 200 000 people spread over a
 vast area that is 10 times the land mass of Great Britain
- 80,000 or a third of the population identify as indigenous and are coupled with a high burden of chronic disease, mental health issues and inequities in their social determinants of health
- 2/3 of the population are in two urban centres Darwin (59%) and Alice Springs (10%)
- The NT has 16 acute inpatient beds per 100 000 (national average is 40 per 100 000)
- The burden of mental illness is 16% of the total burden as opposed to 7% nationally
- Death by suicides are higher for Indigenous Australians and higher for the NT



Mental Health Snapshot





Approaching these challenges

- Become more skilled at addressing Public Health Challenges-MPH, Public Health Training, Administration Training
- Engage with your local Public Health Directorate
- Engage with your stakeholders in mental health
- Volunteer for National Committees
- Enhance the training and education of your staff as well as the public





Mental Health Initiatives

Mental Health Initiatives

- Short Stay Psychiatry Units Service Development and Evaluation
- Evaluation of the Psychological Effects of NT Supervised Quarantine
- Complex PTSD prevalence study in Military Veterans in the NT
- The Complex Care Team Pilot and Evaluation
- Education and Democratisation of Mental Health Skills
- Co-Response Team Initiative and Evaluation



Short Stay Psychiatry Units in ED

Mental Health Presentations and Emergency Departments

- Mental health presentations make up a significant proportion of those seen in ED, endure on average longer waits and represent a large allocation of the ED resources.
- ED embedded short stay psychiatry units have been part of the re-design of ED and SSU in an attempt to better deal with this issue.
- PAPU are another model of short stay psychiatry units (similar to SARA, PECC and Psychiatry SSUs).
- Whilst the 2013 DHHS Guidelines on PAPUs suggest these units be in either traditional mental health units or ED, there is potential utility for embedding these in ED: liaison, proximity, creating sanctuary within ED



Short Stay Psychiatry Units in ED

PAPUs founded in Metropolitan Melbourne

- Between 2016 and 2017, there three ED embedded PAPUs launched at Austin, Peninsula and Eastern Health.
- The ED embedded PAPUs aimed to provide timely and brief mental health care (less than 72 hours), reduce the demand on ED and an adult focus (16-65 years old with some leniency on the margins of this).

The key service group included but isn't limited

- First presentations
- Requiring further longitudinal assessment
- Require brief crisis intervention
- Suffering a drug intoxication or withdrawal



Evaluating the model care

There are infinite ways and means to measure of model of care and its relative success, but there is no "right way". We chose to look at the following attributes

- Patient and Staff Acceptability and Satisfaction
- Safety
- Demographics, KPI and utility of the interface with ED
- Diagnostic Related Groups (DRG)



Acceptability PAPU Survey-(66 Austin, 22 Peninsula and 11 Eastern Health)

Table 1. Collated patient feedback surveys (N [%]).

Orientation to the unit	Poor	Average	Good	Excellent	N/A	Not answered
The orientation you received to the unit (i.e. being shown around)	-	I	22	74	2	-
The courtesy, respect and helpfulness of staff during admission	-	I	П	87	-	-
The information given to you about PAPU routines (e.g. meal times, phone use, etc.)	-	6	26	65	1	I
The WRITTEN information given to you about your rights and responsibilities	1	2	26	65	3	2
The VERBAL explanation given to you about your rights and responsibilities	2	5	23	64	3	1
Your Treatment: Thinking about the treatment you received, how would you rate:	Poor	Average	Good	Excellent	N/A	Not answered
The explanation given to you by your doctor about your illness	2	4	28	60	3	2
The explanation given to you by your doctor about your treatment and medication	-	6	27	62	3	I
The community to be found and to desistance have a	_	4	20	71	2	2
The opportunity to be involved in decisions about your treatment						



Acceptability Semi-Structured Interviews

- 30 interviews were completed (10 each site) of PAPU clients
- 30 interview were complete (10 each site) of PAPU/ED staff

The interviews were analyses thematically to the point of thematic saturation. Themes include:

- PAPU as a place of Sanctuary
- PAPU staff being viewed as caring and engaged
- PAPU being selective about patient intake
- PAPU being viewed more positively when there was direct service contact



Safety

All 3 services during the 12 month of the evaluation were free from significant events that threatened or directly harmed patients, their family and staff: no significant code greys, code blacks or other incidents.

Safety likely a factor of

- Patient selection
- Thus patient DRG
- Thus as well patient demographic



Demographic, KPIs and ED interface

Table 2. Summary of key findings for objective 3 (I September 2017 to 31 August 2018).

	Austin	Peninsula	Eastern	
PAPU Consumer Demograph	hics			
Age (mean [SD])	37 (14)	37 (14)	36 (14)	
Age groups (N [%])				
16-25	103 (28.2)	202 (25.5)	361 (65.5)	
26-35	90 (24.7)	182 (23.0)	64 (11.6)	
36-45	69 (18.9)	168 (21.2)	50 (9.1)	
46-55	62 (17.0)	161 (20.4)	51 (9.2)	
56-65	32 (8.8)	65 (8.2)	19 (3.4)	
>66	9 (2.5)	13 (1.6)	6 (1.1)	
Sex	62.2% F, 37.0% M, 0.8% Neither Identifying as M/F	61.2% F, 38.8% M, 0.0% Neither Identifying as M/F	60.25% F, 39.75% M, 0% Neither Identifying as M/F	
Main diagnosis prompting admission (N [%])	Depression 84 (23.0), Suicidal Ideation 83 (22.7), Adjustment Disorder 40 (11.0)	Adjustment Disorder 212 (26.8), BPD 127 (16.1), Depression 122 (15.4)	BPD 194 (34.1), Depression 107 (18.9), Substance Used Disorder (14.8)	
Number of Admissions	365	791	567	
Mental Health presentations to ED transferring to PAPU	17.0% (276/1627)	14.2% (632/4456)	11.3% (470/4175)	
LOS (hours) In PAPU (mean [SD, CI])	55.5 (32.9 [52.0, 59.0])	44.4 (23.6 [42.8, 46.1])	50.0 (50.7 [45.8, 54.2])	
Community discharges from PAPU	85.5% (312 separations)	86.6% (685 separations)	78.7% (443 separations)	
Step-up admissions to APU and other	14.5% (53 separations)	8.3% (66 separations)	21.3% (120 separations)	
Bed occupancy rates	76.4%	74.0%	80.8%	
Number of beds	4	6	4	
Re-presentation/readmission after PAPU separation (N [%])				
28-day re-presentation to ED post-discharge PAPU	96 (26.3)	129 (16.3)	275 (48.5)	
7-day re-presentation to ED post-discharge PAPU	27 (7.4)	68 (8.6)	93 (16.4)	
			(Continu	

Table 2. (continued)

	Austin	Peninsula	Eastern
Re-presentation/readmission	after PAPU separation (N [%])		
28-day readmissions (PAPU to PAPU)	23 (6.9)	52 (6.6)	22 (3.9)
7-day readmissions (PAPU to PAPU)	7 (2.1)	30 (3.8)	5 (0.9)
28-day readmissions (PAPU to other psychiatric unit)	20 (6.0)	44 (5.6)	34 (6.0)
7-day readmissions (PAPU to other psychiatric unit)	6 (1.8)	17 (2.1)	18 (3.2)
Total 28-day readmissions	43 (11.8)	96 (12.1)	56 (9.9)
Total 7-day readmissions	13 (3.6)	47 (5.9)	23 (4.1)
ED flow of PAPU consumers			
Wait time before definitive care (mean [SD])	5 hours 55 minutes (5 hours)	6hours 40 minutes (4 hours 24 minutes)	6 hours 28 minutes (5 hours 7 minutes)
4-hour NEAT breaches (N [%])	123 (45.1)	315 (61.9)	241 (49.9)
8-hour NEAT breaches (N [%])	27 (9.8)	130 (25.5)	130 (26.9)

BPD: Borderline Personality Disorder; PAPUs: Psychiatric Assessment and Planning Units; SD: standard deviation; NEAT: National Emergency Access target; ED: emergency department; LOS: length of stay; CI: confidence interval.



ED and **PAPU** Interface

Mitchell et al.

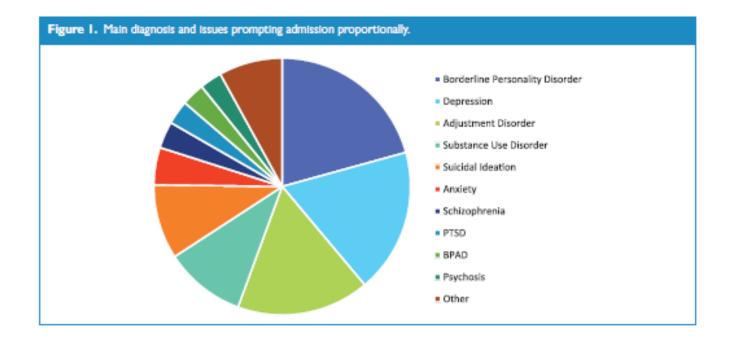
[Table 3. ED flow of mental health consumers pre- and post-implementation of PAPU (χ^2 test for % and 7-test for means significance).

r NEAT breaches (N [%]) 33 r NEAT breaches (N [%]) 10 ED Mental Health Presentations 7	321 (49) 00 (15)	4:19 [4:09, 4:28] 657 (40) 166 (10) 1630 520 (31.9)	<0.001 <0.001 <0.001 109.5% 0.833
r NEAT breaches (N [%]) 33 r NEAT breaches (N [%]) 10 ED Mental Health Presentations 7	321 (49) 00 (15)	657 (40) 166 (10)	<0.001 <0.001 109.5%
r NEAT breaches (N [%]) ED Mental Health Presentations 7.	100 (15) 178	166 (10) 1630	<0.001 109.5%
ED Mental Health Presentations 7.	778	1630	109.5%
Mental Health Admissions from ED ((N (%))	245 (31.5)	520 (31.9)	0.022
			0.033
sula .			
time (hour: minutes) before definitive care (mean 4:	1:21 [4:14, 4:27]	5:44 [5:36, 5:51]	<0.001
r NEAT breaches (N [%])	479 (37.5)	2241 (50.3)	<0.001
r NEAT breaches (N [%]) 4	139 (11.1)	917 (20.6)	<0.001
ED Mental Health Presentations	715	3140	83.1%
Mental Health Admissions from ED (N [%]) 3	319 (18.6)	1184 (37.7)	<0.001
n			
time (hour: minutes) before definitive care (mean 5:	5:58 [5:49, 6:07]	6:49 [6:40, 6:58]	<0.001
r NEAT breaches (N [%])	838 (54)	2473 (59)	<0.001
r NEAT breaches (N [%]) 8	811 (24)	1261 (30.2)	<0.001
ED Mental Health Presentations 6	5003	7248	20.7%
Il Health Admissions from ED (N [%])	2035 (33.9)	2225 (30.7)	<0.001
ined			
time (hour: minutes) before definitive care (mean 5:	5:05 [5:00, 5:10]	5:57 [5:52, 5:02]	<0.001
r NEAT breaches (N [%]) 3	8638 (45.5)	5371 (52.2)	<0.001
r NEAT breaches (N [%])	350 (16.9)	2344 (22.8)	<0.001
ED Mental Health Presentations 8	3496	12,018	41.5%
Mental Health Admissions from ED (N [%])	2599 (30.7)	3929 (32.7)	0.001

BPD: Borderline Personality Disorder; PAPUs: Psychiatric Assessment and Planning Units; SD: standard deviation; NEAT: National Emergency Access target; ED: emergency department; LOS: length of stay; CI: confidence interval.



PAPU DRG





Further Reading





The efficacy, safety and acceptability of emergency embedded Psychiatry Assessment and Planning Units: An evaluation of Psychiatry Assessment and Planning Units in close proximity to their associated emergency departments

Australian & New Zealand Journal of Psychiatry DOI: 10.1177/0004867419899717

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Objective: To determine the efficacy, safety and acceptability as well as the patient demographics of three newly developed emergency department-embedded Psychiatric Assessment and Planning Units located in Metropolitan Melbourne at Austin, Peninsula and Eastern Health Services.

Methods: The evaluation reviewed a 12-month period of service activity from 1 September 2017 to 31 August 2018, when all three Psychiatric Assessment and Planning Units services were operational. A 12-month period from 1 September 2014 to 31 August 2015 was compared as the pre-Psychiatric Assessment and Planning Units period. Mixed qualitative and quantitative methods were used. This included semi-structured interviews of 30 Psychiatric Assessment and Planning Units patients and 30 emergency department staff (10 of each for all 3 sites), patient survey, statistical analysis of Client Management Interface data for the emergency department and related Psychiatric Assessment and Planning Units as well as audit of RISKMAN registers.

Results: There were 365 Austin, 567 Eastern and 791 Peninsula Psychiatric Assessment and Planning Units admissions. Psychiatric Assessment and Planning Units were generally well accepted by patients and emergency department staff, relatively safe, operating within the Key Performance Indicators with mixed effect on emergency department flow. Austin emergency department processing times improved post-Psychiatric Assessment and Planning Units (4 hours 57 minutes to 4 hours 19minutes; p < 0.001) while deteriorating at Eastern and Peninsula. Adjustment Disorder and Depression and Borderline Personality Disorder were the most common admission diagnoses. While the Psychiatric Assessment and Planning Units had mixed utility on emergency department processing times, they appear to serve a demographic not previously accommodated in traditional emergency department psychiatry models.

Conclusion: The emergency department-embedded Psychiatric Assessment and Planning Unit model of care appears effective on some measures, safe and acceptable to patients and staff. The Psychiatric Assessment and Planning Units seem to service a group not previously accommodated in traditional emergency psychiatry models.

Emergency psychiatry, psychiatric assessment and planning units, service evaluation, short-stay psychiatry units

Mental health patients make up a significant proportion of TAustin Mental Health Service, Heidelberg, VIC, Australia emergency department (ED) presentations, endure on aver
- Peninsula Community Mental Health Service, Frankston, VIC, Australia age longer stays in ED and represent a large allocation of Medicine, 2018; Barratt et al., 2016; Weiss and et al, 2016).

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Studiey Road, Hedelberg, VIC 3004, Australia. Psychiatric Short Stay Units have been part of the redesign Email: davidmitchell2000@hotmail.com

North East Area Mental Health Service, Austin Health, Heidelberg,

Australian & New Zealand Journal of Psychiatry, 00(0)



Implications

- PAPU and related short stay psychiatry units are being implements in multiple states and territories across Australia
- They rely on evaluations such as this in making these important service development
- In the NT we are currently building a Stabilisation and Referral Area (SARA), similar to a PAPU, at the RDH, and use this literature to enhance the model we expect to operate in 2023.



Psychological Distress of Supervised Quarantine

- The COVID 19 Pandemic has necessitated public health initiatives such as supervised quarantine as means of controlling the spread of the virus. This has been at various times throughout the pandemic for both interstate and international arrivals.
- In the NT mandated supervised quarantine has occurred in multiple settings: home, hotel and within purpose allocated facilities such as the Howard Springs Facility (HSF).
- The HSF within the NT provides an arguably novel and unique form of quarantine.
- The psychological distress within supervised quarantine for COVID 19 purposes is not well defined and warranted further evaluation.



HSF

- Initially a staff camp for Inpex workers it was handed over to the NT government
- The facility was repurposed as a designated quarantine facility
- Located 30km outside of Darwin in a remote and rural locality
- Quarantine for 14 days
- Housing both domestic (interstate) as well as international arrivals



Objectives

Domains of Evaluation	Outcome Measures		
Aim 1			
	• Age		
Demographics	GenderMarital statusASTI status		
Aim 2			
Psychological Distress in those in Quarantine	DASS-21 score for entire quarantine study populationMean scores at day 7-10		
	Semi-Structured interviews on those in quarantine thematically analysed		
Aim 3			
Experience of Professionals enforcing quarantine	Semi-structured interview of workers in quarantine thematically analysed		



Demographics

Demographic		
Aboriginal Status	N(%)	
Audingmai Status	90,41	
Aboriginal	0(0)	
Non-Indigenous	94(100)	
_		
Not specified	0(0)	
Gender	N(%)	
Male	62(66)	
Female	32(34)	
Mean age in years	(SD)	
40.5	9.9	
Marital Status	N(36)	
Married	33(35.1)	
Single	57(60.6)	
Divorced	4(4.3)	

- All identify as non-indigenous
- Predominantly more males
- Mean age 40.5 (9.9) years
- Mostly single



Results-Domestic

DASS 21 Scores Domains Mean and 95% confidence Inte	Depression ervals Mean (CI)	Anxiety Mean (CI)	Stress Mean (CI)
Total (N)			
Overall (94)	2.42 (2.04-3.22)	0.72 (0.51-0.93)	2.6 (2.07-3.13)
Male (62)	2.63(1.57-2.88)	0.7 (0.41-0.99)	2.48 (1.81-3.15)
Female (32)	1.91(1.14-2.68)	0.76 (0.4-1.15)	2.70(1.77-3.64)
(P value)	0.14	0.81	0.94
Married (33)	2.82(1.64-4.00)	0.82(0.47-1.17)	2.30(1.41-3.19)
Divorced (4)	2.25(1.07-3.43)	0.75(0.26-1.24)	4.75 (2.06-7.44)
Single (57)	2.14(1.51-2.77)	0.66(0.30-0.94)	2.57(1.90-3.24)
(P value)	0.54	0.77	0.21
18-35 years (42)	2.10(1.30-2.90)	0.77(0.44-1.1)	3.10(2.22-2.98)
36-56 years (47)	2.62(1.77-3.47)	0.73(0.43-1.03)	2.24(1.56-2.82)
>65 years (5)	1.50(0-3.25)	0.50(0.11-0.89)	0.50(0-1.82)
(P value)	0.64	0.51	0.19
NSW (9)	2.56 (0.3-4.82)	0.33(0.01-0.66)	1.67(0.17-3.17)
NT (10)	2.80(1.29-4.31)	1.00(0.35-1.65)	2.60(0.04-3.17)
Qld (11)	3.82(1.73-5.91)	1.27(0.57-1.97)	3.55(1.83-5.27)
Vic (48)	1.58(1.08-2.08)	0.58(030-0.90)	2.48(1.74-3.22)
SA (4)	3.75(0-9.2)	0.50(0-1.07)	3.00(0.12-5.88)
WA (12)	3.5(1.81-5.19)	0.75(0.33-1.17)	2.50(1.96-3.37)
(p value)	0.82	1.11	1.43
Vic (48)	1.58(1.08-2.08)	0.58(030-0.90)	2.48(1.74-3.22)
Other States (46)	3.28(2.63-4.20)	0.58(0.31-0.85)	2.66(1.93-3.37)
(P value)	0.0017*	0.23	0.7

DASS 21 Scoring chart (Depression, Anxiety, Stress)				
Level	Depression	Anxiety	Stress	
Normal	0-9∘	0-7 [¢]	0-14 [¢]	
Mild	9-13•	8-9	15-18	
Moderate	14-20	10-14	19-25	
Severe	21-27	15-19	26-33	
Extremely Severe	28+	20+	34+	



Of the 94 surveys analysed:-

- Only 3 persons scored between 10 and 13 for Depression symptoms indicating mild depression.
- There were no scores above this range for Depression
- No participants scored in the range for even mild anxiety or stress (cut offs 8-9 and 15-18 respectively)
- This included no difference for gender of the participants, marital status, age groups and state of origin prior to quarantine.
- The exception appeared to be for those arriving in quarantine from Victoria. When persons quarantining from Victoria were compared with Non-Victorian arrivals, the Victoria arrivals had significantly lower mean Depression scores than those from the combined other states (Depression scores of 1.58 vs 3.28 p=0.0017).



Themes

Quarantined Persons

Theme saturation was reached after 10 interviews. The interviews took between 45 minutes and 1 hour to complete. There were 6 males (60%) and mean age was 34.0. All participants (10, 100%) related the experience of undergoing the interview as positive and valuable. Overall, quarantine appeared to be acceptable and well tolerated. Through thematic analysis several themes were deduced regarding the psychological welfare of those in quarantine.

A sense of distress being linked to lack of control Distress with authorities in quarantine being linked to a perceived lack of communication An overall sense that Quarantine was important



Themes

Quarantine Workers

10 semi-structured interviews of quarantine workers were completed. Theme saturations was achieved at 8 interviews and another 2 were conducted in to ensure no new themes emerged. This brought the interviews to 10, in line with those conducted for the persons in quarantine. The mean age was 37.5. The participants were from a range of disciplines and jobs within quarantine. There were three welfare officers, two security guards, three health workers in management roles and one registered nurse and one registered mental health nurse.

Fear of making a mistake Clients with complex needs Importance of Quarantine



International Quarantine

- We've just completed interviews and screening DASS 21 on International Arrivals
- Range of Nations UK, Canada, Germany, Istanbul and Singapore
- Further analysis needed but more interesting results......



Complex PTSD and Veteran Populations

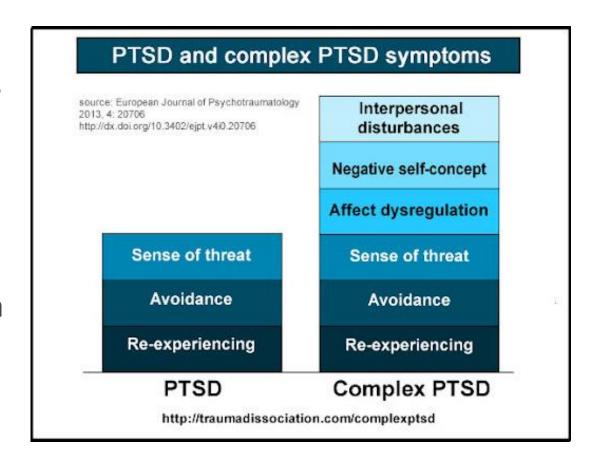
 Posttraumatic Stress Disorder (PTSD) and Complex PTSD in Australian Defence Force Veterans: A cross sectional survey



Backgound

- Standardized interventions for combat-related PTSD might not be appropriate for people with CPTSD.
- CPTSD has a greater number of symptoms, higher treatment discontinuation rates and the need to address emotional dysregulation

(Miles and Thompson, 2016)





Knowledge Gaps

- We don't know the extent of CPTSD vs. PTSD in treatment seeking ADF veterans.
- We don't know about relationships between CPTSD distress severity, functioning, physical health and psychological resilience in this client group.

Filling these gaps would help to inform the planning of trauma-related treatment resources, assessments and interventions.



Aims

- a) determine if there are qualitatively different groups of trauma treatment-seeking ADF veteran participants, known as 'classes,' with symptom endorsement that reflect PTSD and CPTSD using the ITQ; b) assess the internal reliability of the ITQ in ADF veterans for future routine use;
- c) determine how presentations vary between PTSD and CPTSD in terms of demographics, childhood adversity and adulthood traumatic life events, mental health co-morbidities, functioning and physical health; d) examine potential moderating effect of psychological resilience on the relationships between Adverse Childhood Experiences/Trauma with PTSD/CPTSD distress severity and functioning.



Method

Anonymous Cross sectional survey - 200 mental health treatment seeking ADF veterans - standardised measures:

Demographic and clinical characteristics

International Trauma Questionnaire (ITQ): ICD-11 CPTSD/PTSD symptoms (12-item)

The Childhood Trauma Questionnaire (28-item)

Life Events Checklist (17-item).

Work and Social Adjustment Scale (5- item).

Depression Anxiety Stress Scale (21-item).

Connor Davidson Resilience Scale (10-item).

Alcohol Use Disorders Identification Test screening tool (10-item)



Method

Inclusion criteria:

Adult (>18 yrs) MH treatment seeking ADF veterans.

Able to read, write, and communicate in English.

Capacity to provide informed consent.

Process:

Invite eligible clients (give them flyer and information).

They can contact our team if they have questions/want further information.

Participants can complete a paper version of the survey or an online version (their choice).

Completing and returning the questionnaire acknowledges they are providing informed consent.





Other Projects with Public Health Implications

Other Current Projects

- The Complex Care Team Pilot and Evaluation
 The implementation of a DBT program for BPD/Complex Trauma
- Education and Democratisation of Mental Health Skills
 Upskilling of GPs and Allied Health Professionals to enhance mental care delivery; Black Dog
 Institute, Echo Project and NT PHN
- Co-Response Team Initiative and Evaluation

 The implementation of an embedded mental health clinician within police and ambulance 1st

 responders to reduce ED presentations and improve care delivery

MHA evaluation, prevalence study of psychosis in remote and Aboriginal populations in the NT, CBT pilot intervention for those in supervised Quarantine.



Questions?

