

## Evidence check

15 October 2020

Rapid evidence checks are based on a simplified review method and may not be entirely exhaustive, but aim to provide a balanced assessment of what is already known about a specific problem or issue. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.

## Models of emergency department mental health care

### Evidence check question

1. What innovative models or redesign of emergency department mental health care have been reported in response to the COVID-19 pandemic?
2. What is the evidence for different models of mental health care in the emergency department setting?

### In brief

#### Question one

- Adaptations to the mental health services in the emergency departments (EDs) during COVID-19 sought to minimise the risk of infection and transmission in hospital settings(1-6) and to convert space and divert resources to provide critical COVID-19 related services.(2, 4-7)
- Within Australia, various models have been developed.
  - In Victoria, a framework for mental health care during COVID-19 outlines staged actions for reducing bed-based admissions and increasing community-based mental health services.(2) An intensive mental health community care service model was proposed as an alternative to bed-based mental health services during the COVID-19 outbreak.(1)
  - In South Australia, an urgent mental health care centre within close proximity to a major hospital is currently being developed to divert mental health patients from the emergency department.(8) A mental health co-responder program reduced ED presentations by emergency service call-outs by two-thirds.(9)
- In UK, the Royal College of Psychiatrists recommends that where possible, patients who present with mental illness should be moved to a separate area away from the high-risk areas in emergency departments.(11)
  - A survey of ED clinicians from 68 EDs in the UK found 82% of EDs established an alternative care pathway for mental health assessment in response to COVID-19.(10) A range of assessment locations were used in the pathways, including: 38 (68%) on a separate site which has existing mental health services, 9 (16%) away from the

emergency department but within the hospital, 5 (9%) within the emergency department, 3 (5%) at home via telehealth, 1 (2%) at another clinic site.(10)

- Studies in US settings describe:
  - conversion of psychiatric emergency care areas to COVID-19 assessment and management areas(7)
  - providing psychiatric emergency assessment to multiple emergency departments from one crisis response centre located in one of the hospitals.(4)
- In Spain, mental health home care and home hospitalisation care models were proposed.(5, 12) In Italy, new admissions into day hospitals, day centres, short and long-term residential care facilities and in-patient units were either suspended or strictly restricted.(6)

### Question two

- Models with potential to reduce the ED presentations and boarding by patients experiencing mental health crises include:
  - central acute community team,(14) community based psychiatric emergency service,(14) mobile assessment team,(14) rapid response team,(18) assertive outreach care model,(15, 21) home acute care and crisis resolution team.(21, 22)
  - emergency department follow-up team,(18) child guidance model,(18, 19) emergency department initiated case management model,(20) and mental health liaison nurse model.(23)

### Limitations

There are limited peer-reviewed articles or open-source resources on innovative models and redesign of emergency department mental health care in response to COVID-19. There is no evidence on differential ED care models for new psychiatric patients and patients with long-standing mental health conditions during the COVID-19 outbreak. The empirical evidence on this topic is still developing.

### Background

People with mental health illness are among the most vulnerable during a pandemic due to high rates of smoking, comorbid health conditions, residential and financial instabilities and lack of social support.(24, 25) Therefore, mitigating and minimising the risk of COVID-19 infection among this population group is crucial.(24)

Emergency department settings are a high-risk environment for COVID-19 infection and transmission. They are also a front-line for assessing and managing COVID-19-related critical cases and at times of outbreak, need preserving and prioritising spaces and resources for COVID-19 management. (7)

Since the beginning of the COVID-19 pandemic, there has been a reduction in the patient presentations with mental illnesses in emergency departments.(26-28) However, it is predicted that there could be a rebound in mental health presentations due to extended period of lockdown and social distancing measures.(29) There is a need for planning for emergency and acute psychiatric patient care and innovative models that address challenges posed by COVID-19 pandemic.(29)

## Methods (Appendix 1)

PubMed, Google and grey literature searches were conducted on 18 and 23 September 2020, respectively. Question one included peer-reviewed articles and government and key organisation reports on emergency department mental health care within the specific context of COVID-19. Question two included review articles, either systematic reviews or literature reviews, with documented search terms and inclusion criteria and key organisational reports on the general model of mental health care in emergency departments. Studies and reports that exclusively reported on telehealth were excluded.

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## Results

**Table 1: Mental health care model in emergency departments in response to COVID-19**

Source	Summary
<b>Peer reviewed sources</b>	
<p><a href="#">Critical Care And Emergency Department Response At The Epicenter Of The COVID-19 Pandemic</a></p> <p>Uppal, et al. 2020(7)</p>	<ul style="list-style-type: none"> <li>• A commentary article from New York, US.</li> <li>• Faced with a massive influx of patients in hospitals due to COVID-19 pandemic, New York hospitals had expanded critical care capacity by increasing critical care beds, converting non-traditional hospital spaces to critical care areas, and ensuring adequate staffing and supply of equipment.</li> <li>• In preserving the emergency department for high-equity patients, tents and annexes were set up outside hospitals for assessment and evaluation, and spaces normally preserved for psychiatry emergency care were converted into spaces for suspected COVID-19 cases.</li> </ul>
<p><a href="#">Emergency Department Management of the Covid-19 Pandemic</a></p> <p>Schreyer, et al. 2020(4)</p>	<ul style="list-style-type: none"> <li>• An analysis article from the US about three emergency departments' management of the COVID-19 crises.</li> <li>• Any patient who presented with psychiatric complaints was first screened for COVID-19 symptoms, travel and exposure history. They were then arranged to have a tele-consultation with a psychiatrist working from a crisis response centre located at one of the hospitals. If the psychiatrist deemed admission was necessary, and the patient did not have COVID-19 symptoms, exposure or travel history, the patient was transferred to the crisis response centre. Otherwise, the patient with symptoms or history was admitted to the in-patient psychiatric unit at the presenting hospital. If the patient was deemed not requiring admission, they were discharged unless they screened positive for COVID-19 and were unable to quarantine at home.</li> </ul>
<p><a href="#">An overview of the expert consensus on the mental health treatment and services for major psychiatric disorders during COVID-19 outbreak: China's experiences</a></p> <p>Xiang, et al. 2020(30)</p>	<ul style="list-style-type: none"> <li>• An overview of expert consensus in managing mental health during COVID-19 pandemic in China.</li> <li>• It was recommended that psychiatric outpatient clinics are located away from emergency departments, fever clinics, respiratory departments or areas with high-infection risk. Infection control measures should be observed.</li> <li>• Single entrance to the outpatient clinic, restricting accompanying visitor number to one, mandating mask wearing, taking temperatures at the triage station and isolating patients with COVID-19 symptoms were recommended.</li> <li>• Remote delivery of treatment, extending follow-up appointment intervals, reinforcing medication adherence and help-seeking when symptoms deteriorate, providing psychoeducation, decreasing</li> </ul>

Source	Summary
<p><a href="#">The role of mental health home hospitalisation care during the COVID-19 pandemic</a></p> <p>Garriga, et al. 2020(12)</p>	<p>physical examination, utilising telehealth services, and using third-party services for medication delivery were encouraged.</p> <ul style="list-style-type: none"> <li>• A letter to the editor from Spain.</li> <li>• In order to minimise the risk of COVID-19 infection and transmission of patients with severe mental illness in hospital settings, several strategies were proposed. Those included recommending in-person visits to those with psychiatric emergency only, phone follow-up, telepsychiatry consultations, and modifications to the electronic pharmacy.</li> <li>• In this letter, authors propose a mental health home hospitalisation care model comprising two main modalities during COVID-19 pandemic. <ul style="list-style-type: none"> <li>○ Home intensive community teams for mild-to-moderately ill patients.</li> <li>○ Home hospitalisation teams for moderate-to-severe ill patients.</li> </ul> </li> <li>• This letter did not elaborate on the operational details of this model of care.</li> </ul>
<p><a href="#">A psychiatrist's perspective from a COVID-19 epicentre: a personal account</a></p> <p>Pacchiarotti, et al. 2020(5)</p>	<ul style="list-style-type: none"> <li>• A perspective article from Spain.</li> <li>• The authors describe the unprecedented situations that they had faced during the peak of COVID-19 pandemic. <ul style="list-style-type: none"> <li>○ Acute in-patient units and emergency units were converted into COVID-19 units, admission capacity was reduced, and day hospitals were closed.</li> <li>○ Many psychiatrists were recruited as general hospital doctors in dealing with a surge in COVID-19 cases.</li> <li>○ Psychiatric units were divided into 'clean' units for COVID-19 negative patients, 'COVID-19' units and non-psychiatric COVID-19 hospital units.</li> </ul> </li> <li>• The authors propose mental health home care and home hospitalisation care, operationalised by home visits and telemedicine, as alternatives to in-hospital care.</li> </ul>
<p><a href="#">COVID-19 disease emergency operational instructions for Mental Health Departments issued by the Italian Society of Epidemiological Psychiatry</a></p> <p>Starace, et al. 2020(6)</p>	<ul style="list-style-type: none"> <li>• This article provides a detailed description of the operational instructions for mental health departments issued by the Italian Society of Epidemiological Psychiatry on 16 March 2020. The instructions include operational guidance for the following activities. <ul style="list-style-type: none"> <li>○ Outpatient activities: phone check-ins, nurse assessment of physical and mental health of the patient and family members during the phone check-ins, proceeding with the appointments concerning critical clinical situations only and postponing appointments for others, implementation of telemedicine, placing measures to avoid overcrowding for services that</li> </ul> </li> </ul>

Source	Summary						
	<p>cannot be deferred and implementing strict infection control measures inside the venues.</p> <ul style="list-style-type: none"> <li>○ Day hospitals and day centres: suspending or drastically reducing the number of activities.</li> <li>○ Short- and long-term residential care: suspending admissions unless under exceptional circumstances and only if the facility can ensure proper isolation and protection against infection and transmission. Otherwise, alternatives such as transferring the patient to other facilities, including compulsory admission outside the hospital, can be considered.</li> <li>○ In-patient units: limiting new admissions to clinical emergencies and admitting only if the facility can ensure proper isolation and protection against infection and transmission. Other alternatives, including home assistance, should be considered.</li> </ul>						
<b>Grey literature</b>							
<p><a href="#">Framework and guidance for mental health care during COVID-19</a></p> <p>Victoria State Government Health and Human Services 2020(2)</p>	<ul style="list-style-type: none"> <li>• This document provides a guidance on provision of care in acute, subacute and residential facilities during the COVID-19 pandemic. It outlines stages of pandemic and corresponding actions for mental health services. The following table is reproduced from this document.</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #d3d3d3;">Stage</th> <th style="background-color: #d3d3d3;">Mental health services action</th> </tr> </thead> <tbody> <tr> <td> <p><b>Stage 1</b> Initial containment stage preparedness and planning</p> </td> <td> <p>Mental health services adapt existing business continuity plans to prepare the specific requirements of COVID-19 as per local health service planning requirements. Communicate with all consumers, families and workforce to implement exposure prevention protocols, for example hygiene protocols and physical distancing. Review of care plans and needs of each current consumer and family with the consumer and their family to identify mental health care and treatment during coming months.</p> </td> </tr> <tr> <td> <p><b>Stage 2</b> Targeted Action - containment in response to confirmed cases of COVID-19 in Victoria</p> </td> <td> <p>Identify contingencies for bed-based mental health services and increased provision of community-based mental health services in light of:</p> <ul style="list-style-type: none"> <li>• expected reduction in workforce</li> <li>• reduced bed capacity</li> <li>• the aim of reducing risk of infection through unavoidable bed-based admissions and emergency department presentations</li> <li>• protocols to support safe provision of community care for consumers, families and staff.</li> </ul> <p>Identify essential services in line with above.</p> </td> </tr> </tbody> </table>	Stage	Mental health services action	<p><b>Stage 1</b> Initial containment stage preparedness and planning</p>	<p>Mental health services adapt existing business continuity plans to prepare the specific requirements of COVID-19 as per local health service planning requirements. Communicate with all consumers, families and workforce to implement exposure prevention protocols, for example hygiene protocols and physical distancing. Review of care plans and needs of each current consumer and family with the consumer and their family to identify mental health care and treatment during coming months.</p>	<p><b>Stage 2</b> Targeted Action - containment in response to confirmed cases of COVID-19 in Victoria</p>	<p>Identify contingencies for bed-based mental health services and increased provision of community-based mental health services in light of:</p> <ul style="list-style-type: none"> <li>• expected reduction in workforce</li> <li>• reduced bed capacity</li> <li>• the aim of reducing risk of infection through unavoidable bed-based admissions and emergency department presentations</li> <li>• protocols to support safe provision of community care for consumers, families and staff.</li> </ul> <p>Identify essential services in line with above.</p>
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<b>Stage 4</b> Stand-down and recovery stage. The number of confirmed cases is declining	Mental health services, with all stakeholders, current service delivery and in collaboration with the department, evaluate and agree on plan and priorities for future service delivery.				
<p><a href="#">Providing Acute Mental Health Care in the Community – Intensive Mental Health Community Care coronavirus COVID19 response</a></p> <p>Victoria State Government Health and Human Services 2020(1)</p>	<ul style="list-style-type: none"> <li>This document provides guidance on the provision of acute mental health care in the community in response to the COVID-19 pandemic.</li> <li>This service model can be used as an alternative to bed-based mental health services during stage 2 and stage 3 of the pandemic. It aligns with the action plan for stage 2 and 3, which may involve redirection of available resources to essential services and reducing the risk of infection in acute facilities.</li> </ul> <div data-bbox="667 1173 1326 1552" data-label="Diagram"> <pre>                     graph TD                         Triage[Triage] --&gt; Inpatient[Inpatient unit care]                         Triage --&gt; Intensive[Intensive Mental Health Community Care]                         subgraph Intensive_Box [ ]                             direction LR                             A[Extension to step-up and step-down care]                             B[Alternative to bed-based MH care]                         end                         Intensive --- Intensive_Box                     </pre> </div> <ul style="list-style-type: none"> <li>This document outlines who can be referred to intensive mental health community care and when this model of care may not be suitable. It also outlines care planning and therapeutic interventions and operational requirements.</li> </ul>				
<p><a href="#">What we are doing now - Hospital Demand Management Plan</a></p> <p>Government of South Australia 2020(8)</p>	<ul style="list-style-type: none"> <li>The following excerpts describe the mental health measures implemented by the SA Health in response to COVID-19.</li> </ul> <p><i>In response to COVID-19, SA Health in collaboration with Ramsey has opened 20 beds at the Adelaide Clinic for patients in the metropolitan area. The beds will be open from March through to</i></p>				

Source	Summary
	<p><i>June 2020 to assist with anticipated higher demand in the acute system.</i></p> <p><i>SA Health is working closely with the private sector to establish an urgent mental health care centre in close proximity to the Royal Adelaide Hospital, as an alternative for mental health patients who would otherwise present to its Emergency Department.</i></p> <p><i>We are also implementing:</i></p> <ul style="list-style-type: none"> <li>○ <i>Increased mental health bed capacity at the Royal Adelaide Hospital and Lyell McEwin Hospital</i></li> <li>○ <i>Direct mental health admission pathways, and rural and remote rapid review processes for hospital transfers, in CALHN.</i></li> <li>○ <i>A statewide Borderline Personality Disorder Collaborative has been established.</i></li> <li>○ <i>Construction has commenced on a specialised 18 bed Neurobehavioural Unit (NBU) at the reactivated Repat site.</i></li> <li>○ <i>SA Ambulance Service and Central Adelaide Local Health Network (CALHN) have partnered to commence a second phase of the Mental Health Co-Responder program. This program brings paramedics and mental health clinicians together to support consumers in the community where suitable, rather than transport them to an ED.</i></li> <li>○ <i>Planning has commenced for a Statewide Paediatric Eating Disorder Service and a Tier 7 Dementia Unit for Older Persons, both based at the reactivated Repat Health Precinct.</i></li> </ul>
<p><a href="#">Mental health co-responder program extended</a></p> <p>Government of South Australia 2020(9)</p>	<ul style="list-style-type: none"> <li>• The mental health co-responder program was successful in diverting two-thirds of emergency call outs to appropriate care in the community.</li> <li>• This program is a collaboration between a local health network and ambulance service.</li> </ul>
<p><a href="#">Alternatives to emergency departments for mental health assessments during the COVID-19 pandemic</a></p> <p>Parmar and Bolton(10)</p>	<ul style="list-style-type: none"> <li>• A document published by the Royal College of Psychiatrists, UK.</li> <li>• A survey of 68 clinicians working in 68 emergency departments revealed that 56 (82%) of emergency departments had established an alternative care pathway for mental health assessment.</li> <li>• The primary location of assessment within alternative care pathways included: 38 (68%) on a separate site which has existing mental health services, 9 (16%) away from the emergency department but within the hospital, 5 (9%) within the emergency department, 3(5%) at home via telehealth, 1 (2%) at another clinic site.</li> <li>• Those facilities accepted self-referrals, as well as referrals from emergency departments, liaison psychiatry services, ambulance</li> </ul>

Source	Summary
	<p>services, police, crisis and home treatment teams, primary care and community mental health teams.</p> <ul style="list-style-type: none"> <li>Clinicians reported a reduction in emergency department presentations as a result of diverting patients to alternative care facilities.</li> </ul>
<p><a href="#">COVID-19: Liaison psychiatry services</a></p> <p>Royal College of Psychiatrists(11)</p>	<ul style="list-style-type: none"> <li>Guidance published by the Royal College of Psychiatrists, UK.</li> <li>Clinical service prioritisation: where possible, move patients who present with mental illnesses to a separate area away from high-risk areas in emergency departments. If not possible, minimise the risk of infection.</li> <li>Alternatives to the acute hospital emergency departments for patients presenting with primary mental health problems: when planning off-site emergency assessment, the following should be considered, appropriate location and facilities, hours of work, staffing models, access to IT, admin support, medication and pathology services, protocols for escalation and transportation and access to senior psychiatry advice.</li> </ul>

**Table 2: Mental health model of care in emergency departments in general**

Source	Summary
<b>Peer reviewed sources</b>	
<p><a href="#">Service Models for Urgent and Emergency Psychiatric Care: An Overview</a></p> <p>Coates 2018(14)</p>	<ul style="list-style-type: none"> <li>A literature review of service models for urgent and emergency psychiatric care</li> <li>This review found significant variations in the identified service models, with most models either community- or hospital-based. There were a few integrated models.</li> <li>This review highlights the need for integrated care models, such as central acute community team, community based psychiatric emergency service, and mobile assessment team, that integrates the community and hospital services.</li> </ul>
<p><a href="#">A systematic review of crisis interventions used in the emergency department: recommendations for pediatric care and research</a></p> <p>Hamm, et al. 2010(18)</p>	<ul style="list-style-type: none"> <li>A systematic review of effectiveness of emergency department-based interventions for mental health presentations.</li> <li>This review identified 12 observational studies. Three studies were specific to paediatric care and nine were about adult or general care.</li> <li>In paediatric care studies, availability of psychiatrist specialist care in the forms of emergency department follow-up team, rapid response team and child guidance team were associated with a reduction in either hospital admissions or length of stay.</li> </ul>

Source	Summary
	<ul style="list-style-type: none"> <li>○ Emergency Room Follow-Up Team: youth patients are followed-up by child psychiatrist and specialist nurse after being seen by an emergency department psychiatrist.(31)</li> <li>○ Rapid Response Model: paediatric patients were immediately seen by child psychiatrist or residents.(32)</li> <li>○ Child Guidance Model: paediatric patients were referred to a child guidance team consisting of psychiatric social worker and psychiatrist.(33)</li> <li>● In one adult care study, availability of a crisis intervention by a medical team was associated with a reduction in hospital admissions.                         <ul style="list-style-type: none"> <li>○ Crisis intervention: assessment by resident psychiatrists and investigation of patient subjective experiences.(34)</li> </ul> </li> </ul>
<p><a href="#">Interventions for people presenting to emergency departments with a mental health problem: A systematic scoping review</a></p> <p>Johnston, et al. 2019(20)</p>	<ul style="list-style-type: none"> <li>● A systematic scoping review of interventions for people presenting to emergency departments with a mental health problem.</li> <li>● This review identified 277 relevant articles and grouped them under seven intervention categories: pharmacological, psychological/behavioural, triage/assessment/screening, educational/informational, case management, referral/follow up and mixed interventions.</li> <li>● Several low-to-moderate quality studies found that emergency department-initiated case-management interventions, or referral or follow-up interventions and mixed interventions (screening plus counselling) resulted in a reduction in presentation, re-presentation rates or length of stay.</li> <li>● This review notes the disconnected evidence and lack of integrated and person-centred care. It recommends mental health specialty capacity building in emergency departments and integration of specialty care with emergency care.</li> </ul>
<p><a href="#">A systematic review of management strategies for children’s mental health care in the emergency department: update on evidence and recommendations for clinical practice and research</a></p> <p>Newton, et al. 2017(19)</p>	<ul style="list-style-type: none"> <li>● A systematic review of management strategies for children’s mental health care in the emergency department.</li> <li>● This review identified and synthesised findings from seven studies, which were grouped under two categories: assessment and screening strategies and emergency department-based specialised models of care.                         <ul style="list-style-type: none"> <li>○ Longer hospital stay was associated with screening laboratory tests during emergency department visits.</li> <li>○ Availability of emergency department-housed unit, child guidance team and specialty team were associated with decreased length of stay in the hospital.</li> </ul> </li> <li>● This review notes the low quality of the available evidence, which suggest that availability of specialist care and resources in</li> </ul>

Source	Summary
	<p>emergency departments for paediatric patients could result in reduced length of stay.</p>
<p><a href="#">Community alternatives to acute inpatient care for severe psychiatric patients</a></p> <p>Vázquez-Bourgon, et al. 2012(21)</p>	<ul style="list-style-type: none"> <li>• A literature review of evidence on the feasibility and efficacy of community alternatives to acute inpatient care for severe psychiatric patients.</li> <li>• This review identified three main types of acute care alternatives: Acute Continuous Day Care, Assertive Outreach Care and Home Acute Care.                             <ul style="list-style-type: none"> <li>○ Acute Continuous Day Care: acute care provided at the acute day hospitals or units can have many advantages compared to inpatient hospitalisations, including in areas of symptom recovery, social recovery, reduction in care costs, and patient satisfaction. The length of stay and readmission rates were shown to be similar to that of inpatient hospitalisation.</li> <li>○ Assertive Outreach Care: this model of care is characterised by dedicated multidisciplinary team, proactive follow-up, mental health promotion and social care programs in the community. Studies had shown that this model of care was associated with improved treatment adherences and quality of life and decrease in admissions into psychiatric hospitals and acute inpatient units.</li> <li>○ Home Acute Care or Crisis Resolution Team: this model of care is characterised by rapid assessment and treatment of patients experiencing mental health crises in the community 24 hours a day or for long working hours. Studies had shown that home acute care could result in a reduction in acute admissions to conventional psychiatric units in the hospitals.</li> </ul> </li> <li>• This review concludes that the above three models of care can serve as alternatives to acute inpatient care for severe psychiatric patients.</li> </ul>
<p><a href="#">Examining models of mental health service delivery in the emergency department</a></p> <p>Wand and White. 2007(23)</p>	<ul style="list-style-type: none"> <li>• A literature review of models of mental health service delivery in emergency departments.</li> <li>• This review identified three models of care, including:                             <ul style="list-style-type: none"> <li>○ Consultation-liaison psychiatry services: this model of care is characterised by the psychiatric services within the general hospital, providing psychiatric consultation to the patients presenting to emergency departments. This service model is critiqued for lack of service evaluation, lengthy wait times, lack of privacy and negative attitudes from the emergency department staff.</li> <li>○ Psychiatric emergency centres: this model of care is characterised by the acute mental health care provision in centres attached to emergency departments. This service</li> </ul> </li> </ul>

Source	Summary
	<p>model is critiqued for high costs for running the services, segregation of psychiatric patients and stigma.</p> <ul style="list-style-type: none"> <li>○ Emergency department mental health liaison nurses: this model of care is characterised by mental health liaison nurses providing clinical, psychological and referral services within emergency departments. Studies show that this model of care could reduce the waiting times and enhance the quality of assessment, management, coordination and follow-up.</li> </ul> <ul style="list-style-type: none"> <li>● This review concludes that mental health liaison nurse model embedded within emergency departments could potentially provide cost-effective and enhanced specialised mental health service in acute care settings.</li> </ul>
<p><a href="#">Crisis teams: systematic review of their effectiveness in practice</a></p> <p>Carpenter, et al. 2013(22)</p>	<ul style="list-style-type: none"> <li>● A systematic review of the effectiveness of crisis resolution and home treatment teams.</li> <li>● This review identified 37 interventional studies and found that implementation of crisis resolution teams had a modest impact on the reduction of the admissions and duration of stay at acute facilities. This model of care also found to be cost-effective alternative to hospital admissions.</li> </ul>
<p>Residential alternatives to acute psychiatric hospital admission: systematic review</p> <p>Lloyd-Evans, et al. 2009(35)</p>	<ul style="list-style-type: none"> <li>● A systematic review of the effectiveness of residential alternatives to standard acute in-patient mental health services.</li> <li>● This review identified 27 studies, including those evaluating community-based services that provide either residential crises management or placement within a family environment and time-limited in-patient services within the hospital complexes.</li> <li>● This review concludes that despite the low quality of the evidence, community-based alternatives could potentially be less costly, more acceptable and as effective as acute in-patient mental health services.</li> </ul>
<b>Grey literature</b>	
<p><a href="#">Nowhere else to go: Why Australia's health system results in people with mental illness getting 'stuck' in emergency departments</a></p> <p>Duggan, et al. 2020(36)</p>	<ul style="list-style-type: none"> <li>● A report commissioned by Australasian College for Emergency Medicine and was released in September 2020.</li> <li>● This report examines the current model of mental health care in Australia and explores the influencing factors of increased demand for emergency care department services by people experiencing mental health crises.</li> <li>● It summarises six innovative mental health care models in emergency departments, including:             <ul style="list-style-type: none"> <li>○ <a href="#">The Psychiatric Alcohol and Non-prescription Drugs Assessment (PANDA) Unit at St Vincent's Hospital, Sydney</a></li> </ul> </li> </ul>

Source	Summary
	<ul style="list-style-type: none"> <li>○ <a href="#">The Mental Health Observation Area (MHOA) in Joondalup Health Campus, Perth, Western Australia</a></li> <li>○ <a href="#">Homeless Team at the Royal Perth Hospital, Western Australia</a></li> <li>○ <a href="#">Mental Health Liaison Nurse (MHLN) service at the Royal Prince Alfred Hospital, Sydney</a></li> <li>○ a partnership intervention project between the Queensland police, health and ambulance services</li> <li>○ peer worker and <a href="#">Safe Haven Café</a> model at St Vincent’s Hospital, Melbourne.</li> </ul> <ul style="list-style-type: none"> <li>● This report recommends five priority actions to reduce the mental health presentations at the emergency departments, including:                     <ul style="list-style-type: none"> <li>○ ensuring adequacy of services to meet need</li> <li>○ improving funding and service models to provide better outcomes</li> <li>○ establishing effective services coordination and accountability in all jurisdictions</li> <li>○ ensuring best practice emergency mental health care and treatment</li> <li>○ ensuring adequacy of rural mental health services and health workforce capacity.</li> </ul> </li> </ul>
<p><a href="#">Models of Care for Mental Health in ED</a></p> <p>Centre for Clinical Effectiveness 2017(13)</p>	<ul style="list-style-type: none"> <li>● A scoping review of models of care for mental health in emergency departments.</li> <li>● This review identified 17 relevant articles, with the majority describing models of mental health assessment within emergency departments and two describing specialised service provision outside the emergency departments.</li> <li>● A detailed summary of the included articles and models of care is provided in the review.</li> </ul>
<p><a href="#">Models of care for people with severe and enduring mental illness</a></p> <p>Kakuma, et al. 2017(15)</p>	<ul style="list-style-type: none"> <li>● An evidence check commissioned by the NSW Ministry of Health.</li> <li>● It identified and synthesised around 150 academic articles, reports and other resources about models of care for people with severe and enduring mental illness.</li> <li>● The five main types of models of care that were identified are: intensive case management, assertive community treatment, supported housing/Housing First, the strengths/recovery-based model and critical time intervention. In majority of the models, care coordination was provided by a case manager and team and combined health, social and housing support were provided.</li> <li>● Majority of the identified models of care were inpatient units in the hospitals or community services, with only a few mentioning care models and coordination in the emergency departments.</li> </ul>

Source	Summary
<p><a href="#">Care of the Psychiatric Patient in the Emergency Department –A Review of the Literature</a></p> <p>American College of Emergency Physicians 2014 (16)</p>	<ul style="list-style-type: none"> <li>• A reference tool and guide prepared by the American College of Emergency Physicians.</li> <li>• This review recommends best practices for reducing the emergency department boarding of psychiatric patients.                             <ul style="list-style-type: none"> <li>○ Having a psychiatrist available either on-site or via telehealth.</li> <li>○ When a psychiatrist is unavailable, make available treatment protocols for hospital and emergency physicians to follow.</li> <li>○ Move psychiatric patients to psychiatry emergency department observation units, away from the main emergency department area.</li> <li>○ Provide case management in the emergency departments.</li> <li>○ Establish mobile crisis intervention teams or urgent walk-in clinics that can de-escalate crises before patients present to emergency departments.</li> <li>○ Develop state-wide patient dashboards to allow emergency department staff to view and allocate patients to available inpatient beds across the state.</li> <li>○ Change billing and reimbursement guidelines.</li> </ul> </li> <li>• This report describes community resources that can be used for establishing services for emergency psychiatric patients, including:                             <ul style="list-style-type: none"> <li>○ establishing regionalised psychiatric services</li> <li>○ establishing comprehensive crisis systems that provide round-the-clock services, including crisis hotlines, walk-in care for urgent cases, mobile response units, medical clearance screening for hospitalisation, and safe-houses</li> <li>○ developing individualised treatment plans, including history, treatment plan and contact persons, for frequent psychiatric patients of emergency departments and storing this information with the patient’s files. Every time when the patient checks into the emergency department, emergency physicians are alerted to this information</li> <li>○ establishing dedicated 24-hour psychiatric centres which can receive patients brought in by ambulances or diverted from emergency departments</li> <li>○ utilising community databases for frequent emergency utilisers and creating care plans for them.</li> </ul> </li> </ul>
<p><a href="#">Mental health and new models of care: lessons from the vanguards</a></p>	<ul style="list-style-type: none"> <li>• A report based on scoping and in-depth case study interviews and roundtable discussions with leaders and stakeholders from UK.</li> <li>• In terms of urgent and emergency care services for people with mental health problems, several care models were described, including:</li> </ul>

Source	Summary
<p>Naylor, et al. 2017(17)</p>	<ul style="list-style-type: none"> <li>○ a 24 hour, seven days a week psychiatric liaison service, which incorporates consultant psychiatrist, mental health triage nurse, frail older people’s assessment and liaison service as well as the alcohol team service</li> <li>○ Safe Havens service in the community setting that provides a service for those who are at risk of mental health crises seven days a week.</li> <li>○ First Response Service that directs emergency help callers to a dedicated mental health crisis response service. It consists of a psychologist who conducts an initial telephone assessment, a coordinator that oversees the care process and mental health nurses and social workers that provide in-person assessment and management.</li> </ul>

## Appendix

### PubMed search terms

((“mental health”[tiab] or “mental\* ill\*”[tiab] or “mental\* disorder\*”[tiab] or psychiatric[tiab]) AND (emergency service[Title/Abstract] OR emergency medical services[Title/Abstract] OR emergency medicine[Title/Abstract] OR hospitals[Title/Abstract] OR hospital units[Title/Abstract] OR emergency department[Title/Abstract] OR emergency hospital[Title/Abstract] OR emergency hospitals[Title/Abstract] OR emergency medical service[Title/Abstract] OR emergency medicine[Title/Abstract] OR emergency room[Title/Abstract] OR emergency service\*[Title/Abstract] OR emergency unit[Title/Abstract] OR emergency units[Title/Abstract] OR emergency ward[Title/Abstract])) AND (2019-nCoV[title/abstract] or nCoV\*[title/abstract] or covid-19[title/abstract] or covid19[title/abstract] OR "covid 19"[title/abstract] OR "coronavirus"[MeSH Terms] OR "coronavirus"[title/abstract] OR sars-cov-2[title/abstract] OR “severe acute respiratory syndrome coronavirus 2”[Supplementary Concept])) AND (2020/01/01:3000/12/31[Date - Publication])

((Models, Organizational[MeSH] OR organizational innovation[MeSH] OR "Patient-Centered Care/organization and administration"[Mesh] OR Delivery of Health Care, Integrated[MeSH] OR “model of care”[tiab] OR “models of care”[tiab] OR “care model\*”[tiab] OR “care delivery model\*” [tiab] OR “organisation of”[tiab] OR “organisational model\*”[tiab] OR “organisation model\*”[tiab] OR “organization of”[tiab] OR “organizational model\*”[tiab] OR “organization model\*”[tiab] OR “healthcare delivery model\*”[tiab] OR “integrated care”[tiab] OR “integrated model\*”[tiab] OR integrated[title]) AND (“mental health”[tiab] or “mental\* ill\*”[tiab] or “mental\* disorder\*”[tiab] or psychiatric[tiab]) AND (2019-nCoV[title/abstract] or nCoV\*[title/abstract] or covid-19[title/abstract] or covid19[title/abstract] OR "covid 19"[title/abstract] OR "coronavirus"[MeSH Terms] OR "coronavirus"[title/abstract] OR sars-cov-2[title/abstract] OR “severe acute respiratory syndrome coronavirus 2”[Supplementary Concept])) AND (2020/01/01:3000/12/31[Date - Publication]))

((Models, Organizational[MeSH] OR organizational innovation[MeSH] OR "Patient-Centered Care/organization and administration"[Mesh] OR Delivery of Health Care, Integrated[MeSH] OR “model of care”[tiab] OR “models of care”[tiab] OR “care model\*”[tiab] OR “care delivery model\*” [tiab] OR “organisation of”[tiab] OR “organisational model\*”[tiab] OR “organisation model\*”[tiab] OR “organization of”[tiab] OR “organizational model\*”[tiab] OR “organization model\*”[tiab] OR “healthcare delivery



model\*[tiab] OR “integrated care”[tiab] OR “integrated model”[tiab] OR integrated[title] AND (“mental health”[tiab] or “mental\* ill”[tiab] or “mental\* disorder”[tiab] or psychiatric[tiab]) AND (emergency service[Title/Abstract] OR emergency medical services[Title/Abstract] OR emergency medicine[Title/Abstract] OR hospitals[Title/Abstract] OR hospital units[Title/Abstract] OR emergency department[Title/Abstract] OR emergency hospital[Title/Abstract] OR emergency hospitals[Title/Abstract] OR emergency medical service[Title/Abstract] OR emergency medicine[Title/Abstract] OR emergency room[Title/Abstract] OR emergency service\*[Title/Abstract] OR emergency unit[Title/Abstract] OR emergency units[Title/Abstract] OR emergency ward[Title/Abstract]) AND (2000/01/01:3000/12/31[Date - Publication]))

## Google and Twitter search terms

Mental health care/psychiatric care and emergency department and COVID-19.

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Rapid evidence checks are based on a simplified review method and may not be entirely exhaustive, but aim to provide a balanced assessment of what is already known about a specific problem or issue. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.