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Evidence Check

Recovery-oriented mental health models

An **Evidence Check** rapid review brokered by the Sax Institute for the Agency for Clinical Innovation. May 2016.

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This report was prepared by:

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1 Executive summary

This Evidence Check has been commissioned by the Murrumbidgee Local Health District (MLHD) and the Agency for Clinical Innovation (ACI) through the Sax Institute to identify information about recovery-oriented community-based mental health care for adults.

Review scope

This rapid review examined papers supporting the recovery of adults experiencing mental illness. The researchers sought evidence to support the review in three stages:

- The first stage consisted of a systematic search of Medline, Scopus, Embase, Cochrane Library and CINAHL databases
- The second stage focused on searches of the five databases for each of the following concepts: e-Health; telehealth; online; smartphone; acute/crisis care; and community care
- The third stage involved a search of articles identified from reference lists and grey literature.

The researchers presented the initial analysis of the data to a group of stakeholders that asked for papers on the following topics to be included in the review as they were not included in the initial search. They included third wave therapies, recovery colleges, eating disorder community care, family sensitive practice, co-design and the open dialogue approach. The researchers applied the additional search terms to the same databases. The researchers excluded articles that focused on child or adolescent mental health, older persons' mental health, inpatient or residential treatment, housing and accommodation assistance, and non-clinical NGO services. The researchers also excluded those studies that examined models that had not been evaluated although some were subsequently included for background literature.

The researchers included a total of 171 papers in the review.

Review questions

What models of care for mental health services for adults with mental health conditions in the community have been implemented and evaluated?

Of the models identified, which of these have shown to deliver positive outcomes for consumers and families/carers? Which have no evidence of positive outcomes?

Results summary

This rapid review of care coordination models shows that most existing models can, if adapted to be delivered in a recovery-oriented fashion, have good outcomes for consumers. Recovery-oriented care coordination models which bring together a multidisciplinary team of specialists, including peer-support workers, are effective in delivering care.

A range of 'add-on' services for care-coordination allow for basic models to be used to target specific needs. Effective add-ons include Illness Management and Recovery, Individualised Placement and Support

for employment, cognitive behavioural therapy (CBT) interventions, Wellness Recovery Action Planning, Wellness Enhancement Recovery Programs, and peer support add-ins such as Self-Help Agencies and Friends Connection. These programs can be added to as usual care with little additional resource implications to increase the effectiveness of standard programs for target groups of consumers.

Of those 'third wave' therapies analysed, the framework with the clearest positive outcomes for consumers was Dialectical Behavioural Therapy. The Open Dialogue approach, while showing some very significant benefits in small Finnish studies, needs more large scale evaluation before it is implemented in Australia.

The only model specifically developed as a recovery-oriented model was the Open Doors to Recovery Program, which showed positive outcomes for consumers. Recovery orientation of existing models is possible, although large projects (e.g. REFOCUS) which sought to provide recovery oriented service development showed little effective change in practice. This was attributed to a lack of organisational commitment and stability. This factor was seen to be a contributor to intervention failure in multiple recovery-oriented projects. This rapid review also found that peer worker inclusion in case management teams improved their recovery orientation and recovery outcomes for consumers.

e-Health interventions are effective treatments for individuals with a wide range of diagnoses. They are mostly delivered via 1) web-based platforms for treatment; 2) tools for prompting health-related behaviours; and 3) online therapy. Web-based treatment platforms are used as stand-alone interventions or blended treatments with either a program-specific therapist or the consumer's own clinician involved. Several programs are already available for free or at low cost in Australia, including ThisWayUp, MoodGYM, GetReal and Mindspot. Online CBT programs are shown to be as effective as face-to-face counselling. Blended programs can also be used as transition support programs for individuals leaving inpatient care. eHealth programs are appropriate to rural and regional settings where internet access is available, and most can be delivered via both mobile technology and computers. Any implementation of e-Health initiatives should be done with a full understanding of the digital divide, which means that some groups may have more difficulty accessing these technologies than others. This is particularly significant because there is a lower use of internet-based technologies amongst those groups which often already have poorer mental health, including those in remote regions and some groups of indigenous, and Culturally and Linguistically Diverse (CALD) Australians.

High-quality evidence for interventions appropriate to Indigenous communities are missing but those that do exist show that they are short-term, localised and delivered by Indigenous people. Principles of service provision should be flexibility, reciprocity, cultural-specificity and involvement.

There is a lack of evidence for models which specifically target people from CALD communities. However, the programs included here show that they are more successful at engaging with CALD communities when staffed with culturally-specific staff and peer-support workers.

Murrumbidgee Local Health District (MLHD) includes urban centres, regional and rural areas, and one remote area. For rural and regional areas, localised programs which are devised with local collaboration of consumers, staff and other community members should be developed to ensure that programs meet local needs.

None of the papers offered a sophisticated cost-benefit analysis. Several papers reported that the programs evaluated were cost-effective. However, they adopted varying definitions of cost-effectiveness, which limited comparison. E-health programs can be implemented in a very cost-effective way for services and provide a us This rapid review of care coordination models shows that most existing models can, if adapted to be delivered in a recovery-oriented fashion, have good outcomes for consumers. Recovery-oriented care

coordination models which bring together a multidisciplinary team of specialists, including peer-support workers are effective in delivering care.

2 Background

This review was commissioned by the Murrumbidgee Local Health District (MLHD) and the Agency for Clinical Innovation (ACI) to identify evidence about providing mental health support for adults who are living in the community.

The focus of this review is on recovery-oriented models of care and interventions. Consumer self-determination and wellbeing are promoted under this recovery-oriented approach to mental health care.[1]

The aim of this evidence check is to communicate a detailed understanding of the models of care and their capacity to maximise mental health outcomes for adults in the community. This understanding can then be used to practically inform MLHD's development of evidence-based Service Delivery Guidelines. While this context provides the background to the review purpose, the findings are also applicable to other NSW LHDs and service settings across Australia.

Review questions

What models of care for mental health services for adults with mental health conditions in the community have been implemented and evaluated?

Of the models identified, which of these have shown to deliver positive outcomes for consumers and families/carers? Which have no evidence of positive outcomes?

Scope and definitions:

- "Models of care" include services or interventions delivered together as a whole service
- Models are included that provide services from acute through to long term care for people in the community
- "In the community" means people who are living outside of an inpatient or other residential setting. Services are not delivered in a hospital setting, but may include the interface between inpatient and community in care planning and transfer of care planning
- Studies are only included where components of the model under examination were well described (e.g. referral process to the service including: types of conditions or other criteria used; types of treatments or interventions; staff type and mix; length of service/numbers of visits; links with other services such as housing, employment, discharge criteria, and links between inpatient and community services)
- Where described the underlying values and principles of the model of care were included
- Models of care which do not offer a recovery-oriented approach were not included
- Interventions of interest included but were not limited to: on-line therapeutic programs and smartphone applications; emerging e-health services; therapeutic/psychosocial interventions; acute and crisis interventions; case management; extended care in the community; use of telehealth for clinical service delivery. There was a particular focus on services or interventions that provide targeted equitable access (e.g. people living in rural and remote areas)
- There is particular interest in services where consumers and families or carers were involved in the design of interventions
- "Positive outcomes" include but were not limited to: consumer satisfaction with the service; better consumer understanding of a condition and how to manage it; reduced unplanned hospitalisations and

potentially avoidable deaths; improved functioning within the community; maintaining tenancy; and improved participation in education and employment.

Studies should also be flagged which:

- Include information on resources or costs required to deliver service
- Describe services for Aboriginal people or people from culturally and linguistically diverse (CALD) backgrounds.

The Evidence Check's commissioners subsequently identified several further areas about which they required information which were not picked up in the initial search. The following areas were thus added to the review:

- Recovery Colleges
- Community-based eating disorder programs
- Family sensitive approach
- Open dialogue approach
- Co-designed community based mental health treatment
- Third-wave therapies: specifically acceptance and commitment therapy, dialectical behavioural therapy and mindfulness.

3 Search methods

The researchers conducted their search strategy over three stages.

Stage one consisted of a systematic search of Medline, Scopus, Embase, Cochrane Library and CINAHL databases. Box 1 below shows the initial search terms relating to community mental health.

Box 1: Search terms for initial search for community based mental health services

Exp: Community mental health services/ OR Community based OR Outpatient service*

AND

Mental OR Psych*

AND

Service OR Intervention OR Model OR Program OR Model of care or trial

AND

Recovery OR Person cent* OR Individuali*

AND

limit to (abstracts and English language and yr="2006 - Current")

Truncation was applied to locate variations of particular words. Terms were mapped to subject headings and 'exploded' to include associated concepts wherever possible. Exhaustive searches were conducted on multiple fields. Results were limited to abstracts, publications in English language and publication year between 2006 and 2016.

The following search results were obtained: Medline 336; Embase 351; CINAHL 350; Scopus 98; and Cochrane Library 8. That gave a total of 1143 results.

Stage two applied focused searches to the five databases for each of the following concepts: e-Health; telehealth; online; smartphone; acute/crisis care; and community care. Appendix 1 shows examples of focused search terms adapted to the different databases. Appendix 2 provides a PRISMA flowchart of the search. Focused searches provided an extra 4611 results.

The systematic and focused searches produced a total of 5754 results which were downloaded into EndNote for assessment. Following a removal of duplicates, the revised total was 3538. We excluded papers that focused on:

- Child, adolescent mental health
- Older persons' mental health
- Inpatient or residential treatment
- Housing/accommodation assistance
- Non-clinical NGO services; or
- A primary illness which was not related to mental ill-health.

Articles were excluded on occasions where they were not recovery-oriented. We also excluded papers that spoke about models in general terms without describing them in detail.

Two researchers tested exclusion criteria against a sample of abstracts with filtering consistency negotiated between them.

After applying the rules to all abstracts, a total of 600 possibly relevant articles remained. Full-texts were downloaded and after applying the exclusion rules to the 600 full-texts, the researchers identified a total of 100 relevant articles for review.

Stage three involved a search of articles identified from reference lists and grey literature obtained from Google via the open search term 'community models care mental health services pdf'. This stage produced an additional 15 documents giving a total of 115 relevant papers.

The researchers conducted a subsequent search to locate further articles focussing on key areas not picked up in the initial search via the same databases. The more widely focused search was for papers on: recovery colleges; open dialogue approach; eating disorder community treatment; family sensitive approaches; co-design; mindfulness dialectical behavioural therapy; and acceptance and commitment therapy. A group of stakeholders from MLHD, the Sax Institute and the ACI identified these areas of focus. As a result, 56 additional papers were added to the search bringing the total number of papers to relevant to the review to 171 (see Appendix 2 – PRISMA flowchart).

4 Results

Background

Components of a mental health system in a high-resource setting

It is hard to start thinking about what interventions should and can be provided within a community mental health system without an overall sense of what a mental health system should look like.

Graham Thornicroft and Michelle Tansella[2, 3] developed a study which sought to map out the key components of different types of mental health systems – those with low, medium and high levels of resources. The components were developed via a process involving a systematic review of existing literature, and surveys of international experts in mental health policy and systems development from 31 nations.[4]

Australia has a high level of resources available to the government to fund mental health care. Table 1 below sets out those elements that should be included in a mental health system within a high-resource setting.

Table 1: Components of a mental health system in a high-resource setting developed by Thornicroft and Tansella[3]

Primary care and mental health	General adult mental health services	Specialised adult mental health services
• Case findings and assessment • Talking and psycho-social treatment • Pharmacological treatments	• Out-patient/ambulatory clinics • Community mental health teams • Acute in-patient care • Long-term community-based residential care • Work and occupation	• Out-patient/ambulatory clinics • Community mental health teams • Acute in-patient care • Long-term community-based residential care • Work and occupation

As the table shows, a mental health system should include in-patient care and long-term residential care (not included in this review) along with a variety of community-based services ranging from low-intensity to high-intensity and delivered within general primary care and more specialised mental health services. The scope of our review covers most of these elements, although we do not cover pharmacological treatments and assessment at the primary care levels.

Recovery-oriented services

The concept of recovery has become a guiding principle for the development and implementation of mental health services in Australia and is identified as such within our main mental health policy and implementation documents. The Australian Health Ministers' Advisory Council (AHMAC) officially endorsed the *National framework for recovery-oriented mental health services* in July, 2013.[1]

Beyond Australia recovery is also a goal of international mental health and is included as a Goal of the WHO Mental Health Action Plan (2013-2020) which aims to: "promote mental well-being, prevent mental disorders, provide care, enhance recovery, promote human rights and reduce the mortality, morbidity and disability for persons with mental disorders." The same document describes recovery thus: "From the perspective of the individual with mental illness, recovery means gaining and retaining hope, understanding

of one's abilities and disabilities, engagement in an active life, personal autonomy, social identity, meaning and purpose in life and a positive sense of self. Recovery is not synonymous with cure."

The focus of recovery is therefore on the individual and recovery-oriented services should be person-centred. Key to this is the creation of 'recovery oriented services' which promote the concept of recovery to individuals through any care that is provided.

Results structure

The results of our rapid review are structured into four sections which were developed in line with the main findings and review goals. The first section highlights the case-management models identified in the literature, including those case management models which were marked by 'add-on' programs that specialised in the care provided. Most of these models fit within levels two and three of Thornicroft and Tansella's mental health system structure outlined above.[3] The report then highlighted other community-based interventions which were not aligned with a particular case-management model or service structure. Many of these interventions fit within level one of Thornicroft and Tansella's schema.[3] The next section of the report focused in on e-Health and m-Health interventions. The final section of the report reflects on studies which have been found helpful for rural, regional and remote populations.

When discussing the interventions identified we highlight key papers that describe a particular intervention, focusing in on the elements of the program, the target population (including illness type and severity level), staff mix and findings. We focus on whether the outcomes for services and clients were positive, negative, neutral or mixed.

Case management

Key findings

- Effective recovery-oriented case management models identified included, the Open Doors to Recovery (ODR) program, recovery-oriented Intensive Case Management and ACT-IMR (an Illness Management and Recovery add-on to Assertive Community Treatment)
- All programs researchers reviewed that related to case-management were delivered for people with severe or complex mental ill-health
- The only model specifically developed as a recovery-oriented model was the ODR program, which showed positive outcomes for consumers
- With active recovery orientation methods in place standard case management models can be delivered with a focus on recovery
- Peer worker inclusion in case management teams improves their recovery orientation and recovery outcomes for consumers
- Case management add-ons increase the relevance of programs and their recovery orientation
- Consumer-run peer-support add-ons and consumer derived case management tools increase the effectiveness of community mental health services
- Consultation with consumers, carers and staff and adaptation to local contexts make generic models more effective in practice
- Programs are more successful at engaging CALD communities when operated with culturally specific staff and peer-support workers
- Case management programs may be relevant for implementation in larger regional towns, but the extensive resources and staff mix necessary for the program delivery may make them ineffective in many rural areas

- The Care Planning Approach is not currently an appropriate model
- There were no programs specifically relevant to indigenous communities or rural and remote communities
- There were no cost-effectiveness evaluations conducted of the programs
- Organisational commitment to implementation and recovery-orientation was cited as key to program success or failure in several studies.

Introduction

A Cochrane Review of randomised controlled multi-morbidity interventions found a high level of evidence to support the use of care coordination or case management for improving mental health (specifically depression).[5] However, case-management comes in different forms and many are not specifically recovery oriented. The most frequently practiced forms of case management are[6]:

- clinical case management — where the case manager is also a clinician and may also provide clinical support
- recovery-oriented case management — based on a strengths or other recovery-oriented model
- the brokerage model of case management — where the case manager is not generally a clinician and does not provide clinical support and only links together relevant services.

Our review found multiple case management models with the most frequently cited being Intensive Case Management (ICM), Open Doors to Recovery (ODR), the Care Program Approach (CPA) and Assertive Community Treatment (ACT). These are discussed here before describing a series of add-ons that are frequently used with standard case management to meet the needs of specific groups of consumers. These add-ons include peer-support programs, employment interventions, CBT and programs specific to ethnic communities.

Intensive Case Management

ICM has shown mixed success in improving consumer outcomes. Evaluations of ICM in different contexts have reported mixed success with Randomised Controlled Trials (RCTs) in the UK, for example, showing little positive impact over other methods of case management.[7, 8] However, evaluations of Irish and US programs have shown more significant positive impacts on functioning and symptomology.[9, 10] This is likely to do with the local context in which the program is implemented with those that are more successful being implemented in settings that are more prepared for it.

An Irish RCT investigated a recovery-oriented ICM program which involved (at least) weekly meetings with consumers over a nine-month period.[10] Consumers had significant levels of mental ill-health with the main diagnoses being schizophrenia, other psychotic illnesses and bipolar disorder. Staff and consumers collaborated to develop detailed plans meeting individual client needs, crisis planning, goal setting, vocational support and social support.[10] This was backed up by the creation of formal plans by multidisciplinary teams. In doing so it drew from elements of already established programs including ACT (discussed below) and other forms of ICM, but did so in a way that was tailored to the local context. There were low staff-client ratios of less than 1:5 and the program did not draw on an additional workforce, but was created to work with existing resources.[10]

The program's developers created it through consultation with a multidisciplinary team of practitioners, and patients and carers provided input into its design which was underpinned by a strong focus on the philosophy and practice of recovery. This consultation ensured the program was locally relevant. When compared to treatment-as-usual the intervention group had significantly improved symptoms and functioning, including in interpersonal relationships and cognition.[10]

Opening Doors to Recovery

The US-based recovery-focused ODR program was the focus of three qualitative and quantitative studies.[11-13] The program aims to reduce readmission rates amongst individuals with severe mental ill-health who have a recent history of inpatient admission and is underpinned by the values of recovery, person-centred care and peer support. The focus of the intervention is on community connections and meeting consumer needs to allow them to have a stable place in the community.

The intervention is run by a mobile multidisciplinary team comprising of three 'Community Navigation Specialists' (CNS) — a clinician, a peer-worker and a carer/family member.[11, 12] The team works with a client based on their needs and have flexibility in the types of support offered. They generally meet at least once a week with the client, and link them up with services and community supports to meet their needs.

The program relies on formal and informal close connections and partnerships with other service providers and community organisations (including police) and this is a key part of the role of the CNS — called "collaborative fusion" by Compton et al.[12]

The program was evaluated both qualitatively[13] and quantitatively[12] and showed positive impacts in both. The program led to improved recovery for consumers and significantly reduced levels of hospitalisation and recidivism, for clients in contact with the criminal justice system.[12]

Care Programme Approach

The CPA is used within the NHS to offer case management or care coordination to people with severe mental ill-health. CPA is usually offered in a non-person-centred way with standardised care plans offered.[14] However, two studies included in this review put in place recovery oriented planning processes. Farrelly et al[14] reviewed CPA planning for people with psychosis after the implementation of Joint Crisis Plans (JCPs) which were developed as part of a more individualised approach to CPA. However, they found that there was no improvement in individualisation of plans following the implementation of JCPs.

In a qualitative study by Rogers et al[15] a CPA was developed for people with Borderline Personality Disorder in a personality disorder specific service. The care coordinator worked with the consumer to identify their needs and develop a person-centred plan for addressing their needs. The consumer is empowered to put the plan in place and the coordinator works with them to do so.[15] This process was found to be helpful when implemented in a collaborative manner but unhelpful when consumers felt that planning was being conducted without their input.[15] Based on these findings there is currently no evidence to support the implementation of a CPA approach.

Assertive Community Treatment models

The most commonly referenced discrete care management model was Assertive Community Treatment (ACT). While ACT is a very frequently used intervention in community mental health, the researchers conducting this rapid review could only identify a small number of eligible studies, likely to be a result of using 'recovery' or 'person-centred' as a search limiter. ACT as it was developed does not have an explicit recovery orientation. However, all of the studies included here worked from a recovery oriented perspective. A sub-table summarising the ACT studies is provided in Table 2 below.

ACT is at its core a community based case management rehabilitation model which targets individuals with more severe mental ill-health. It was developed by Leonard Stein, Mary Ann Test and others in the 1970s to support deinstitutionalisation in the US.[16, 17] From there it was widely introduced in the UK, Australia and other countries as deinstitutionalisation progressed. ACT has been evaluated extensively and found to have largely positive outcomes for consumers including in housing, recovery, rate of hospitalisation and employment.[18, 19] Previous meta-analyses of ACT interventions have found that it has significant impact on

hospitalisations, particularly among those who are high users of hospital services and is cost-effective when compared to regular hospitalisation.[20] It has therefore been a treatment model supported by government, including endorsement as an effective evidence-based practice by the US Government Department of Health and Human Services. In Australia ACT has been an intervention of choice by many local health districts and the second national survey of Psychotic Illness in Australia from 2010 showed that around 9% of people with psychosis received home visits from ACT services over the prior 12 months.[21]

ACT is a clinical model of case management where case managers are a team of clinicians who directly manage the consumer's needs as much as possible without calling on external services. Client visits take place in the consumer's home or another community setting rather than in the clinic. ACT staff are clinicians and teams will generally have a range of competencies including nursing, social work and those of mental health professionals. The overall aim is to meet a client's psychosocial needs before they reach a crisis situation thereby allowing them to live in the community. ACT targets consumers who have high-service needs and has been successful in allowing these consumers to live a relatively stable life in the community and is viewed as cost-effective because it reduces hospitalisation, including within Australian-based RCTs.[17, 22] Rosen et al[22] describe the main facets of ACT as it operates in Australia. These are described in Box 2 below.

Box 2: Main components of ACT

Main components of Assertive Community Treatment (ACT) in Australia (adapted from Rosen et al[22]):

- Clinical case management
- Cost effective (compared to frequent hospitalisation of this group)
- Multi-disciplinary teams
- Mobile care in the community
- 24-hour crisis back up
- Open-ended (offered for no fixed time period)
- Available all week (day and night)
- Personalised to meet consumers' needs
- Low case-loads for staff (1:10).

One critique of ACT has been that it is not genuinely person-centred or recovery oriented. While it may work with a consumer's needs it is not designed to do this in a recovery-oriented way which looks holistically at the consumer's needs in relation to their overall recovery journey (which may differ from their clinical journey and clinical needs).[23 24] Other critiques have stated that ACT is actively coercive, which goes against the need for recovery to be focused on the individual's own definition of recovery.[25]

Table 2: ACT-related interventions

Authors	Population	Elements	Outcomes
Morrissey et al[20]	450 US ACT users (substance use disorder, schizophrenia or severe affective disorder) with history of hospitalisation.	Standard ACT but with training in recovery orientation and person centred care for staff.	Reduction of use of hospital beds — approx. 33 days per client compared to pre-intervention.

Authors	Population	Elements	Outcomes
Salyers et al[26]	324 people with severe mental illness in 7 community MH centres.	ACT-IMR combined standard ACT with Illness Management and Recovery (IMR is explained in more detail below).	Promoted recovery (particularly hope) and self-management of illness. IMR increases recovery orientation of ACT.
Salyers et al[27]	17 participants with schizophrenia or schizoaffective disorder.	ACT-IMR combined ACT with IMR training provided by a peer worker.	Increased understanding of recovery amongst consumers. IMR increases recovery orientation of ACT.
Salyers et al[23]	498 people receiving ACT, 145 of which also received IMR — Primary diagnosis: psychosis (72%), mood disorder (24%), 47% had comorbid substance misuse. 90% unemployed. 34% less than high school education. 6% homeless.	Any time period of IMR in combination with standard ACT. Average use of IMR: 10 ±6.3 months.	ACT-IMR participants had less use of inpatient care and emergency services than ACT alone.
Malm et al[28]	Swedish study. 51 people with schizophrenia. Five year follow-up of individuals enrolled in ACT-IC.	Standard ACT is supported by an Integrated Care (IC) team made up of the consumer, professionals and family. IC team work together to plan and problem solve.	Program was found to be useful long-term with positive outcomes in consumer satisfaction and social functioning compared to control.
Tempier et al[19]	144 UK consumers (57 in ACT and 50 in standard care) with first episode psychosis (ages 16–40) in London.	Standard ACT for people with first episode psychosis vs standard care with a community mental health team.	After 18 months the intervention group had statistically significant wider social support networks and better clinical outcomes.
Gold et al[29]	74% of ACT-IPS participants had schizophrenia.	Implemented ACT-IPS (Individualised Placement and Support) program which delivers vocational training in US rural setting to support employment. Comparison to traditional vocational program.	64% in the ACT-IPS achieved employment compared to 26% in ACT alone. Also earned more income.

Authors	Population	Elements	Outcomes
Gao and Dolce[18]	60 consumers with a history of inpatient admissions for mental ill-health.	Consumers received standard ACT but staff received intensive training in vocational support which focused on the importance of employment and skills in how to support employment.	Improved employment in ACT-receiving consumers from 5% to 24% over 12 months.
Barbie et al[30]	33 people (16 in intervention, 17 control) with diagnoses of schizophrenia (75%) and bipolar (25%) and long term mental ill-health (years: 21.87±12.07).	Intervention group received standard ACT with additional workbook training in recovery, goal setting, building support, managing stress.	Hope, empowerment and recovery increased in the intervention group. No overall quality of life improvement.
Van Vugt et al[31]	530 people with the most severe mental ill-health in a large Dutch ACT evaluation. Had Global Assessment of Functioning scores less than 40 or two hospital admissions of over 50 days combined in last year.	Outcomes for clients who had a consumer provider as part of their standard ACT care team were compared to those who received care from teams without consumer providers.	Improvement in client HoNOS (Health of Nation Outcome Scale) scores in needs being met (measured by Camberwell Assessment of Needs scale). Showed increased days of hospitalisation but decreased homeless days.
Nepean Blue Mountains LHD[32]	38 consumers with history of high levels of inpatient stays.	Standard ACT implemented with high fidelity to ACT program.	Changes after 12 months of program implementation: number of bed days reduced from 3022 to 569 per year. Admissions reduced from 75 to 32 per year.
Siskind and Wiley-Exley[33]	Consumers with severe mental ill-health (73–77% schizophrenia).	US comparison of standard ACT between 61 rural teams and 13 urban teams.	Those in rural ACT were less likely to have a substance use issue and were more likely to be supported by family. ACT implementation made more difficult in rural setting by less experienced team, greater distances meaning less client contact.

Authors	Population	Elements	Outcomes
Van Veldhuizen[34]	200–220 long-term psychiatric patients.	FACT program offering standard ACT to the 20% of people currently needing intensive support. When move to 80% get less intensive ACT: "recovery oriented case management" but can still draw on ACT team. Move back to ACT when need more intensive support.	80-90% of consumers in the high needs group receive full ACT for only a short period and can then move to less intensive services.
Chui et al[35]	Individuals in Hong Kong with long-term severe mental ill-health.	Hong Kong implementation of FACT: Flexible ACT. Structured program which includes a focus on employment, substance misuse and family interventions.	Patient outcomes not reported but program viewed as successful by staff.

The studies that this review recovered were largely those attempting to address the critiques about the lack of recovery orientation within the ACT model by adding in components which made them more recovery oriented. Three studies led by Michelle Salyers[23, 26, 27] implemented a modified form of ACT: ACT–IMR, which added the Illness Management and Recovery (IMR) program (explained in further detail below) to standard ACT. In one pilot study of ACT-IMR, the IMR component of ACT-IMR was implemented by peer-support workers.[26] The implementation of the program in this context showed improved understanding of recovery by both consumers and staff. The program also showed improved recovery scores on self-rated quantitative recovery measures. The results are encouraging, however, as this was only a pilot study its results cannot be generalised.

Malm et al[28] reported a RCT of another variation of ACT which includes a form of Integrated Care (IC), ACT-IC. In this approach ACT is informed by a 'clinical microsystem' resource group who meet quarterly over a two-year period to provide guidance on the consumer's treatment. The group includes the patient, health professionals and carers, and their role is "problem solving, communication and planning". The program is also supported by psycho-education for all group members through a structured workbook. This five-year trial showed positive benefits to consumers, finding that ACT-IC improved social functioning, lower symptomology and lower rates of hospitalisation.[28]

A study by Morrissey et al[20] also found lower rates of hospitalisation for 450 clients with substance abuse, schizophrenia and affective disorders who were high users of services (mean 113 days' hospitalisation over 24 months) and were enrolled in their recovery-oriented ACT model. This model combines a standard form of ACT related intervention, but provides 'intensive' education in recovery and person-centred care for practitioners implementing it. The education focused on "strengths-based assessment, individualized and person-centered planning processes, promotion of a culture of recovery within ACT…use of peers as recovery mentors [and developing] consumer choice and independence while avoiding coerciveness".[20] Reduction in hospitalisation equated to approximately 32 days per person per year. Largely because of the reduced hospitalisation, the program had a cost benefit of a reduction in expenditure of approx. US$11,257 per participant per year.[20]

ACT was used for early intervention in psychosis in a UK study which compared the use of ACT with standard care.[19] They found that use of ACT was associated with larger social networks and better clinical outcomes in the long term (18-month follow-up), but not immediately.

ACT will generally include an element of vocational support and employment has been highlighted through the explicit addition of Individualised Placement and Support (IPS) add-ons (the IPS method is discussed below).[35] ACT IPS has led to improved rates of employment in those with severe mental ill-health.[29] Proactive staff training in vocational support and the importance of employment for mental health outcomes led to significant outcomes in a US-based trial.[18] This program was developed because staff attitudes and expectations were limiting ACT teams from offering vocational support, an issue that has been highlighted elsewhere.[36] Gao and Dolce[18] report an increase in employment from 5% to 24% over a 12-month period in those receiving this employment-oriented ACT. Employment outcomes for ACT are significant because of the low rate of employment in this group and the significant benefits of employment on mental health and social functioning. ACT has been less successful in creating employment outcomes when not teamed with IPS or vocational training is not specifically highlighted.[36, 37]

Flexible or Function ACT

Flexible or Function ACT, or FACT, is a derivation of the ACT program from the Netherlands.[35] It is a flexible approach to ACT where individuals who are significantly unstable are offered standard ACT comprising "shared case management and assertive outreach" where other long-term consumers who are more stable are moved to "individualised case management by a multi-disciplinary team".[34] In the latter group services are offered by the same ACT team who meet them on a less intensive basis (2–4 times per month). The team "consists of 7–8 FTE case managers (psychiatric nurses, psychiatric community nurses, social workers, substance abuse counsellors), .8 psychiatrist, .6 psychologist and .5 Supported Employment Worker" along with a peer support worker[34] and have a case load of 1:20. This is significantly higher than the 1:10 cited by Rosen et al[22] as standard in Australia and the 1:15 in the UK.[35] The program as implemented in Hong Kong had even higher case-loads at 1:50[35], which was due to resourcing issues in this context.

A staff-oriented evaluation of the Hong Kong FACT Personalised Care Program revealed a recovery oriented care planning program in which individualised plans are created and key partnerships with services made to meet client needs. The Hong Kong program provides different levels of care according to need (low, medium, high) but all work includes the individual's own recovery goals in their plans.[35] All plans list consumer goals, strategies for meeting these goals and identified service partners, and are considered separately by a multidisciplinary team. Case managers are clinicians or others with qualifications in mental health (e.g. social workers) who have expertise in "medication management, motivational interviewing, cognitive behaviour therapy for psychotic symptoms, and family intervention".[35] Substance misuse is specifically tackled as part of the program. IPS (discussed above) is used to support employment. The Hong Kong-based program has not yet been evaluated from the client's perspective but staff have found it to be effective in meeting its goals. FACT as implemented in the Netherlands has shown significantly higher rates of symptom recovery than treatment prior to the implementation of FACT (from 19% to 31%).[34]

Consumer involvement in care

None of the ACT programs had been co-designed with consumers but several involved consumers as peer-support workers.[26, 30, 31] A Dutch study of the use of peer-support workers (called "consumer-providers") in teams implementing ACT found that those consumers whose ACT teams included these workers had improved measures of recovery and their needs were better met.[31] However, days spent in hospital appeared to increase when consumer-providers were used. It was unclear as to why this was the case.

Inclusion criteria and discharge criteria

For all the studies the researchers included for analysis severe and persistent mental illness was the only general inclusion criteria for ACT programs. Beyond describing the general characteristics of the participants and their level of ill-health and complexity none of the studies discussed referral into the program.

None of the studies that the researchers included discussed discharge criteria for exiting case management programs. This is significant as programs such as ACT have been previously critiqued for encouraging ongoing dependency on the program. However other studies have provided criteria for those who can safely exit the program. For example, Cuddeback et al[38] provided the following criteria for ACT consumers transitioning out of the program: "those who have exhibited independent living skills, self-advocacy skills, and who can ask questions about their care needs".

Applicability

While none of the studies included in this review took place in an Australian context, implementation of ACT in an Australian setting has also been evaluated positively.[22] For example, a study of the implementation of ACT in the Nepean Blue Mountains Local Health District (LHD) showed that their ACT intervention led to a significant reduction of inpatient 'bed days' from 3022 to 569 over 12 months from the time of implementation and inpatient admissions were halved.[32] The ACT program implemented in the Nepean Blue Mountains LHD included the following key facets:

- Specific clinical lead for the team
- "Team management of consumers (distinct from normal case management as consumers have a primary clinician and significant team input utilising skills of multiple staff and promoting continuity of care when staff are on leave)"
- Daily meetings with all team members
- "Interactive case reviews with reflection on collaborative care planning"
- Active networking by staff to make connections with community-based resources to support specific client needs
- Active liaison with other sections of community mental health to meet client needs.

In addition to the decrease in hospitalisations the program showed high staff and stakeholder satisfaction including from police who stated that they had less interactions with frequent contacts.[32]

Partners in Recovery

Articles on Partners in Recovery (PIR) did not appear in the review, however PIR is included here because it is a significant Australian care coordination approach. PIR is a program which has been implemented across Australia to provide care coordination for individuals with severe and complex mental ill-health. The program is implemented in 42 local areas by consortia made up of local NGO services and Primary Health Networks.[39] PIR's approach is for support facilitators meet with a client to understand their needs and then connect the system for the client to meet these needs.[40] They can also spend flexible funding to buy in needs that are not otherwise available via the public system. The program has also been implemented in rural and remote regions but there are no published evaluations of the program.

Case management add-ons

A wide variety of studies reported case management add-ons, which were designed to be implemented alongside or within standard case management.

The populations targeted in the case management 'add-on' models were generally those with psychosis or mental illness classed as 'severe' or 'serious'. Two studies also specifically focused on consumers experiencing mental ill-health along with comorbid physical conditions, including heart disease and Cardio-Obstructive Pulmonary Disease (COPD).[5, 41]

Illness Management and Recovery

Illness Management and Recovery (IMR) is a widely-promoted form of recovery oriented psycho-social education model used internationally in multiple cultural contexts (e.g. US Department of Health and Human Services[42]). In the studies that researchers identified for this review it was trialled in community based settings with people experiencing severe or complex mental ill-health in the US[27, 43, 44], Japan[45] and Israel.[46]

The aim of IMR is to provide consumers with self-help skills that they can use to manage their ill-health and move towards recovery. It is offered through a set curriculum which includes the following: "recovery, mental illness, stress-vulnerability, social support, medication management, relapse prevention, coping with stress, coping with problems and symptoms, getting needs met in the mental health system, and drug and alcohol use."[27] The program can be offered to individuals or in group settings.[42, 43] It can be offered as an add-on to both mental health programs and more general community based rehabilitation programs, thereby making it useful for implementation in settings where services are offered more generically.

The program has been positively evaluated in multiple settings. It has been successful in demonstrating improved consumer knowledge of mental ill-health and goal attainment.[46] The Salyers et al[26] study found good outcomes for consumers who were more confident in managing their illness after completion of the program. In the Japanese trial it was found to improve social functioning and social relationships, quality of life and self-efficacy.[45] However, the case-managers who implemented the program found that it was difficult to implement as part of their day-to-day work and was deprioritised in favour of a client's more urgent needs. The study by Whitley et al[44] found that successful implementation was predicated by well-prepared and trained field staff with strong leaders, staff commitment and a progressive organisational culture. A retrospective cohort study found that those consumers that had been involved in ACT-IMR (an add-on to Assertive Community Treatment) had less hospitalisations and visits to emergency departments than those receiving just ACT.[23] Mueser et al's review[17] of psychosis interventions found that IMR was successful in improving self-efficacy, management and social functioning.

While these evaluations were largely positive, a recent RCT of the use of IMR alone for American war veterans (outside of the ACT setting) conducted by Salyers et al[43] found no benefit over the control group who were offered another form of facilitated group-based problem solving. They found low engagement with both groups when offered in this setting and, while both groups improved, IMR offered no additional benefit. Other programs have used IMR as a base on which to then add further case management add-ons.[47, 48] These are discussed in further detail below.

Consumer driven or derived case-management add-ons

This review identified three case management add-ons which had been developed by consumers or collaboratively between consumers and staff. Several of these add-ons offered structured peer-support alongside regular case management. The other add-ons were specific tools which could be used as part of case management to increase the recovery-orientation of the services provided.

Peer-support programs

Self-Help Agencies (SHA) allow consumers to drop-in and receive services when needed and participate in the running of the organisation, which is entirely peer-run as a "participatory democracy" of peer workers.[49]

They offer "social support, material assistance and vocational opportunities" within the organisation and clients are free to choose the extent to which they engage with these services.[49]

SHAs were provided as an add-on to community mental health services (CMHS) in a RCT of SHA+CMHS vs CMHS alone.[49] Participants had diagnoses of major depression (75%), schizophrenia (9%) and substance dependency (60%). The intervention was found to effectively support key areas of a consumer's recovery compared to CMHS alone. The study authors noted that previous studies of SHAs have shown less positive feedback, but that this program differed in that the SHAs were totally self-run by consumers.[49]

The Friends Connection offers peer-support for consumers involved in an ICM program (discussed above).[50] Consumers are paired with peers who are further along in their recovery journey and involvement in community-focused social activities such as self-help groups and recreation activities. Peer support workers share their own experiences and discuss helpful strategies for goal fulfilment. A mixed methods evaluation of the program implemented with people who had been hospitalised for mental ill-health in the previous 24 months (67% with schizophrenia related disorders, 23% with affective disorders) showed reduced rehospitalisation rates compared to those ICM clients not enrolled in the program.[50]

A multi-site study investigated consumer empowerment through involvement in consumer operated service programs offering "drop-in, peer support and mentoring, and education and advocacy".[51] Consumers in the study had significant mental ill-health, including 50% with schizophrenia and psychosis. The study showed that while there was a negligible increase in empowerment over all sites, empowerment was significantly increased in some programs but not in others.[51] The organisational setting therefore makes a significant difference in consumer outcomes, even within consumer-run services.

Wellness Recovery Action Planning

Wellness Recovery Action Planning (WRAP) was originally developed by Mary Ellen Copeland, a mental health consumer, and has been implemented in multiple service contexts in the US, the UK, Australia and Asia.[6, 52] WRAP involves education about mental health and recovery and the development of a structured wellness plan with the support of a peer worker. They are created in group settings or in individual meetings. Two separate RCTs of WRAP with large numbers of participants were included in the review's research literature. In Cook et al[52] eight 2.5 hour sessions of WRAP were delivered in a group setting over eight weeks with two peer support workers facilitating. Consumers had diagnoses of schizophrenic related disorders (22%), bipolar disorder (38%) and depressive disorder (25%). In Cook et al[53] nine of the same sessions were delivered to consumers (schizophrenia-related disorders 26%, bipolar (31%), depressive disorders 27%). Both studies showed lower levels of service utilisation and need compared to control, while improving an individual's recovery and lessening symptoms.[52, 53]

Wellness Enhancement and Recovery Program

Developed collaboratively in a local setting by consumers and staff, the Wellness Enhancement and Recovery Program (WERP) program for people with serious mental ill-health builds on the IMR content in a context-specific way.[48] The focus is on functional recovery, social responsibility and hope.[48] The program is delivered by clinician case-managers and a peer worker, and delivered in a group setting. At the time of the group session clients are also seen by a psychiatrist and mental health nurse. Multiple groups are held throughout the week and the program runs for three years. Transport is provided for consumers who need assistance to attend. An evaluation of WERP conducted with people with severe mental ill-health (62% with schizophrenia or schizoaffective disorders, 13% bipolar, 21% major depression) found high program satisfaction, however its reliability was reduced because of a lack of control with which to compare outcomes.[48]

Recovery Workbook

Barbie et al[30] conducted a small RCT on a group-based recovery training add-on to ACT in which consumers with serious mental ill-health (82% schizophrenia and related disorders, 18% bipolar) worked through a Recovery Workbook over 12 weekly group discussion sessions. The program provided information on community services, recovery, stress management and goal setting. Peer support workers were involved in the implementation of the program. While overall quality of life was not improved in the intervention group the program did find improvements in "personal confidence and hope, empowerment, goal and success orientation, and recovery."[30]

Cognitive Behavioural Therapy-based add-ons

Several papers described interventions in which CBT was added on to various forms of case management.[54-57] Cognitive Behavioural Therapy (CBT) is an evidence-based practice that can easily be attached to practice as usual, with only small amounts of additional resources, and can be readily adapted to different cultural contexts and minority groups.[57]

A review of community-based interventions for schizophrenia Mueser et al[17] found that CBT is successful when provided for psychosis. Two papers by Turkington et al[55, 56] described a CBT add-on to case management for psychosis involving training a mental health nurse or case manager to provide basic CBT to consumers experiencing psychosis. The nurse-administered intervention was run for six sessions over 2–3 months and found significant improvement in some of the areas tested. The review found that most improvement was detected in insight and reduction in negative symptoms.[55] The case-manager led intervention involved 12 sessions with 38 clients and showed a "medium to large" improvement in symptoms of psychosis and depression in 23 of the 38 consumers. For only one consumer was the intervention unhelpful.[56]

Perry et al[58] reported on an Australian-based CBT program for early psychosis in which participants were offered 20 individual sessions of CBT. The program focused on stress and mood management, anxiety, dealing with psychotic symptoms, sleep, improving confidence and social behaviours.[58] It was found to have positive impacts on psychosis symptoms and improve recovery.

One study investigated a 21-week CBT program designed to offer support for post-traumatic stress disorder (PTSD).[57] Consumers were taught cognitive restructuring, educated about the nature of PTSD and its impact, and provided tools for addressing the ongoing impact of the trauma. Those who completed the program showed improvements in PTSD and depression.[57]

Stirman et al[54] describe a Philadelphia, US-based CBT add-on in which mental health care providers who are not specialists in CBT are trained through a series of context-specific training sessions to be able to provide basic CBT for a variety of common issues. The trainers then provide ongoing support to the clinicians providing the service and ongoing development and clinicians must complete 80% of ongoing training to stay accredited.[54] The program has not been evaluated for impact on clients.

Culturally specific add-ons

Ethnic minorities and immigrant communities often have poorer mental health than the rest of the community but are less engaged with services and have less understanding of recovery and person-centred care approaches to mental health.[47]

A US-based RCT added two types of culturally-specific person-centred care for Latinos and African-Americans to community treatment-as-usual and IMR (discussed above) for people with a diagnosis of psychosis.[47] One group of participants received peer-supported person-centred care where the culturally-specific peer worker cooperated with the consumer and clinician in planning meetings to develop a network

of support, and develop an individual's strengths and understanding of recovery. The second group received all elements offered to the first group and control, and received community inclusion activities conducted weekly in a group setting over six months. Groups were facilitated by culturally-specific peer workers and progressively worked towards greater autonomy for participants.[47]

Chao et al[59] found that matching consumers and care providers on an ethnic basis provided better recovery outcomes for consumers.

Early psychosis add-ons

An early psychosis add-on to case-management, the Graduated Recovery Intervention Program (GRIP), was described in one study and shown to have positive outcomes in terms of consumer goal attainment and decreased hospitalisation compared to treatment-as-usual.[60] The program was provided by two social workers and a psychologist, and consumers were supported by a friend or carer with whom the clinicians were also in contact. A program made up of up to 36 sessions conducted weekly with the first 12 sessions focusing on wellness, goal setting and functional recovery, substance use and dealing with symptoms. Progress is reviewed at 12 weeks and consumer and clinician work out a plan for the remaining sessions and what treatments are needed.[60]

REFOCUS

REFOCUS was an intervention conducted in two English National Health Service (NHS) sites that sought to orient case management staff towards recovery to improve recovery in people who use the services.[61-64] The program starts from the premise that relationships underpin recovery experiences for most consumers and that the relationship between consumers and workers is an important one. Therefore, it is important that mental health worker practice is recovery-oriented. The program sets out a structured process for developing a recovery orientation amongst staff[64] (the manual for the intervention is available online via this link: http://www.mhpf.org.uk/resources/research/refocus-promoting-recovery-in-community-mental-health-services.) The stages of the intervention are[64]:

1. "Understanding values and treatment preferences
2. Assessing strengths
3. Supporting goal striving".

The process for implementation involves team-based and individual recovery training and coaching, including team leader peer support.[64]

The REFOCUS intervention was evaluated through a RCT and process evaluation. The program was implemented in a range of settings: "recovery teams providing long-term support to patients with complex health and social needs", forensic teams, teams specialising in support for psychosis, and one team for consumers with low needs.[61]

The process evaluation, conducted through qualitative analysis of interviews and focus groups with staff, showed that organisational commitment was important and noted that the implementation of the program was stymied by organisational restructuring in one of the organisations.[63] The program's use of role-playing, rather than just statements of intent, was viewed as effective in transmitting the concept of recovery. Interviews and focus groups with consumers showed that for many the program created a more "open and collaborative" environment within the service that allowed them to relate more freely with staff.[62] Quantitative analysis of the RCT data showed that there was no significant improvement in recovery amongst consumers receiving support from services where REFOCUS was implemented and the only significantly positive change over control was in functioning.[61] There was also only limited improvement in the recovery orientation of staff, although change was more marked where more members of the

organisation participated in the intervention.[61] Reasons for the lack of change in key indicators was attributed to ineffective organisational implementation of the innovation, as noted in Wallace et al.[62]

Community-based non-case management interventions

Key findings

- Consumer-led or co-led programs are effective in meeting consumer needs and with outcomes comparable to practitioner-led programs
- The Clubhouse model is an effective community mental health program which promotes recovery and can adapt to local settings
- Community-based, recovery-oriented mental health crisis support is an effective alternative to emergency departments
- Successful recovery-oriented programs were all individualised and localised, meaning that they were tailored both to the individual who was benefiting the services, and the communities in which they were being implemented
- Internet-based, clinician and peer-led transition support programs are effective in reducing rehospitalisation and supporting recovery, including for those with eating disorders
- Individualised Placement and Support is an effective vocational support program which also improves a participant's mental health and is cost-effective
- Social enterprises are effective in providing vocational support, increasing participation in employment and improving recovery and wellbeing
- Dialectical Behavioural Therapy is effective at treating people at high risk of self-harm or suicide
- There are mixed findings about the effectiveness of Acceptance and Commitment therapy compared to CBT. Given that CBT-trained therapists are widely available additional investment in Acceptance and Commitment Therapy is therefore likely unnecessary
- Recovery Colleges are important forums for educating and enabling consumers to understand and enact the concepts of recovery
- Community-based eating disorder programs have been shown to be effective alternatives to in-patient care for those who are significantly unwell. They may act as a step-down program or help to avoid in-patient care. The challenge is to implement these programs within a recovery-oriented setting as the compulsory practices in some programs may conflict with recovery values.

The programs mentioned here largely fit into level one of Thornicroft and Tansella's[3] schema of mental health care in high-resource settings, although some, particularly the eating-disorder related programs, are in levels 2 or 3.

Consumer-led programs

As evidenced in the discussion of consumer-led programs as case-management add-ons, peer-led services are becoming more common in community mental health care and treatment programs.

Davidson et al[65] reviewed four RCTs which showed that peer-led services for those with serious mental ill-health were just as effective as those delivered by non-peers. Confirming this, Sells et al[66] conducted an RCT which showed that when peer support workers are used early in treatment programs this increased later treatment adherence amongst those with severe and complex mental ill-health. Peer providers worked alongside regular case managers to provide case management in a community mental health team but with half the case-load of other providers. Peer providers were given training and supervision designed to provide them with skills in engagement, ethics, resources available, confidentiality and record keeping.[66]

Training also focused on their own peer-related skills to focus on "individual areas of strength and … past experiences with recovery as a tool for understanding, role modeling, and hope building for others".[66] The study was conducted over a 6 or 12-month period and showed that consumers with peer-providers were more connected to treatment in initial stages and felt "more liked, understood, and accepted by their providers".[66]

Doughty and Tse[67] conducted a review of Consumer Led Health Services (CLHS) to determine their effectiveness over standard services. They found that these services were similarly effective and had the bonus of providing vocational experience for consumers and providing good mental health and social functioning outcomes for consumers involved in providing the service.[67] Examples of consumer-led and co-produced services are also cited elsewhere in this review and include self-help agencies, the Clubhouse model, Friends Connection, Recovery Colleges, the Living Room and Prosper.

Clubhouse model

A prominent consumer-led community mental health model is the Clubhouse model. Clubhouses are "intentional recovery communities" and focus on psychosocial rehabilitation in a peer support environment.[68] The mechanism for change is social functioning through engagement in socialisation and individualised skill development in line with the consumer's choice.[69] Consumers (with any type or severity of diagnosis) and staff members (referred to as 'partners') are considered to be equals and they carry out the tasks of running the clubhouse working collaboratively in both management and on day-to-day tasks. Clubhouses must be certified to a set of standards and have been used extensively around the world, currently operating in 29 countries.[70] The Clubhouse model is also seen as a prevocational program as it offers work experience through running the Clubhouse.[71] The Clubhouse model is popular with consumers and has good outcomes from small localised studies.[68, 70] However, it has been found to be less successful as an employment intervention than other programs such as IPS discussed above.[71] The program is difficult to evaluate as a concrete model because its functioning is dependent on how it has been devised in local contexts and therefore depends on local organisational and community commitment.[71]

Recovery Colleges

Only originating in the UK in 2009[72], Recovery Colleges have been developed in many community mental health care settings across Australia, e.g. South Eastern Sydney Recovery College (http://www.seslhd.health.nsw.gov.au/Recovery_College/), Central Coast Recovery College (http://www.ycentral.com.au/mental-health/central-coast-recovery-college/) and MIND recovery college (http://recoverycollege.org.au/).

Recovery colleges put together classes in relevant topics which will assist a consumer's recovery. Oh[72] lists the following typical topics for classes: "maintaining residency, dealing with debt, living with bipolar, understanding psychosis and schizophrenia". Recovery colleges are structured organisations with a core focus on co-production where consumers take on all facets of running the college and designing courses, with the support of some paid staff and, in some cases, clinicians.[73-75]

Recovery colleges include the following key elements and principles[75]:

1. "Co-production between people with personal and professional experience of mental health problems
2. There is a physical base (building) with classrooms and a library where people can do their own research
3. It operates on College principles (it is not a day centre)
4. It is for everyone
5. There is a Personal Tutor (or equivalent) who offers information, advice and guidance
6. The College is not a substitute for traditional assessment and treatment

7. It is not a substitute for mainstream colleges
8. It must reflect recovery principles in all aspects of its culture and operation".

Of the five papers on recovery colleges included in this review which evaluated their operation most were limited in scope and/or methodology. McGregor et al[76] evaluated the Nottingham (UK) Recovery College but the analysis was unclear and it is difficult to know how data was selected for inclusion in the paper. The paper presents a descriptive account of their recovery college which offers 94 different courses to over 800 students who have any type of mental ill-health.[76] They are supported by 1.2 paid members of staff and a building housing, a library, four class rooms and kitchen facilities. The college offers courses are around the themes "understanding mental health issues and treatment", developing practical skills, self-development programs called "building your life" (e.g. WRAP, discussed above), "physical health and wellbeing", and "getting involved", which teaches advocacy and consumer involvement skills.[76] Their evaluation found that the program was developing with high fidelity to the recovery college model as defined by Perkins et al.[75]

Newman-Taylor et al[77] carried out a qualitative evaluation of a recovery college in southern England run by the local NHS Trust. This college ran 28 classes whose content was collaboratively developed by consumers and clinicians. Classes lasted between two hours and a day and examples of course content given were: "Values-based goal setting," "Managing crisis" and "From application to interview — gaining the job that you want".[77] Semi-structured interviews with 11 participants showed that the recovery college allowed students to move out of the patient-practitioner mode of learning and take on their own learning, drawing on peer-relationships to discover new possibilities for moving forward in managing their lives and ill-health.[77] A focus group evaluation of the Recovery Academy in Manchester mirrored these findings.[78]

Participants see recovery colleges as valuable. The Meddings et al[73] evaluation was conducted very early in the operation of their recovery college, but showed that of the 134 students enrolled in the first six courses 71% were people who currently use mental health services and 13% were carers. The attendance rate of courses was 67%. Of those, 97% reported that they would recommend the recovery college to others with 82% stating that they had learned useful information and 68% stating that the course was helpful for their daily lives.[73] A further evaluation by Meddings et al[74] showed that the program went on to enrol 300 students aged from their 20s to their 80s, with the most popular courses being "Using the Arts to Aid Recovery; Coping with Depression/Anxiety; Happiness; Mindfulness; Coping Strategies and Problem Solving; Improving your Sleep and Understanding a Diagnosis of Psychosis/Mood Disorders".[74] The further evaluation confirmed the findings of the first in terms of helpfulness and student satisfaction.

While most recovery colleges, including most of the Australian examples provided above, are located within health organisations they can also be in education facilities.[79] McGaig et al[79] describe a recovery college which was developed at the University of the West of Scotland. The authors describe the importance of early stakeholder engagement and learning from the needs of the community. Those involved in the recovery college are not classified as either teachers or students but as active and equal parts of the college: "people attending are not "taught", or treated as passive recipients of service interventions, but rather "learn" together, through a process of co-production." There is one employed administrator to bring the program together and a part-time project worker supports the peer workers who deliver and develop programs.[79] Examples of courses provided are: Write to Recovery; Creating Positive Relationships; Finding Reliable Health Information on the Internet; Managing Your Mood; Mental Ill-Health and the Family – How to Survive It. Because it is not directly tied to a health service their recovery college is open to everyone whether they have been receiving services or not.[79]

Prosper

Barrett et al[80] describe a-consumer led 'social movement' or network called 'Prosper' based in a part of London which has a diverse population with diverse needs. The network is funded by the local health district and is self-led, creating its own projects and self-running them by drawing on the skills of its collective membership. The core themes to the work of prosper are "create" and "collaborate" and the key organising tool is a monthly 'Open Forum'. At this forum consumers (who self-identify, with any diagnosis or severity of mental ill-health) meet, speak about the skills they have, connect with others and identify their skills, and develop projects to take forward over the next month.[80] Prosper works in with already established consumer organisations in the area and develops courses in collaboration with local recovery colleges.

Carer and family-focused programs

Family-based interventions assist families or carers with supporting individuals who have serious diagnoses to manage their illnesses and crisis situations.[22] Family sensitive practice is an approach that focuses on the role of an individual with mental ill-health in their family, particularly as a parent. Other programs do not specifically focus on the family member or carer but actively include them as partners in the consumer's recovery journey.

Family sensitive practice

Cowling and Garrett[81] describe family sensitive practice in a large community mental health service in NSW. The program creates an environment where the child's needs are highlighted as part of a "narrative" of the family in relation to the person experiencing mental ill-health to build family resilience.[81] The reasoning is that this will help both the recovery of the person experiencing mental ill-health and create a more stable family environment for the other members of the family. Treatment sessions are first conducted with the family group, then with individual family members and then again with the family group. The conditions for dialogue are that the members of the family are able to communicate openly with empathy and positivity.[81] Within family group meetings the most difficult aspect of the meetings is in mediating existing power dynamics which may mean that some members dominate or are silenced.

One US-based study implemented an Intensive Family Support Service to carers and family members to assist them to support an individual experiencing mental ill-health.[82] Supports were flexible and developed in line with the carer's needs, but generally offered education about mental ill-health, instructions about personal coping strategies and communication such as that offered in family behavioural therapy.[82] Professional guidance and peer support from other carers was offered alongside referral to carer advocacy organisations. The program was offered to any individual supporting a family member with a mental illness (rather than being attached to a particular service) and was offered in group or individual settings. Family support workers are employed to support the intervention.[82] The program received very high (95% agreement) satisfaction scores when evaluated. An Australian study examined practitioner-identified barriers to uptake of family sensitive practice.[83] Practitioners felt unable to act on the complexity of needs of families against a background of a fragmented and complex service system. Given the heavy workloads facing practitioners, these factors meant that family-sensitive practice was deprioritised in favour of other work. Rather than continuously working with family practitioners felt that there were key times when families should be brought into treatment, including during initial meetings and crisis times where they could provide context to help with the individual's treatment.[83]

Mueser et al[17]'s review of interventions for psychosis found that family based psychoeducation was successful in improving psychosocial functioning and reducing hospitalisation amongst consumers.

Open Dialogue Approach

The Open Dialogue Approach has a strong focus on the family as a core part of therapeutic treatment. The approach originated in Finland around 30 years ago as a treatment for psychosis and is now the main approach to psychosis treatment in Finland.[84] It has not been widely used elsewhere but its influence outside Scandinavia, including Australia, is growing and it is currently being tested in a multi-centre RCT within the NHS in England.[84-86]

Open Dialogue takes a dialogical approach to mental ill-health where the consumer along with their family and friends are fully included in treatment. It starts from the idea that psychosis might be a medical problem but that difficulties related to functioning are largely social problems.[84] Dialogue-focused therapeutic meetings are developed as soon as an individual comes into treatment to work out an approach to treatment which makes sense for the individual and meets their needs in the context of their lives.[87] Seven principles underpin the Open Dialogue Approach: "(1) immediate support, (2) the social networks' perspective, (3) flexibility and mobility, (4) responsibility, (5) psychological continuity, (6) tolerance of uncertainty, and (7) dialogism". [87]

Dialogue teams with a variety of expertise in clinical and social fields are selected in line with consumer need.[88] Seikkula who developed the Open Dialogue approach, describes the work of clinicians thus: "The aim for the professionals is to carry out their work in network meetings on an equal basis and in the presence of and together with the help-seeker and private network and to adjust their professional roles and tasks according to the particular help-seeker's need."[89]

Holmesland et al[89] conducted focus groups with Open Dialogue practitioners and observed Open Dialogue meetings. Challenges to Open Dialogue were found to come from existing power differentials amongst clinicians, and between clinicians and consumers, lack of skills, including active listening and use of silence, and a lack of understanding about just what Open Dialogue is.[89] Lakeman[90] notes that a barrier to the implementation of Open Dialogue in non-Scandinavian settings may be the lack of effectively trained practitioners as the program necessitates that staff have three years of training as either Open Dialogue practitioners or family therapists.

Very few evaluation studies of the Open Dialogue Approach appeared in our search results. Ulland et al[87] reflect on the adaptation of the Open Dialogue Approach to the local conditions of Norway and while they found that the programs involving this approach were implemented successfully there were no studies that compared the program to care as usual. Seikkula et al[88] looked at the benefits of a fully developed Open Dialogue program compared to a shorter version of the program, which demonstrated a very significant reduction in hospitalisation for those involved in the full Open Dialogue program. Of consumers in the Open Dialogue group 82% no longer had symptoms of psychosis five years after their involvement in the program.[88]

A review of Open Dialogue Approach studies conducted by Lakeman[90] found that the approach resulted in a significant decrease in the duration of untreated psychosis in participants. However, all existing evaluation studies are limited by methodology and lack of matched control. The current NHS RCT may provide more definitive evidence of the effectiveness of Open Dialogue and applicability within a non-Scandinavian service system.

Transition support programs

Discharge from inpatient care is a time of vulnerability for consumers. Our review however identified very few recovery-oriented transition support programs.

The American Association for Community Psychiatry has developed principles for successful transition. Velligan et al[91] investigated a model developed and implemented in Texas to put these principles in place. The model has the following components: In reach by community care into the hospital while the consumer is still an inpatient; group intake where the consumer or several consumers are supported by clinicians and a social worker who encourage shared decision making and peer-support, and; family psychoeducation to support the consumer.[91] The program has not yet been evaluated.

A German program used an internet-based program to continue 'maintenance' treatment for consumers (54% mood disorder, 46% anxiety related disorder) after discharge from an acute inpatient setting.[92] The treatment involved consumers identifying through an initial plan helpful behaviours and strategies for implementing these into their lives. They then fill in a web diary each week where they evaluate their progress and think about their next week. They participate in an only peer-support group which includes small groups of up to six participants. The final element is communication with a therapist who supports them in their progress.[92] In a RCT of the program participants were shown to have greater recovery and symptom management than controls.

Transition support programs for eating disorders, discussed below, had mixed success.[93, 94]

Employment-related programs

Employment programs are included here because of the considerable need identified amongst those receiving community mental health services for employment[39] and the mental health significant benefits known to flow from employment.[17]

Individualised Placement and Support

Individualised Placement and Support (IPS) is a program which offers supported employment for people with serious mental ill-health. It is underpinned by the following six principles: "everyone has the right and responsibility to work; everyone has the right to support when motivated to work; work enhances self-esteem and societal inclusion; work is purposeful activity that is central to our lives; work is part of recovery and; all have the right to make their own choices and are valuable to society."[95] Implementation involves working with the client to understand their job preferences, "rapid job placement", collaboration with psycho-social rehabilitation supports and ongoing support as needed (not a time-limited intervention).[95, 96] Evaluations of IPS have shown the program to be cost-effective and successful in increasing long-term employment for people with mental ill-health and to be a superior intervention in comparison to other programs.[96, 97] The IPS program also assisted with the client's social functioning and recovery and was a vehicle for staff to better understand recovery.[95] Mueser et al[17] report that 15 RCTs have supported the use of IPS for improving employment for people with schizophrenia.

Social enterprises

Social firms or social enterprises are organisations which are set up to provide employment opportunities for people with mental ill-health or another disability. They are a method which may have utility for offering supported employment for people in rural and regional areas. Fieldhouse et al[98] describe a not-for-profit horticultural company created to offer supported employment in a rural setting in the UK. The program was supported by the local National Health Service (NHS). The company trained consumers (no details of mental ill-health levels or diagnoses were provided in the paper) in horticulture while they were working as a paid employee for the company. Consumers could move on from the country and gain paid employment with 10 out of the 16 trainees in paid employment as a result of the program. The program was supported by a one-year grant but continued after the grant ceased.[98] Social firms are suitable to an Australian rural or regional

setting with several operating currently in the disability sector, for example, Huntley Berry Farm in Orange (http://www.huntleyberryfarm.com.au/).

The Creative Recovery project in place in remote Indigenous communities (discussed below) is a good example of a remote, Indigenous-focused mental health recovery social enterprise.[99] In Australia 60% of disability enterprises operate in rural and regional areas.[100] A qualitative study with consumers involved in social enterprises found that they support consumer recovery and promote empowerment "belonging, success, competence and individuality".[101]

Community based recovery oriented crisis support

Crisis Resolution/Home Care (CR/HC) teams deliver crisis support services in a community setting, which is usually a client's home. They have been used in Australian settings since the 1980s and offer 24-hour support in the community to avoid consumers moving into inpatient care.[22] The program has also been instituted in multiple settings internationally.[102]

Winness et al[102] conducted a review of existing studies and attempted to understand the experience of CR/HC from a consumer's perspective. The crisis services reviewed helped consumers to stay at home in a crisis situation rather than going into an inpatient setting. Successful programs worked with the consumer's own understanding of their immediate needs and where possible involved family members. Programs were more successful from a consumer's perspective when they were available around the clock and where support was available immediately.[102] Well-planned discharge including crisis planning was important to consumers. Overall, the review found found that consumers prefer CR/HC to inpatient care. In home crisis care was seen to be preferable because it did not overly medicalise their issues and allowed them to address their problems in the situation where they occurred, rather than the artificial environment of the hospital.[102]

The Living Room is a crisis support service developed from a recovery basis and responding to calls from within the consumer movement to develop psychiatric crisis care that is not centred on the emergency department.[103] It is a voluntary non-residential program, and employs two clinicians and three peer support workers who work with consumers who are in a crisis situation. It is housed in the community mental health service, but has a separate entry and is open in the evenings five days a week. It is open to people with a wide range of diagnoses. A small qualitative study which interviewed 18 Living Room 'guests' and staff showed very positive outcomes for guests who compared the program very favourably to previous encounters with emergency departments during crisis situations.[103]

Creativity-based programs

The review identified seven programs which used art or, in one case, music therapy to promote recovery mainly for people with serious mental ill-health, although one study did not specify participant needs.[104-106] Programs were generally localised and short-term (up to 13 months in length) and focused on creating an environment where individuals learned skills to be able to express themselves and discuss ideas of recovery and wellbeing.[105] Two small-scale Australian art-therapy programs had positive impacts on the recovery journeys of participants.[107, 108] An Australian-based review of music therapy programs showed therapeutic effectiveness in people with mental ill-health.[109]

In Australia the Creative Recovery program has worked successfully to promote mental wellbeing in remote Indigenous communities (discussed above).[99]

Primary care interventions

In this rapid review researchers did not find any General Practice-based (GP) models of mental health services which were recovery oriented. However, they are an important aspect of community-based mental

health treatment as indicated in the Thornicroft and Tansella[3] framework. The review by Pilbeam et al[110] highlights a primary care-based rural mental health model that is most practical for very rural or remote communities and shows that building competency amongst generic health care workers in mental health interventions has positive impacts on care. However, its limitations relate to GP interest in mental health and limited time available for additional services in primary care.[110]

Community-based eating disorder programs

Most of the eating-disorder programs described in the literature are based in inpatient settings. A small number of community-based programs were identified and are discussed here. One paper described an Australia-based intensive program in the community for individuals with Anorexia Nervosa which was developed in response to a lack of outpatient services in Victoria.[111] The program, Body Image, Eating Disorders Treatment and Recovery Service (BETRS), has four components:

1. Group program targeting a) family members and carers and b) consumers — motivational interviewing, education, severe anorexia nervosa
2. Individualised structured therapy and CBT-E (Enhanced CBT)
3. Family therapy providing skills to family members
4. Day program:
    - Consumer Day Program over six hours a day for three days per week
    - Family and carer day program to provide skills in meal support
    - Outreach into home to provide meal support.

Involvement in these components is planned and individualised (Newton et al 2013).[111] The program showed improvements in mental health and eating disorder symptoms and quality of life.

The Scottish Anorexia Nervosa Intensive Treatment Team (ANITT) program sits within a suite of interventions designed to meet the needs of people who require different levels of treatment in line with their needs. The overall program includes four levels ranging from (1) inpatient care for the most seriously unwell through to (2) the ANITT program of intensive outpatient care, (3) outpatient "group and individual therapy, dietetic and psychiatric treatment" and (4) "guided self-help" through iCBT (internet based CBT discussed below), and 'bibliotheraphy' (use of self-help books).[94] ANITT participants are of very low BMI (less than 13 for women or 14 for men).

The first 2–12 weeks of the program is designed around developing trust between the clinicians and consumer and increasing BMI to create a stable, safe weight upon which the next stage of therapy can start.[94] The ANITT program is then offered over an 18-month period with reviews conducted every six months. This involves therapy twice a week alongside meal support from other staff 2–10 times a week, dependent on individual need. Consumers are gradually moved to less intensive support. Consumers can refuse dietician involvement, thereby upholding their individual treatment choices but must accept "medical risk monitoring".[94] The 35 patients in the program are supported by one psychiatrist, seven psychologists of varying experience, two dieticians and an administrator.[94] Meetings with consumers take place either in their home or an outpatient clinic attached to a hospital. The program was found to be very cost effective compared to the previous program which focused more on inpatient care. Consumer satisfaction surveys have found high levels of satisfaction (4 on a 5-point scale).

Fairburn et al[93] describe a program for individuals with eating disorders who were not significantly underweight (all had a BMI over 17.5 — so excluded those with Anorexia Nervosa). GPs and other clinicians gave 154 participants referred into the program one of two forms of CBT: CBT-Ef or CBT-Eb (both of which are forms of CBT for adults with an eating disorder). CBT-Ef focuses solely on addressing eating disorders, whereas CBT-Eb addresses both eating disorders and "mood intolerance, clinical perfectionism, low self-

esteem, or interpersonal difficulties, as indicated in the individual patient".[93] The treatments were run across 20 sessions of 50 minutes' duration over 28 weeks. The program was staffed by four psychologists and a mental health nurse who had received six months training in the treatments.[93] Clinical outcomes for both intervention groups were improved over waitlist control with over 50% of participants having a level of eating disorder not more than "one standard deviation above the community mean". [93]

The Community Outreach Partnership Program targets individuals with eating disorders for whom other treatments do not work because of low engagement by consumers with the treatment program.[112] The program does not focus on a reduction of symptoms (recovery understood as cure) but on "increasing quality of life, reducing distress and increasing hope for the future" (recovery as a meaningful life).[112] The program is run by 'outreach counsellors' who have training in social work, psychology or nursing. They meet with consumers weekly in the community (in line with the consumer's needs) and broker other services as needed (dietician, psychiatrist, therapist etc.). Staff ratio is 20:1. The intervention is individualised, supporting the consumer with their own needs, for example "nutritional goals on a practical level by providing assistance with grocery shopping, meal support, menu planning, meal preparation, problem solving and supportive counselling".[112] Consumers were in the program for an average of 25 months (range 5–53). An evaluation of the program showed improvements in scores of hopelessness and distress, and improvements in eating disorder symptoms and BMI.[112]

Two other programs had low acceptability to the individuals targeted by the interventions. Lowe et al[113] attempted to implement a CBT-oriented transition support Intensive Outpatient Program termed "Normalisation of eating" for women leaving eating disorder inpatient care. The program was structured around group sessions twice a week which offered psychotherapy or psychoeducation alongside a supervised meal. Each consumer also had individualised support from a case manager and dietician and their involvement was overseen by a psychiatrist.[113] The case manager worked with family members when needed. All staff had masters' level degrees, however they did not necessarily have a background in CBT or related therapies. The program was found to be limited by a lack of structured processes for involving key program administrators who could advocate for the program, and competing demands which meant that a lack of time was set aside for CBT. The program was also limited by patient "ambivalence" and concerns that the program was not relevant to their needs.[113] This is a significant limitation from a recovery and person-centred care perspective.

A text-messaging based intervention attempted to address the high levels of ongoing morbidity amongst eating disorder patients with a BMI of over 17.5 (thereby excluding Anorexia Nervosa) transitioning out of outpatient treatment programs.[114] The intervention involved participants sending weekly text messages describing their progress and being provided with a pre-programmed response in return, which was checked by a staff member for "plausibility and to prevent repetition".[114] An example of the message sent is: "Try distracting yourself from troublesome thoughts about your weight/appearance by meeting with people you like and going out together".[114] The program was found to be acceptable to participants with an average rating of "good" overall on a four-scale measure (excellent, good, poor, very poor), however most participants stated that they would not participate in the program again or refer a friend to it.[114] Half the participants reported that they did not like the automated program and preferred contact with a person. Participants were meant to send texts weekly, but did so an average of only 13 times (range 3–23).[114] Based on this low acceptability this program should not be implemented.

Third Wave therapies

Third wave therapies include mindfulness, acceptance and commitment therapy, and dialectical behavioural therapy. They follow the 'first wave' of behavioural therapies developed in the 1950s and the second wave,

CBT developed in the 1970s.[115] A meta-analysis of third wave therapies conducted by Ost [115] identified 'moderate' effect sizes for both ACT and DBT, with a large effect for ACT compared to waitlist. They could not calculate an effect for Mindfulness.

Mindfulness

Mindfulness-based interventions have a focus on 'mindful' practice where an individual engages in meditation which aims to bring their mind to the present moment.[116] Mindfulness has been described as "a form of mental training in non-judgemental observation of current conditions such as autonomic arousal, muscle tension, habitual thought patterns and cognitive activity".[117] Several different forms of Mindfulness-Based therapies have been developed. Mindfulness Based Stress Reduction (MBSR) and Mindfulness Based Cognitive Therapy have been used in a variety of mental health interventions and have been shown to reduce stress and anxiety, and to assist in treating depression, though study results have been mixed.[117, 118] It has been used in Post-Traumatic Stress Disorder (PTSD) with a current RCT testing its utility for women with PTSD from intimate partner violence.[119] A small study of an approach to mindfulness meditation called iRest showed benefits in emotional regulation and mental health for combat veterans with PTSD.[120]

Paulik et al[117] report on a very small study based in Eastern Sydney which provided a MBSR program to a group of 12 people with a variety of diagnoses using community mental health services. The program ran over 12 weeks of 2-hour themed group classes facilitated by an Occupational Therapist and Psychologist. All classes included a period of mindfulness followed by group discussion of topics related to mindfulness and stress reduction.[117] Most participants showed significant improvement in their mental health and coping as a result of their involvement in the program, and this continued after the program finished when participants were followed up at 12 months.

One study compared automated telephone prompts for mindfulness, mastery and health behaviours within a Spanish and English speaking community-based sample of middle-aged people with depression (who were not receiving treatment from mental health services). An initial in-home visit was conducted where individuals were introduced to basic mindfulness concepts including breath meditation and visualisation.[121] They then received a daily phone call which guided them through a simple meditation on a particular topic or mindfulness skill.[121] This group was compared to groups who received Mastery Control (self-efficacy) prompts or general Health Tips. Participants reported on their physical and mental health using an online form each night. The program found the most significant positive effects across the program from the group receiving the mindfulness tips but that mindfulness and mastery control prompts had similar impacts on mental health.[121] The program could be run with a landline and computer or smartphone which can access the internet.

Dialectical Behavioural Therapy

Dialectical Behavioural Therapy (DBT) is the third wave therapy which has been the subject of most research. It mainly targets people with borderline personality disorder and those who exhibit suicidal behaviours. It has been recommended for use in conjunction with Assertive Community Treatment.[122] It involves the following five components[123]:

1. "Increasing behavioral capabilities
2. Improving motivation for skillful behavior (through contingency management and reduction of Interfering emotions and cognitions)
3. Assuring generalization of gains to the natural environment
4. Structuring the treatment environment so that it reinforces functional rather than dysfunctional behaviors, and
5. Enhancing therapist capabilities and motivation to treat patients effectively".

Treatment focuses on developing skills in mindfulness, behavioural change and problem-solving.[124] It is carried out by DBT-trained therapists and involves weekly individual therapy and group skills development (2½ hours per week), telephone support with the therapist and therapist team.[123] Treatment usually lasts one year, although shorter programs have been trialled, two of which are discussed below.[115] DBT training is provided to staff from a range of therapeutic environments through a 45-hour training course and supervision.[123]

Four papers investigated DBT for consumers at risk of self-harm or suicide.[123-126] The papers by Neacsiu et al[126], Linehan et al[123] and Harned et al[125], which all drew on the same study, compared DBT to 'expert psychotherapy' in the treatment of women at high risk of self-harm and suicide. The women in the study had made at least two suicide attempts in the previous five years, including one attempt in the eight weeks prior to the study, and women with a diagnosis of psychosis, schizophrenia or bipolar disorder were excluded.[123, 125] DBT was offered by DBT-trained therapists over a 12-month period at the intervals and intensity described by Linehan et al[123] above. DBT was found to be twice as successful in preventing suicidal behaviour than standard psychotherapy.[123] DBT was also superior in treating women who also had comorbid drug dependency.[125] Neacsiu et al[126] found that DBT "decreased experiential avoidance and expressed anger" which are significant problems in Borderline Personality Disorder.

Hawton et al[124] conducted a systematic review of interventions for self-harm and found that DBT impacted to reduce self-harm, though they noted that the quality of the interventions was low. They found mixed findings of a secondary effect for DBT in depression (some studies found no effect, others significant effect).[124]

DBT has also been used for mixed populations receiving intensive outreach support. Ritschel et al[127] evaluated the use of DBT with 56 people whose main diagnoses were depression (50%), bipolar disorder (20%) and anxiety disorders (23%). Of those, 65% had comorbid conditions, including 20% with a substance or alcohol use disorder. The program of DBT was compressed into six months rather than the standard 12 months and group therapy was provided daily over five weeks instead of weekly over the length of the program. They received standard weekly individual therapy and 24-hour phone support.[127] Depression and anxiety improved over the program but skills in mindfulness did not increase as expected.

DBT has been offered in an intensive form, iDBT, in a course lasting four weeks.[128] The program was run with a mixed population of 447 outpatients who showed decreasing levels of hopelessness and depression.[128] The effect increased over time and a quarter of the participants completed a second course, indicating that DBT is more effective when available over a longer period.

DBT has been evaluated from the consumer perspective through qualitative interviews, and was shown to increase consumer understanding of coping and skills in mindfulness.[129] This finding on mindfulness conflicts with the findings in the Ritschel et al[127] study cited above. Training in DBT was found to improve understanding and respect towards consumers with borderline personality disorders by practitioners.[130]

Acceptance and Commitment Therapy

Acceptance and Commitment Therapy has been developed for use with both physical and mental health problems. It aims to teach consumers how to accept (rather than resist) their feelings, choose a path forward and act to take that path.[131] Johns et al[132] state that in doing so Acceptance and Commitment Therapy is compatible with recovery. One study trialled Acceptance and Commitment Therapy with consumers with psychosis.[132] The program was run by a therapist and assistant and involved four weekly two-hour group sessions (The program is available here: https://contextualscience.org/quotact_for_lifequot_group_intervention_for_psycho). A specific Acceptance

and Commitment Therapy manual for psychosis was developed by the research team. Each session involved activities centred around mindfulness, coping strategies, defusion (letting go of troubling thoughts) and "values clarification".[132] Small positive changes in functioning and mood were noted, however only 42% of participants attended all four sessions.[132]

A meta-analysis comparing Acceptance and Commitment Therapy to CBT found small positive effect sizes for the former in comparison to CBT, but on the whole no difference between the two.[131] This contradicts earlier studies which have shown Acceptance and Commitment Therapy to be superior to CBT.[131]

eHealth and Telehealth interventions

Key findings

- eHealth interventions are low-cost and appropriate for rural and regional areas with good internet access
- Several free or low-cost evaluated eHealth programs are already available for mental health treatment in Australia
- There is good evidence for the effectiveness of eHealth interventions which can be adapted for a wide range of diagnoses and situations
- Blended eHealth interventions are more effective than standalone web-based interventions
- CBT conducted online is as effective as that conducted in person
- Smartphone apps which prompt specific health behaviours are effective in engaging consumers in health and wellbeing activities
- There is some evidence from an Australian intervention that a disproportionate number of participants in eHealth interventions are located outside of urban areas. This may mean that regional populations are already seeking and choosing to use these technologies at a higher rate than those in urban areas.

Introduction

eHealth interventions to improve psycho-social functioning in the community have significant relevance to communities where access to the internet is reliable. mHealth interventions involving mobile phone technology are also discussed in the literature, however these are less useful for those in rural and regional areas where mobile phone reception is very limited.[133, 134]

The populations targeted in the self-help eHealth and mHealth interventions were those with both higher prevalence of disorders such as anxiety or depression, and lower prevalence disorders such as bipolar disorder, psychosis and eating disorders. The Naslund et al[134] review focused eHealth and mHealth for severe mental ill-health and identified four types of programs developed specifically for this group. They classified interventions into:

1. "Illness self-management and relapse prevention" — included programs which provided automated messaging prompts to consumers about self-management
2. "Promoting adherence to medications and/or treatment" — technologies were used to deliver prompts about treatment and appointments via SMS messaging
3. "Psychoeducation, supporting recovery, and promoting health and wellness" — web-based tools used for education and iCBT (see below) or peer-support
4. Symptom monitoring — apps were used which asked clients to report symptoms at various times throughout the day.

They found that the programs they reviewed were generally successful at engaging this population in behaviours that either improved their mental health or facilitated more effective use of services.[134] One recent study of a mobile phone intervention to support recovery-oriented shared decision making in mental health found that while these technologies were promising, technological difficulties made implementation difficult for consumers.[135] The digital literacy of consumers must therefore be understood before a decision is made to rely on any specific technology.

An Australian-based review of existing depression eHealth and their applicability to the Australian context was conducted by Batterham et al.[136] They categorised eHealth interventions into those that were self-led, those that were provided by a health service, those which were provided by a private provider and guided interventions in which a clinician is involved in the administration of the program to the consumer. Existing interventions reviewed were found to be effective and cost-effective and appropriate to an Australian context.[136] The review by Parikh and Huniewicz[137] of eHealth for mood disorders also supported the efficacy of the technologies for a wide audience. They cited the cost-effectiveness and accessibility of the interventions, which are open 24 hours a day and not restricted by location.

Despite these positive evaluations of mental eHealth applications some caution should be used and their implementation must be done with an eye to the 'digital divide'. This divide can mean that some parts of the community are more able to access these programs and the technologies that they use. Overall, Indigenous Australians have less access to these types of services. This may be caused by many factors including the larger proportion of Indigenous Australians living in remote regions, and higher rates of unemployment and low income, which make enabling technologies more difficult to purchase.[138]

Specific programs

Most of the programs identified in our review were based on internet-based CBT methods (iCBT).[139-142] One program showed increased skills confidence after participation in an online virtual reality program which trained individuals in job interview skills.[143] The eHealth programs identified here are only those that have been written up and were identified in the literature review. However, there are many more that are in existence, including the following Australian-based programs:

- **PTSD Coach** — A smart phone app designed for veterans with PTSD to help them manage their symptoms. http://at-ease.dva.gov.au/veterans/resources/mobile-apps/ptsd-coach/

- **MyCompass** — Provides information on good mental health and management of symptoms. Can be accessed via computer and mobile devices. https://www.mycompass.org.au/

- **eCentreClinic** — Offer free access to courses being trialled. Developing an Arabic Wellbeing course. https://www.ecentreclinic.org/

- **Mental Health Online** — Offers online therapy and information. https://www.mentalhealthonline.org.au/

- **eCouch** — Interactive self-directed programs for depression, anxiety, relationship problems and grief. https://www.mentalhealthonline.org.au/

- **Mindspot** (https://mindspot.org.au/) is an Australian internet-based CBT (iCBT) intervention. Individuals self-refer to the Mindspot website where they fill out either an online assessment questionnaire or telephone assessment and are then referred to a relevant course.[140] They may be

referred to alternative treatment if they are not deemed eligible for the course, such as where they are suicidal or are involved in psychotherapy already. Four courses were offered: 1) 'Wellbeing' for adults aged 18-60 with anxiety or depression, 2) 'Wellbeing plus' for those with the same needs aged over 60, 3) an OCD course, and 4) a PTSD course. The courses contained 4–6 lessons of text, images and cases, and were completed over an eight-week period. Participants completed the lessons online via a computer and were then provided with 'homework' to do between lessons. Of those who went on to complete the program, 51% were not from a major city, making it likely that this format appeals to those in regional or rural areas. For all but those enrolled in the OCD course there was very significant improvement in symptomology where up to 50% of those enrolled no longer met the criteria for depression or anxiety.[140]

- **Get Real** (https://www.ontrack.org.au/web/ontrack/programs/get-real) is another Australian-based eHealth program and targets early psychosis or "psychotic-like experiences" (PLEs) amongst young people.[144] Program content is based on the self-help book *Think You're Crazy? Think Again* by Morrison et al[145] and has four modules which are completed online over two sessions. The program assesses participants and educates them about normal feelings, risk factors for psychosis, CBT techniques for addressing unhelpful thought patterns and where to seek help.[144] The program trial found that for 83% of participants (n=12) the program was helpful and half found that they were more able to cope with PLEs. The program can work on computers or mobile devices which have access to the internet, flash player software and a pdf document reader.

- **HORYZONS** is an Australian online early intervention program for first episode psychosis.[146, 147] The program adopts a strengths based approach compatible with recovery. It involves interactive modules of psychosocial education over four weeks and online peer support through 'the café' where participants can communicate with each other about their experiences, with new areas opening as the participant completes a module. The program is moderated by clinical psychologists and 'vocational workers' who contribute as needed to forums.[146] A trial of the program showed that 60% completed the four-week program. The program had a significant impact on depression symptoms amongst participants. One study evaluated clinical and security risks to participants involved in the program and found none.[147]

Blended iCBT programs

MoodGYM is an Australian iCBT intervention offered without cost online over five sessions of interactive exercises. The program focuses on identifying thoughts, emotions and positive relationships and introducing relaxation techniques.[148] A small Norwegian study evaluated a blended treatment program involving MoodGYM and in-person consultations with a therapist for people with mild-moderate depression. Participants completed the five MoodGYM sessions and met with a clinician in between online sessions. Clinical sessions focused on the previous MoodGYM session, symptoms, content of the next session and motivation to complete the next session. The blended treatment had a high completion rate of 11/14 participants and qualitative data showed that the program was most useful when consumers identified with the program and had a good connection with their therapist.[148]

ThisWayUp (https://thiswayup.org.au/) is available through either self-referral or clinician referral so consumers may work through the program themselves or supported by a clinician.[149] It offers courses in Sadness, Worry, Worry and Sadness (mixed depression and anxiety), Worry and Sadness (mindfulness based course), Shyness, Panic, Obsessive Compulsive Disorder, Stress, Post-Traumatic Stress Disorder and Health Anxiety. When referred as a clinical intervention ThisWayUp allows the clinician to login and check on

consumer progress. The courses have shown improvement in 80% of course completers and 20% of non-completers, but around 50% do not complete.[149] It is available via mobile devices such as tablets and smart phones, and computers.

Living with Bipolar is a UK-based program developed as a self-management resource for people with bipolar disorder. Consumers were consulted extensively in the program's development. The program was recovery focused and over ten sessions sought to educate about bipolar, increase self-esteem and self-mastery in relation to symptoms, introduce skills for crisis management and develop goals which would help them on their recovery journey.[150] A RCT showed improvement in the intervention group in all outcome areas. **MyRecoveryPlan** is another US-based resource developed for bipolar disorder. While the program had low levels of involvement overall (only 9%) Simon et al[151] found that the program was more successful when online peer coaching was used to support involvement (continuation increased to 38%). An individualised Australian-based program, **ORBIT,** provides similar online modules for bipolar disorder over four modules and is provided over a three-week period.[152] The program has shown improvement in quality of life over the control group, however depression and anxiety scores were not improved.

Barnes et al[153] described an Australian online psycho-social education program developed for bipolar and delivered over 23 sessions, first weekly then monthly over a 12-month period. Consumers also received feedback from therapists on sessional reports on their mood. This program was not evaluated in its final form, but initial evaluations at six months showed effectiveness.[153]

Two quantitative Dutch studies investigated a generic iCBT intervention for anxiety, depression and work-related stress.[139, 154] Participants were individuals on a wait-list for in-person treatment, for which there is a long delay in treatment in the Netherlands. Participants accessed a web site which led them through four weekly sessions involving identifying meaning, defining problems, and creating plans to address these problems. They were emailed exercises and wrote down their responses to the exercises. Psychology Masters students were employed to comment on their answers and assist them with identifying strategies, but did not offer therapeutic support.[139] The program requires internet access via a computer. The program showed significant benefit for those experiencing depression and anxiety, but less for work stress.[154] This program has subsequently been adapted for other groups, including Dutch Turkish immigrants experiencing depression.[141] While the Turkish immigrant program showed good outcomes for the participants who completed it, there was a high dropout rate of 42%.

Overcoming Bulimia Online is a web-based CBT program for eating disorders.[155] The program was provided over eight sessions which focused on education about bulimia, strategies for change, problem solving and future planning. This program implemented with the aid of a support worker who was not a clinician but communicated with consumers in line with their needs with some opting for phone contact and others for email-based support. They completed exercises in between sessions and provided data on their symptoms at the start of each session, which was mapped in a graph so that they could map their progress. A small qualitative study evaluated the program from a consumer perspective and found that participants were positive about the intervention, which they liked because of its anonymity and convenience.[155] Two other studies of a separate online program for eating disorders showed positive impacts for this group, however the intervention was not described in enough detail in the study for full insight into what was involved.[156, 157]

Online mental health therapy

Two quantitative studies[158, 159] reflected on online mental health therapy in which a therapist communicates with the consumer via a web-based interface where they write messages to each other.

Ruwaard et al[158] reported on a large study of a Dutch online mental health clinic comprising of online "therapist-assisted CBT". Participants had depression, panic disorder, PTSD or burnout. The program begins with an assessment interview conducted via telephone and therapy is then conducted via a web-based interface. The therapist leads the discussion based on a manual which sets out treatment for one of several types of disorder and provides exercises for the consumer to do. Standard motivational feedback is provided, although it is tailored to the consumer.[158] Programs last between five and 16 weeks depending on topic. Of those enrolled in the program, 71% completed it. Among those that completed the program 72% saw significant improvement.[158] Kessler et al[159] reported a randomised controlled trial of a similar intervention which provided 10 sessions of 55 minutes of CBT online via a web-page. This program, however, did not rely on a manual and provided CBT in the same manner as it would take place in a face-to-face session. This program also showed positive outcomes for clients.[159]

A Cochrane review of therapist-supported anxiety-specific iCBT[160] found no differences in outcomes between therapist supported iCBT and face-to-face CBT sessions. This supports previous research which has shown the guided self-help CBT is as effective as that conducted face-to-face.[161]

A Swedish randomised comparison of eight weeks of iCBT vs eight weeks of personalised email-based CBT provided by a therapist both programs found that both programs were successful.[162] With little gain from personalised interventions, iCBT would seem to be more cost-effective than CBT provided by a therapist online, however research comparing the two modalities is limited.[160]

Co-designed e-health interventions

One study[163] focused on the 'Common Ground' web application and service design. This was developed by consumer researcher and advocate Patricia Deegan[163] to facilitate better conversations about medication between consumers and psychiatrists to ensure that consumer needs were met and recovery promoted in these encounters. The Common Ground web application is delivered in a setting called a 'Decision Support Centre' where peer workers are core to the organisation of the visit by welcoming the consumer and assisting them with the use of a computer which they can use to access the Common Ground App. The consumers record their treatment and recovery goals on the application, which they can then discuss with a practitioner. This app can also be used by the client at home and accessed by several practitioners.[163] It is used in multiple treatment settings in the US, including within ACT programs. It has shown improvements in recovery, health functioning, understanding of medication side effects and health impacts[164], but has not shown improved adherence with psychotropic treatment regimens.[165] This tool has very strong recovery and person-centred care values underpinning its development and use.

Mobile phone related technologies

SMS text message based programs prompting mental health behaviours for those transitioning from healthcare services have been found to have limited effect. A study by van den Berg[166] introduced smart-phone communication for mental health in the form of telephone calls and text messaging as ongoing treatments after discharge from a community based day care facility. Participants were provided with either telephone calls or telephone calls and text messages provided by nurses. The content of the telephone calls was based on goals set by consumers when they left the facility with nurses questioning them about their progress. They were called an average of 12 times (total average duration: 57 minutes). The program was shown to decrease anxiety in participants but not depression.[166] The eating disorder treatment transition support program described by Robinson et al[114], discussed above — which used automated SMSs to support people with ongoing eating disorder recovery — was found to have only limited success with this population.

Macias et al[133] described a study where a smartphone application **WellWave** was used to improve mental health and wellbeing for people with serious mental health problems. The application promotes physical exercise and other behaviours by delivering "a daily menu" of activities to an individual's phone. The participants can use the application to report on their activities and these can be monitored by clinicians. The application is backed up by a library of resources (videos, documents etc.) which can be accessed by participants. The application has been very successful in engaging with participants with 94% of people using the application daily and 73% responding to prompts and engaging in exercise.[133]

The Zautra et al[121] study, discussed above in as a third wave therapy, also used telephone prompting of health-related behaviours, and this could be carried out with either a mobile phone or fixed line phone.

Discussion of mobile phone or smartphone technologies also overlaps with the discussion of eHealth above as telehealth is merging with eHealth due to advances in mobile technologies.

Programs relevant to the rural and regional Australian context

Key findings

- Different levels of programs should be considered for rural and regional contexts depending on population size and level of resources available
- None of the recovery-oriented case management programs were appropriate for rural or regional settings outside of major regional towns
- Localised interventions which were made specific to the community in which they were set up were most useful in smaller rural and regional settings
- Indigenous-focused interventions should have a strong community connection and work in with existing community structures and traditions
- eHealth interventions (discussed in the section above) are useful for delivering mental health interventions in rural and regional Australia.

Introduction

People in rural and remote communities are more likely to experience mental ill-health, receive less help for it than other Australians and complete suicide more often.[167] A recent Australian-based review of rural mental health service models by Pilbeam et al[110] promotes locally derived, context specific programs based on core elements. For those communities with low populations and limited resources they prescribe a primary care based service which provides basic services including assessment, basic CBT and counselling, medication and liaison with specialist services. For those communities with a higher level of resources they suggest mental health specific inpatient and outpatient services, community based care-coordination services, and specialist employment and housing services.[110] For those areas with the highest level of resources, such as large regional towns, more highly sophisticated programs relying on a wide range of staff competencies and service connections are appropriate. For many of the more complex case management programs introduced above this highest level is where the programs are most able to be delivered.

eHealth and mHealth

Telehealth programs (including skype or other forms of video-conferencing) allowing practitioners and specialists to communicate with and monitor the health of patients who are geographically isolated has become standard in rural and regional area. However, with the growth in availability of reliable internet brought about by the NBN eHealth technologies will become more useful in these settings. The programs discussed in the previous section will be most useful when they can be used with a range of simple

technologies (both computer and mobile device) to meet the needs of different consumer groups. Lack of mobile coverage in rural and regional areas render mHealth and smartphone related technologies less useful in these settings.

Online forums where those experiencing mental ill-health can share their experiences also offer hope to rural, remote and regional consumers where internet access is available. A study of the rural, remote and regional users of the Australian-based SANE forums by Baylosis[168] found that online interactions via support forums fulfilled a need for this group not met in their communities. Individuals in rural, remote and regional communities felt isolated and unable to connect with those in their place-based communities about mental health. Involvement in the forums therefore allowed them to communicate their experiences in ways that were not otherwise available.[168]

Current rural and remote programs

None of the case management or ACT-related studies were highly applicable to rural or remote populations as all had been conducted in urban settings. As ACT relies on intensive support from a team of clinicians it is difficult to administer within a rural or regional setting.[34]

While none appeared in our review other studies that are not explicitly recovery-oriented have trialled ACT models in rural settings and these have had mixed results.

A RCT of an ACT supported employment program, ACT-IPS, (Individualised, Placement and Support)[29] found that this model of ACT — which had high-fidelity with both the ACT model and the IPS program — could be successfully implemented in a rural setting which had high levels of social disadvantage. The ACT-IPS program had a staff profile of a psychiatrist, two nurses, two case managers, a senior clinician, a social worker and two employment specialists.[29] Staff patient ratio was 1:10. Those in the ACT-IPS program had better employment outcomes compared to those in a standard vocational program, with 64% holding competitive jobs compared to 24% in the control group.[29]

Another study comparing the implementation of ACT in an urban and a rural setting found significant difficulties in implementation in the rural setting.[33] These related to distances needed to travel to see clients, lower numbers of qualified staff and poorer quality program management. A review of ACT in rural settings revealed difficulties in implementation resulting in "smaller teams, less comprehensive staff, and less intensive services".[169] The authors stated that Intensive Case Management (discussed above) was more appropriate in rural settings because it "emphasizes individual caseloads, fewer staff, less intensive contacts, and brokered services".[169] This is also a hallmark of the current PIR program implemented across Australia (also discussed above).

A US-based study evaluated the Clubhouse model (discussed above) for use in a rural setting.[68] The Clubhouse model was found to work well in this context with positive outcomes for consumers.

Many of the programs that were successfully implemented in rural and regional areas were localised, adapted to community needs and short-term.

'The Station' is a consumer-driven rural service that has been operating in the Upper Yorke Peninsula and lower Mid-North in South Australia for over 10 years.[170] It is a recovery focused service open to consumers and their families who come to the centre for peer support, formal and informal activities. It is run by two part-time coordinators and open three days a week.[170] A realist evaluation found that the service was nurturing and empowering for consumers, and that its success was context driven and relying on strong support from the local mental health system.

One small-scale study evaluated a community centred church-based quilting project run in rural New South Wales.[171] The program aimed to decrease community stigma and improve recovery by providing an activity where mental health could be spoken about but was not a core focus. Led by a mental health nurse a team of 16 quilters within the community worked together over eight weeks to create a quilt which was given to a young person in the community who was experiencing mental ill-health. The program provided the opportunity for those making the quilt to speak about mental ill-health in a low-stigma environment while producing something of value. Those involved in the project reported greater levels of understanding and interest in helping people who experience mental ill-health, thereby decreasing stigma.[171]

Programs for Australian Indigenous communities

A recent report for the Federal Government on improving Aboriginals and Torres Strait Islanders' access to mental health services could be improved with the following strategies: providing services locally, flexible appointment times, supported transport to appointments, home visitation, services that do not involve out-of-pocket costs, providing service choices, indigenous-delivered services and services provided in non-medical service settings.[172] Services should also focus on a holistic approach to health and wellbeing, and be delivered with an ethic of trust and reciprocity.[172]

Nagel and Thompson[173] developed a culturally specific care planning approach for use with Indigenous Australians in remote or rural settings to promote self-management of mental ill-health. The study took place in remote communities in the Northern Territory and worked with Aboriginal Mental Health Workers to provide a brief intervention of two sessions 2–6 weeks apart which focused on "problem solving, motivational therapy and self-management".[173] The program also centred around goal setting and achievement. Compared to treatment as usual qualitative and quantitative measures showed that participants were highly engaged in the program and could set and achieve their goals.

The Creative Recovery project is part of the Arts in Health model and has been developed to provide weekly workshops to Indigenous participants in remote communities (Lockhart River, Aurukun, Mornington Island).[99] The program takes a different, context-driven form in each location, but generally focuses on creative skill building to allow participants "to express themselves and share thoughts, feelings and experiences with others."[99] Participants are supported by 'Artist Mentors' from their own community arts centres, and their work is exhibited and sold, thereby functioning as a social enterprise for participants to make money from their art. The program is designed to work in with existing community organisations and practices and give something back to the community.

5 Conclusions

This rapid review of care coordination models shows that most existing models can be adapted to be delivered in a recovery-oriented fashion and that this has good outcomes for consumers. Recovery-oriented care coordination models which bring together a multidisciplinary team of specialists including peer-support workers are effective in delivering care.

A range of add-on services for care-coordination allow basic models to be used to target specific needs. Effective 'add-ons' are Illness Management and Recovery, Individualised Placement and Support, CBT interventions, Wellness Recovery Action Planning, Wellness Enhancement Recovery Program, peer support add-ins such as Self-Help Agencies and Friends Connection. These programs can be added to care-as-usual with little additional resource implications to increase the effectiveness of standard programs for target groups of consumers.

Of the third wave therapies analysed in this review the framework with the clearest positive outcomes for consumers was Dialectical Behavioural Therapy.

The Open Dialogue approach, while showing some very significant benefits in small Finnish studies, needs more large scale evaluation before it is implemented in Australia.

Recovery orientation of existing models is possible, although large projects (e.g. REFOCUS) which seek to provide recovery oriented service development, have shown little effective change in practice. This has been attributed to a lack of organisational commitment and stability. This factor was seen to be a contributor to intervention failure in multiple recovery-oriented projects.

eHealth interventions are effective treatments for individuals with a wide range of diagnoses. The main uses are for 1) web-based platforms for treatment, 2) tools for prompting health-related behaviours and 3) online therapy. Web-based treatment platforms are used either stand-alone or as blended treatments with either a program-specific therapist or the consumer's own clinician involved. Several programs are already available for free or at low cost in Australia, including ThisWayUp, MoodGYM, GetReal and Mindspot. Online therapy programs are shown to be as effective as face-to-face counselling. Blended programs can also be used as transition support programs for individuals leaving inpatient care. eHealth programs are appropriate to rural and regional settings where internet access is available, and most can be delivered via both mobile technology and computers. Any implementation of eHealth initiatives should be done with a full understanding of the digital divide, which means that some groups may have more difficulty accessing these technologies than others. This is particularly important to understand the lower use of internet-based technologies amongst those in remote regions and some groups of indigenous and CALD Australians.

High quality evidence for interventions appropriate to Indigenous communities are missing but those that do exist show that they are short-term, localised and delivered by indigenous people. Principles of service provision within indigenous communities are flexibility, reciprocity, cultural-specificity and involvement.

There is a lack of evidence for models which specifically target people from CALD communities. However, the programs included here show that they are more successful at engaging with CALD communities when staffed with culturally specific staff and peer-support workers.

Murrumbidgee LHD includes urban centres, regional and rural areas, and one remote area. For rural and regional areas, localised programs which are devised with local collaboration of consumers, staff and other community members should be developed to ensure that programs meet local needs.

None of the papers included in this review offered sophisticated cost-benefit analyses, however several papers reported that the programs they evaluated were cost-effective.

Limitations

These findings should be considered in the light of the search strategy used, which focused only on papers that referred to interventions with a specific recovery or person-centred orientation. There may be interventions that are applicable which do not explicitly state that they are recovery-oriented but are nevertheless delivered within this framework. However, test searches that included literature without the recovery and person-centred search terms returned a high number of irrelevant papers.

This limitation was in part addressed using an expert reference group that reviewed the included papers and suggested other areas for inclusion. This resulted in the secondary searches taking place around areas of key interest for Murrumbidgee LHD or the Agency for Clinical Innovation. Subsequent searches did not include the recovery criteria so additional papers could be included.

The limitation of papers from 2006 onwards also limits the discussion of Assertive Community Treatment, Dialectical Behavioural Therapy or studies of the Clubhouse model published prior to that year.

It should also be remembered that publication bias means that negative or neutral results are sometimes not published, which means that available studies are more likely to present a positive base of evidence.

A focus only on interventions and models that have been fully evaluated also meant that some relevant and existing models have not been included. For example, no papers were found which discussed Partners in Recovery or the Personal Helpers and Mentors Service (PHAMS) interventions which are implemented throughout Australia.

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7 Appendix 1

Focused search terms adapted to database examples

Focused search concept	Database	Search term
e-Health	Medline	(Telemedicine/or e-health.mp.) and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 - 2016")
	Embase	(exp telehealth/ or e-health.mp.) and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp and limit to (abstracts and english language and yr="2006 -Current")
	CINAHL	e-health and (mental or psych*) and (service or intervention or trial or model or model of care or program) and Limiters - Abstract available; English Language; Published Date: 20060101-20161231;Academic Journals and 2006-
	Scopus	(TITLE-ABS-KEY(recovery OR individuali* OR "person cent*")TITLE-ABS-KEY (e-health) AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	e-health and (mental or psych*) and (service or intervention or trial or model or model of care or program) 2006-current
Acute/crisis	Medline	(exp Crisis Intervention/ or (acute community or community crisis)).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")
	Embase	(exp crisis intervention/ or (acute community or community crisis)).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")
	CINAHL	(acute community or community crisis) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*) and Limiters - Abstract Available; English Language; Published Date: 20060101-20161231; Academic Journals
	Scopus	(TITLE-ABS-KEY(recovery OR individuali* OR "person cent*")TITLE-ABS-KEY ("acute community" OR "community crisis") AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	(acute community or community crisis) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*) and 2006-current

Focused search concept	Database	Search term
Telehealth	Medline	(telehealth.mp. or exp Telemedicine/) and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")
	Embase	(exp telehealth/ or exp telemedicine/) and (mental or psych*).mp.and (service or intervention or trial or model or model of care or program).mp.and (recovery or person cent* or individuali*).mp and limit to (abstracts and english language and yr="2006 -Current")
	CINAHL	("Telehealth+") and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*) and Limiters - Abstract Available; English Language; Published Date: 20060101-20161231; Academic journals
	Scopus	(TITLE-ABS-KEY(recovery OR individuali* OR "person cent*")TITLE-ABS-KEY (telehealth) AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	("Telehealth+") and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*); 2006-Current
Online	Medline	(exp Online Systems/ or online.mp.) and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp and limit to (abstracts and english language and yr="2006 -Current")
	Embase	(exp online system/ or online.mp.) and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")
	CINAHL	("Online Services" or online) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*) and Limiters - Abstract Available; English Language; Published Date: 20060101-20151231; Academic Journals
	Scopus	(TITLE-ABS-KEY(recovery OR individuali* OR "person cent*")TITLE-ABS-KEY (online) AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	("Online Services" or online) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*); 2006-Current
Smartphone	Medline	(exp Smartphone/ or smartphone.mp. or smart phone.mp.) and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")

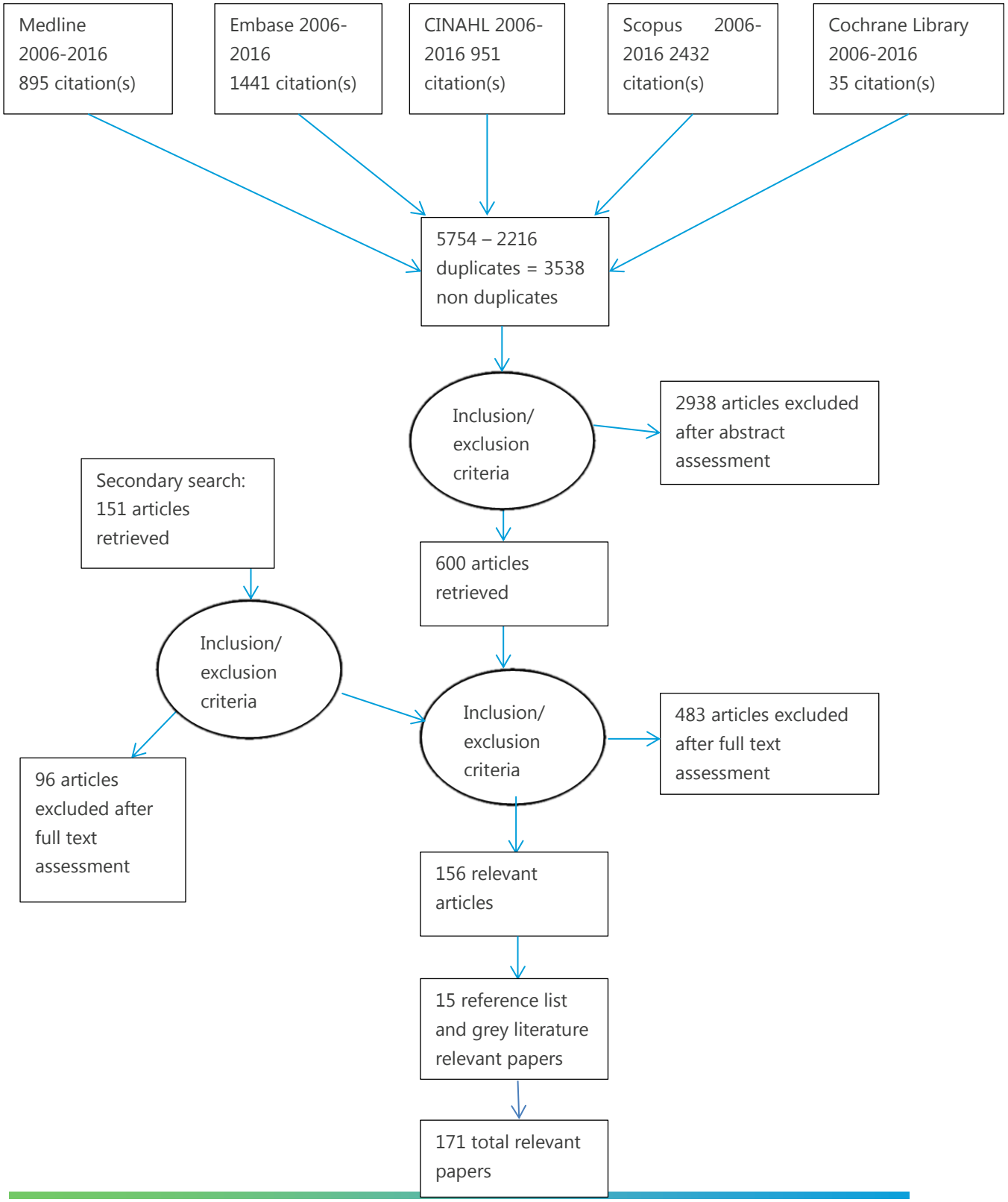
Focused search concept	Database	Search term
	Embase	(exp telemedicine/ or smartphone or smart phone).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")
	CINAHL	("Smartphone+") or smartphone or smart phone) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*) and Limiters - Abstract Available; English Language; Published Date: 20060101-20161231; Academic Journals
	Scopus	(TITLE-ABS-KEY(recovery OR individuali* OR "person cent*")TITLE-ABS-KEY (smartphone OR "smart phone") AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	("Smartphone+") or smartphone or smart phone) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*); 2006-Current
Community care	Medline	(community care or care in the community or community mental or community psych* or community treat*).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")
	Embase	(community care or care in the community or community mental or community psych* or community treat*).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")
	CINAHL	(community care or care in the community or community mental or community psych* or community treat*) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*) and Limiters - Abstract Available; English Language; Published Date: 20060101-20161231; Academic Journals
	Scopus	(TITLE-ABS-KEY(recovery OR individuali* OR "person cent*")TITLE-ABS-KEY ("community care" OR "care in the community" OR "community mental" or "community psych*" or "community treat*") AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	(community care or care in the community or community mental or community psych* or community treat*) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*); 2006-Current
Third wave therapies	Medline	(Acceptance and commitment or dialectical behave*" or mindful*) and (community care or care in the community or community mental or community psych* or community treat*).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 -Current")

Focused search concept	Database	Search term
	Embase	(Acceptance and commitment or dialectical behave*" or mindful*) and (community care or care in the community or community mental or community psych* or community treat*).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and (recovery or person cent* or individuali*).mp. and limit to (abstracts and english language and yr="2006 - Current")
	CINAHL	(Acceptance and commitment or dialectical behave*" or mindful*) and (community care or care in the community or community mental or community psych* or community treat*) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and (recovery or person cent* or individuali*) and Limiters - Abstract Available; English Language; Published Date: 20060101-20161231; Academic Journals
	Scopus	(TITLE-ABS-KEY Acceptance and commitment or dialectical behave*" or mindful*) AND (TITLE-ABS-KEY(recovery OR individuali* OR "person cent*")TITLE-ABS-KEY ("community care" OR "care in the community" OR "community mental" or "community psych*" or "community treat*") AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	(Acceptance and commitment or dialectical behave*" or mindful*); 2006-Current
Additional search: Recovery College, Eating disorders, Open dialogue therapy, Family sensitive practice, Co-designed services.	Medline	(Recovery College or Eating disorder* or Open dialogue or Family sensitive or Co-design*) and (community care or care in the community or community mental or community psych* or community treat*).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and limit to (abstracts and english language and yr="2006 -Current")
	Embase	(Recovery College or Eating disorder* or Open dialogue or Family sensitive or Co-design*) and (community care or care in the community or community mental or community psych* or community treat*).mp. and (mental or psych*).mp. and (service or intervention or trial or model or model of care or program).mp. and limit to (abstracts and english language and yr="2006 -Current")
	CINAHL	(Recovery College or Eating disorder* or Open dialogue or Family sensitive or Co-design*) and (community care or care in the community or community mental or community psych* or community treat*) and (mental or psych*) and (service or intervention or trial or model or model of care or program) and Limiters - Abstract Available; English Language; Published Date: 20060101-20161231; Academic Journals

Focused search concept	Database	Search term
	Scopus	(TITLE-ABS-KEY Recovery College or Eating disorder* or Open dialogue or Family sensitive or Co-design*) AND (TITLE-ABS-KEY ("community care" OR "care in the community" OR "community mental" or "community psych*" or "community treat*") AND PUBYEAR > 2006) AND ((mental OR psych*)) AND (service OR intervention OR model OR program OR trial)
	Cochrane	(Recovery College or Eating disorder* or Open dialogue or Family sensitive or Co-design*); 2006-Current

8 Appendix 2

PRISMA flowchart



9 Appendix 3

Table of papers

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Allan et al. 2015 England	People experiencing severe mental illness	Art Therapy In the Community (ATIC)	"ATIC: Developing a recovery-based art therapy practice." Art therapists support consumers throughout the sessions. Out of sessions, therapists communicate with mental health care teams and provide updates of any issues.	Art therapists and a peer worker support	Consumer wellbeing gains	Level IV	Moderate	Low
Alvarez-Jimenez et al. 2012 Australia	Young people experiencing psychosis	Ehealth HORYZONS Intervention	"On the HORYZON: Moderated online social therapy for long-term recovery in first-episode psychosis." The HORYZONS internet intervention combines peer social networking and personalised psychosocial treatments that are designed to support long term results for people experiencing first episode psychosis. Social workers and clinical psychologists moderate HORYZONS daily.	Clinical psychologists social worker	60% of consumer perceived greater social connections	Level IV	Moderate	High
Andrews et al. 2014	People experiencing all levels of depression and anxiety	Ehealth Online Cognitive Behavioral Treatment (CBT)	"Internet psychotherapy and the future of personalized treatment." Internet CBT is a service which delivers psychoeducation to consumers about their disorder. Lessons are designed to help control dysfunctional thinking and behaviour.		Meta-analysis supports I-CBT intervention effectiveness	Level III-3	Moderate	High

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
A-Tjak et al. 2015	Individuals with mental and physical health problems of any severity	Acceptance and Commitment Therapy	"A meta-analysis of the efficacy of acceptance and commitment therapy for clinically relevant mental and physical health problems." A meta-analysis of rcts trialling acceptance and commitment therapy. Compared Acceptance and commitment therapy to CBT.	Various	Acceptance and commitment therapy not superior to ACT	Level I	High	Moderate
Barbic et al. 2009 Canada	Individuals experiencing serious mental illness. 82% schizophrenia and related disorders, 18% bipolar	Assertive Community Treatment (ACT) Recovery Workbook Program	"A randomized controlled trial of the effectiveness of a modified recovery workbook program: Preliminary findings." The Recovery Workbook Program supports consumers by: 1) providing information about mental illness and community services; 2) promoting stress management techniques; and 3) encouraging goal setting.	Sessions are supported by: occupational therapist; peer support worker	The program improved consumer confidence	Level II	High	Low
Barnes et al. 2007 Australia	Adults experiencing bipolar disorder	Ehealth Recovery Road [RR] Program	"Evaluation of an online relapse prevention program for bipolar disorder: An overview of the aims and methodology of a randomized controlled trial." The RR Program assists consumers by monitoring symptoms and providing psycho-educational supports. Consumers also receive medication reminders and are encouraged to keep in contact with their clinicians throughout the program.		Interim results suggest that consumers are utilising all the online programme options	Level II	High	High

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Barrett et al. 2014 UK	People with any type of mental ill-health	Prosper	"Prosper: A social movement approach to mental health." "An evolving self-directed network and movement has been developed that comprises around 150 "members" and a wider network of 20 service user groups across South West London". Focus on "open Forums" and "collective actions" which "fall under the themes of "create" (peer support, outreach, campaigns, training) and "collaborate" (partnership working with user-led organisations and a Recovery College, peer support networks, supporting the development of personal health budgets and local commissioning, and consultancy)."	Self-directed network of peers	Effective at connecting consumers and developing peer support for diverse groups of consumers who have a wide variety of experiences and needs.	Level IV	Low	Medium
Batterham et al. 2015	People experiencing depression of any severity	e-Health programs	"Developing a roadmap for the translation of e-mental health services for depression." e-Health dissemination methods: 1) unguided: consumers have free access without clinician participation e.g. Moodgym; 2) service supported - placing e-health programs into mental health services; 3) private - consumers pay to access the program and 4) clinically guided - clinicians provide access to consumers and offer direct assistance.	Clinicians	E-Health programs may assist to reduce depression in clinical and community environments	Level II	Moderate	High

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Bourne et al. 2007 England	People with mental illness	Employment Support Model Occupational Therapy Input	"From therapy to vocation." ORs support vocational planning and matching consumers with suitable options.	Occupational therapists	44% of consumers were employed, studying or involved with leisure activities	Level IV	Moderate	Low
Carlbring et al. 2011	People with anxiety disorders	Ehealth Online (Internet-delivered) CBT	"Individually-tailored, Internet-based treatment for anxiety disorders: A randomized controlled trial." Consumers receive personalised modules. Online modules include topics of cognitive adjustment, social anxiety, generalized anxiety, panic, agoraphobia, and relaxation.		Intervention has potential to assist long term treatment of anxiety	Level II	High	High
Carolan et al. 2011 USA	People experiencing mental illness	Clubhouse Programs	"A Place to Be: The Role of Clubhouses in Facilitating Social Support." Clubhouses offer consumers employment support as well as social networking and peer support opportunities.	Peer workers (peers) and paid staff (partners)	Clubhouses enable consumers to develop social connections while experiencing personal growth at a pace that they are comfortable with	Level IV	Moderate	High
Chui W et al. 2012 Hong Kong	Consumers experiencing severe mental illness.	Case management Personalised Care Programme (PCP)	"Community psychiatric service in Hong Kong: Moving towards recovery-oriented personalized care." PCP involves: 1) classifying consumers into three levels of risk (i.e. Low, med and high); 2) identifying consumers' needs and 3) identifying consumers' recovery goals.	Case manager average case load =50 consumers.	Collaborations are improving between community service partners to encourage 'holistic' support	Level IV	Moderate	Low

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Compton et al. 2016 USA	Consumers experiencing serious mental conditions with recent hospitalisation	Case management Opening Doors to Recovery (ODR) Program	"Opening doors to recovery: Recidivism and recovery among people with serious mental illnesses and repeated hospitalizations." Under the ODR program, community navigation specialists (CNS) provide consumers with case management and recovery services. Consumers are assisted to navigate their way around the complicated mental health services system.	Professional, peer and family community navigation specialists	Significant lowering of hospitalization numbers	Level IV	Moderate	Low
Compton et al. 2011 USA	Consumers experiencing serious mental conditions with recent hospitalisation	Case management Opening Doors to Recovery (ODR) Program	"Public-academic partnerships: opening doors to recovery: a novel community navigation service for people with serious mental illnesses." ODR involves a case management team of navigators (social worker, family member and peer) who assist consumers in areas of service access, family support and empowerment.	Social worker; family member; peer support worker	Community navigation teams may benefit consumers through the broad range of experience that they offer.	Level IV	Low	Low
Cook et al. 2009 UK	Individuals with schizophrenia or psychosis	Case management - Add on: Occupational Therapy (Individualised) Program	"Occupational therapy for people with psychotic conditions in community settings: a pilot randomized controlled trial." OTs collaboratively work with consumers by: 1) determining what the consumer wants; 2) assessing functions; 3) deliberatively setting goals and 4) determine strengths and performance barriers.	Three occupational therapists care coordinators	The pilot indicates personalised OT may assist consumer recovery. However, evidence supporting OT effectiveness for consumers with psychosis is suggestive only.	Level II	High	Low

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Cook et al. 2013 USA	Individuals with schizophrenia related illness 27%, bipolar 31%, depressive disorder 27%	Case management add on: Wellness Recovery Action Planning (WRAP)	"Impact of Wellness Recovery Action Planning on service utilization and need in a randomized controlled trial." WRAP encourages: 1) individualised strategies; 2) detection of mental ill health warning signs; 3) advanced planning for crisis treatments; 4) post crisis planning to enable routines to resume.	WRAP facilitators (peer workers)	WRAP consumers reported less need for services	Level II	High	Moderate
Cook et al. 2012 USA	Individuals with schizophrenia related illness 22%, bipolar 38%, depressive disorder 23%	Case management add on: Wellness Recovery Action Planning (WRAP)	"A randomized controlled trial of effects of Wellness Recovery Action Planning on depression, anxiety, and recovery." WRAP links consumers with wellbeing resources and encourages understanding of mental illness warning messages.	WRAP facilitators (peer workers)	Reduced depression and anxiety, increased recovery	Level II	High	Moderate
Coulter et al. 2015 USA	Individuals experiencing long term illnesses.	Personalised Care Planning	"Personalised care planning for adults with chronic or long-term health conditions." This planning involves communications between consumers and clinicians whereby health goals and actions are collaboratively developed. Of the 19 articles examined, three of these covered mental health support.	Clinicians	Personalised care planning has potential to reduce depression and increase consumers' health management confidence	Level I	High	Medium

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Cowling and Garrett 2013 Australia	Children and families of people with mental ill-health	Family Sensitive practice	"A child-inclusive family intervention in a community adult mental health service." Describes a program where a series of family-centred sessions take place. First with the family to identify the issues then with each individual separately and then with the family again in order to help the family to put in place shared strategies.	Not clear but states that it can be implemented by non-family workers		Level IV	Low	High
Craine et al. 2009 Canada	Consumers with serious mental illness who are in recovery	Employment Support Model Individual Placement and Support (IPS)	"The contribution of IPS to recovery from serious mental illness: A case study." The IPS Program places consumers into jobs within the community by: 1) matching jobs with client goals; 2) matching jobs with client skillsets and 3) locating jobs that do not require extensive pre-start training.	Clinicians; rehabilitation officers	Improved mental health and social interactions	Level IV	Moderate	Medium
Cuddeback et al. 2013 USA	Consumers with severe mental illness	Assertive Community Treatment (ACT) Transitioning to Case Management	"Consumers' perceptions of transitions from assertive community treatment to less intensive services." ACT to CM transition support involves: 1) preparing clients to transition by ensuring that their fundamental needs are being met; 2) easing clients into the transition by maintaining contacts between ACT and CM staff; 3) involving case managers by encouraging them to make regular contact with their new clients.	ACT = low staff to client ratio case manager typical case load = 40 plus consumers	Most clients who transition to lessor intensive services are displaying positive signs of recovery	Level IV	Moderate	Low

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Davidson et al. 2006	People with severe mental ill-health	Peer-led services	"Peer Support Among Adults With Serious Mental Illness: A Report From the Field." A review of four studies which evaluated peer-led community mental health services.	Peer support workers	Peer-led services as effective as non-peer led services	Level III	Moderate	Moderate
Davis et al. 2015 USA	People in stable period of schizophrenia	Employment Support Model: MIRRORS	"Effect of mindfulness on vocational rehabilitation outcomes in stable phase schizophrenia." Mindfulness Intervention for Rehabilitation and Recovery in Schizophrenia (MIRRORS) assists consumers to manage their stress and improve their work performance through an acceptance rather than a change of thinking (as CBT espouses).		MIRRORS consumers worked extra hours and performed better overall than control group	Level IV	Moderate	Low
Deegan 2010 USA	People experiencing psychiatric illness	Ehealth: Commonground web application	"A web application to support recovery and shared decision making in psychiatric medication clinics." Commonground aims to encourage clients to prepare for their clinical appointments while also supporting collaborative decision making in the medical session itself. Commonground reports reflect consumer needs and are accessible to therapists and case managers.	Peer staff practitioners	The program may improve medical visit outcomes for people with mental illness	Level IV	Moderate	High

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Doughty 2011	People with serious mental illness	Case management Consumer Providers (Consumer-Led Mental Health Services)	"Can consumer-led mental health services be equally effective? An integrative review of CLMH services in high-income countries." Consumer led services are services within which consumers take on planning, administering or evaluation roles. Case management is one of these services. Others services include peer-support, education, policy advisors, auditing and research.	Consumers	Consumer led services can produce the same level of client results as traditional approaches in areas of employment and lowering hospital admittance	Level I	High	Low
Ebert et al. 2013 Germany	People experiencing mental disorders	Transition Support: Trans diagnostic Internet-based Maintenance Treatment (TIMT)	"A transdiagnostic internet-based maintenance treatment enhances the stability of outcome after inpatient cognitive behavioral therapy: a randomized controlled trial." TIMT supports consumers transitioning from inpatient treatment via coaching, support groups and online symptom monitoring functions.		The intervention may assist consumers to sustain healthy changes	Level II	High	High
Fairburn et al. 2009	Adults with eating disorders (excl. Anorexia Nervosa)	CBT-Ef or CBT-Eb	"Transdiagnostic cognitive-behavioral therapy for patients with eating disorders: a two-site trial with 60-week follow-up." CBT Ef and CBT Eb over 28-week program (20 sessions of 50 minutes' duration). Six-month staff training to provide course.	Four psychologists, one mental health nurse	CBT-Ef or CBT-Eb significantly reduced eating disorder symptoms over control	Level II	High	Moderate

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Farrelly et al. 2014 England	Individuals experiencing psychotic disorders	Community Crisis Care. Joint Crisis Plan (JCP) Intervention	"Individualisation in crisis planning for people with psychotic disorders" The JCP intervention allows consumers to express their care preferences in preparation for a future crisis. These preferences are reflected in a personalised care plan.	Care coordinator	Care plan individualisation failed to improve after care coordinators JCP application	Level II	High	Low
Fieldhouse et al. 2014 England	Persons experiencing mental illness	Employment Support Model Natureways Social Enterprise	"Vocational rehabilitation in mental health services: evaluating the work of a social and therapeutic horticulture community interest company" Natureways is a community interest company that provides consumers with horticultural training together with employment opportunities.	Horticultural support worker	Horticulture may be a source of training and employment for people experiencing mental ill health	Level IV	Moderate	High
Fujita et al. 2010 Japan	People with severe mental ill health	Illness Management and Recovery (IMR)	"Implementing the illness management and recovery program in Japan" IMR provides consumers with information and skills aimed to promote the self-management of a mental disorder.	Clinicians	The program is effective in supporting consumers who are experiencing severe mental illness.	Level III-1	Moderate	Low

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high... very low)	Applicability (rural-regional LHD context)
Gao and Dolce 2010 USA	The program supported clients who met ACT inclusion criteria. Such criteria include having been previously admitted to a state hospital and/or having had several admissions to a county psychiatric hospital.	ACT program (Team S)	"A case illustration of strategies to improve employment outcomes among individuals receiving ACT services." Team members receive monthly seminar training sessions over a year. Team based vocational training is designed to help staff to appreciate the connections between employment and consumers' recovery and to develop skills to encourage employment outcomes. No description of base ACT intervention, only vocational add on.	Team leader; 2 x nurses; 2 x case managers; 1 x vocational support; 1 x substance abuse counsellor; 1 x peer support 2 part-time staff = psychiatrist and director	Consumer employment percentages increased from 5 percent to 24 percent over the year	Level IV	Moderate - no control group	Low This study is based on a single New Jersey ACT program
Gleeson et al. 2014 Australia	People experiencing first-episode psychosis	Ehealth HORYZONS intervention	"Safety and privacy outcomes from a moderated online social therapy for young people with first-episode psychosis" HORYZONS aims to assist clients via modules such as 'psychoeducation' and 'identifying emerging illness signs'. Participants retain their standard treatment.	Online moderators	Consumers reported intervention attributes of trust and safety	Level IV	Moderate	High

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Grocke et al. 2008 Australia	People experiencing severe and ongoing mental ill health.	Art-Therapy - Music Therapy	"Is there a role for music therapy in the care of the severely mentally ill?" Review of music therapy for mental ill-health.		Music therapy can support the quality of lives experienced by people with severe and persisting mental ill health	Level IV	Low	Low
Harned et al. 2008 USA	Women with borderline personality disorder and drug dependency at high risk of suicide (>2 attempts previous 5 years)	Dialectical Behavioral Therapy	"Treating Co-Occurring Axis I Disorders in Recurrently Suicidal Women With Borderline Personality Disorder: A 2-Year Randomized Trial of Dialectical Behavior Therapy Versus Community Treatment by Experts" Standard DBT vs. Expert therapy over a 12 month period. Weekly individual sessions, weekly group sessions, telephone support, therapist team meetings.	DBT trained therapists (45 hours training)	DBT superior in treating drug dependency compared to expert therapist	Level III	High	High
Hasson-Ohayon et al. 2007 Israel	People experiencing severe mental illness	Illness Management and Recovery (IMR) Program	"A randomized controlled trial of the effectiveness of the illness management and recovery program" Two clinicians facilitate IMR Program sessions. The distribution of educational documentation forms a major component of the program.	Clinicians case managers	IMR can educate consumers about their mental illnesses and support them towards their goals	Level II	High	Low
Hawnton et al. 2016	Self-harm research	Included analysis of Dialectical Behavioural Therapy	"Psychosocial interventions for self-harm in adults" Systematic review of interventions for self-harm.		Significant improvement in self harm but data quality low	Level I	High	High

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Heenan 2007 Ireland	People experiencing mental illness	Art Therapy - Supported Recovery Program	"Art as therapy: an effective way of promoting positive mental health?" Art therapy is one of the five options offered to consumers under the Supported Recovery Program.	Art therapists	Consumers experienced greater self-esteem and empowerment	Level IV	Moderate	Low
Helgadottir et al. 2009 Australia	People experiencing social anxiety	Ehealth cbtpsych Intervention	"Online CBT II: A phase I trial of a standalone, online CBT treatment program for social anxiety in stuttering". Cbtpsych.com utilises the voices of male and female clinical psychologists who communicate with consumers via pre-recorded sound bites. Delivers personalised feedback emails to consumers. Consumers need to undertake exercises to modify negative thought processes.	Clinical psychologists and pre-recorded messages	The two consumers no longer met social phobia criteria	Level IV	Low	High
Hershell et al. 2014 USA	Therapists providing support to people with borderline personality disorder	Dialectical Behavioural Therapy	"Evaluation of an implementation initiative for embedding Dialectical Behavior Therapy in community settings" Training in DBT with therapists.	Counsellors psychologists, social workers, nurses	Improved understanding and respect for people with borderline personality disorder	Level III	Moderate	Moderate
Holmesland et al 2014 Norway	Variety of people receiving treatment for mental ill-health	Open Dialogue Approach	"Inter-agency work in Open Dialogue: the significance of listening and authenticity." Conducted focus groups with practitioners using the Open Dialogue Approach and observations of meetings to understand the implementation challenges from the practitioner perspective.		Challenge was related to lack of understanding of open dialogue and power differentials	Level IV	Low	Low

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Johns et al. 2016 England	Individuals experiencing psychosis	Acceptance and Commitment Therapy (ACT) Groups for people with psychosis (G-actp)	"The feasibility and acceptability of a brief Acceptance and Commitment Therapy (ACT) group intervention for people with psychosis: The 'ACT for life' study". Consumers receive support via four two-hour skills-building workshops which are conducted on a weekly basis. These workshops encourage consumers to deal with cognitive challenges and to commit to actions that are to be undertaken between workshop sessions.	A lead therapist with support from up to two clinical practitioners in co-facilitator roles.	Some improvements recorded in mood and functioning. High program dropout rate	Level IV	Moderate	Moderate
Kenter et al. 2013 Netherlands	People experiencing anxiety and depression	Ehealth Problem Solving Treatment (PST)	"Guided online treatment in routine mental health care: an observational study on uptake, drop-out and effects" The online PST program educates consumers in techniques that may allow them to address their 'solvable' problems. Feedback is provided to consumers from a Masters level clinical psychology student.	Psychologists	PST can encourage fast recovery and is thus an important early step in mental health assistance.	Level IV	Moderate	High
Kessler et al. 2009 England	People experiencing depression	Ehealth Online Cognitive Behavioral Therapy (CBT)	"Therapist-delivered Internet psychotherapy for depression in primary care: a randomised controlled trial" Therapists provide CBT to consumers online allowing interaction in real time.	Therapists	Online CBT benefits were sustained over a period of eight months	Level II	High	High

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Korsbek et al. 2016 Netherlands	People using mental health services, people with psychosis and people with long term treatments	Smartphone Momentum application	"Momentum: A smartphone application to support shared decision making for people using mental health services". The Momentum smartphone application supports collaborative decision making by allowing consumers to share their treatment interests with practitioners. Consumers are also linked with treating professionals.	Mental health service practitioners	Consumers and practitioners described the Momentum application as being 'useful'	Level IV	Moderate	High
Lakeman 2014		Open Dialogue Approach	"The Finnish open dialogue approach to crisis intervention in psychosis: a review" Systematic Review of Open Dialogue approach.		Some initial positive findings, but limited by lack of broad range of methodologically sound research	Level II	Moderate	High
Leamy et al 2014 England	Staff implementing care coordination services	REFOCUS	"Implementing a Complex Intervention to Support Personal Recovery: A Qualitative Study Nested within a Cluster Randomised Controlled Trial" Qualitative analysis of staff experiences of implementing the REFOCUS trial. REFOCUS is a structured program improving recovery orientation of services.	Care coordination staff and managers	Barriers to implementation were organisational commitment. Facilitators were role play of scenarios	Level IV	Moderate	Moderate
Leenders et al. 2001 Australia	Indigenous people with mental health illness who are located in remote communities	Art Therapy	"Work in progress: Creative Recovery to creative livelihoods" Participation in arts can be a culturally sensitive way to engage Indigenous people who are experiencing mental health issues.		Engagement in meaningful creative activities may encourage wellbeing	Level IV	Low	High

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Leung et al. 2013 Hong Kong, Australia	People with eating disorders	Ehealth Smart Eating program	"Enhancing motivation to change in eating disorders with an online self-help program". The online program offers self-help motivation, motivational worksheets and health evaluations. Consumers receive follow up emails that aim to encourage program use.		Program exercises may help motivate clients to modify their eating habits	Level IV	Moderate	High
Leung et al. 2012 Hong Kong, Australia	People with eating disorders	Ehealth Smart Eating Program	"Breaking the silence of eating disorders with the hope of an online self-help programme". The internet based Smart Eating program assists consumers with eating disorders by promoting self-help measures.		Consumer awareness and health improvements	Level IV	Moderate	High
Linehan et al 2006 USA	Women with borderline personality disorder at high risk of suicide (>2 attempts previous 5 years)	Dialectical Behavioral Therapy	"Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder". Standard DBT vs. Expert therapy over a 12-month period. Weekly individual sessions, weekly group sessions, telephone support, therapist team meetings.	DBT trained therapists (45 hours training)	Halving in rate of suicidal behaviours in group receiving DBT compared to expert therapist	Level III	High	High
Lloyd et al. 2007 Australia	People with mental illness	Art Therapy - the Girrebala arts programme	"Art and Recovery in Mental Health: a Qualitative Investigation". The Girrebala arts programme aims to empower consumers in a community based setting that is supportive of healing.	Artist in residence occupational therapist	Programme promoted adjustments that favour recovery	Level IV	Moderate	Moderate

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Lowe et al. 2011	Women with eating disorders who have been treated as inpatients or are at risk of inpatient admission	Normalisation of eating Intensive Outpatient Program	"Evaluating the real-world effectiveness of cognitive-behavior therapy efficacy research on eating disorders: a case study from a community-based clinical setting". Implemented a transition support program with, mainly, adult women leaving inpatient care. Attempted to adopt CBT in this setting through a normalisation of eating program.	Case manager, dietician, psychiatrist, other staff with masters' level qualifications	Limited success mainly due to organisational problems and lack of acceptability of program to consumers	Level IV	Low	Low
Macias et al. 2015 USA	People experiencing major depression, schizophrenia, or bipolar disorder	Smartphone wellwave app	"Using Smartphone Apps to Promote Psychiatric and Physical Well-Being". The Wellwave application does the following: 1) promotes psychological wellbeing by sending activities to consumers' mobiles daily. 2) reminds consumers of appointments and medication commitments and 3) enables messaging between consumers and peers/ professionals.	Professional program staff, peers	Despite some early technical issues that were fixed, all consumers were satisfied with the program	Level IV	Low	High
Malm et al. 2014 Sweden	Consumers with severe mental illness	Assertive Community Treatment (ACT) Integrated Care (IC) Program	"Durability of the efficacy of integrated care in schizophrenia: A five-year randomized controlled study". The IC Program features shared clinical decision making. Collaborative decision making is encouraged via planning, problem resolution and psychoeducation activities. Consumers are supported by resource groups that include professionals and family.	IC and RR involve multidisciplinary teams based in the community	IC Program: improvements in social functioning and service satisfaction	Level II	High	Low

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Marino et al. 2014	People experiencing severe mental illness	Employment Support Model Individual Placement and Support (IPS)	"An update on supported employment for people with severe mental illness". IPS supports consumers through job planning activities while making efforts to create jobs through employers.		A review of 14 IPS RCTS found that the program increases levels of employment compared to other approaches	Level I	High	Low
Mcclay et al. 2013	People with eating disorders	Ehealth Online CBT	"Online cognitive behavioral therapy for bulimic type disorders, delivered in the community by a non-clinician: Qualitative study". Self-help intervention including 8 sessions deigned to amend unhealthy eating related thoughts. Consumers can also obtain weekly email or phone assistance.		Consumers considered online CBT to be an 'acceptable' but some lacked motivation to complete	Level IV	Moderate	Low
Mcgaig et al. 2014, UK (Scotland)	All people who identify as having mental ill-health	Recovery College	"Establishing a Recovery College in a Scottish university." Describes the development and administration of a Recovery College which is located within a University (rather than a health service).	Administrator with educational background, project worker to support peer workers. 7 peer workers	Not yet evaluated – description of program only	IV	Low	Medium
Mcgregor et al. 2014	Anyone identifying as having mental ill-health	Recovery College	""The college is so different from anything I have done". A study of the characteristics of Nottingham Recovery College. Describes the characteristics of the Nottingham Recovery College.	1.2 paid staff members	Characteristics have high fidelity to Perkins et al 2012 model	Level IV	Low	Moderate

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Mcsherry et al. 2012 Ireland	Individuals attending community mental health service in a semi-rural setting.	Dialectical Behavioural Therapy	"Service user experience of adapted dialectical behaviour therapy in a community adult mental health setting". 12 months of DBT offered in standard form in a community mental health team setting.		Increasing coping strategies and mindfulness skills	Level IV	Low	Moderate
Meddings et al. 2014a	People identifying as having mental ill-health and their carers	Recovery College	"Co-delivered and co-produced: creating a recovery college in partnership". Describe setting up a coproduced recovery college in its early stages. Offers 6 courses co-developed and run by consumers to 135 consumers, carers and others.		High satisfaction from consumers, 67% attendance rate	Level IV	Low	Moderate
Min et al. 2007 USA	Persons with co-occurring mental illness and substance abuse: 67% schizophrenic disorders, 23% affective disorders.	Intensive Case Management- add on: The Friends Connection (FC) Program	"Peer support for people with co-occurring disorders and community tenure: A survival analysis". Consumers receive ICM services as well as FC Program support. The FC Program helps consumers to participate in community activities. The support is delivered by peers who are experienced in recovery.	Peer support staff	The FC Program may reduce rehospitalisation for this target group	Level IV	Moderate	Low

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Morrissey et al. 2013 USA	People with severe mental ill health who have repeated psychiatric hospital admissions	Recovery-oriented Assertive Community Treatment (ACT)	"Assessing the effectiveness of recovery-oriented ACT in reducing state psychiatric hospital use". the program provides consumers with recovery-oriented supports with the aim of reducing hospitalisations.	Recovery focused teams	Reduced hospital days of 32 to 33 days for each person. Most effective when targeting consumers with high use of psychiatric inpatient facilities.	Level III-1	Moderate	Low
Mueser et al. 2007 USA	Individuals experiencing PTSD	Case management add on Trauma Recovery Group	"The Trauma Recovery Group: a cognitive-behavioral program for post-traumatic stress disorder in people with severe mental illness". The Trauma Recovery Group assists consumers via PTSD education, crisis and recovery planning, and coping with mental illness support. Consumers graduate from the program and this achievement is recognised in the awarding of certificates.	Clinicians	Consumers completing the program reduced their symptoms of PTSD	Level IV	Moderate	Low

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Mueser et al. 2013 USA	People with Schizophrenia	Psychosocial interventions for Schizophrenia	"Psychosocial treatments for schizophrenia". A variety of psychosocial treatments exist to support consumers with Schizophrenia in community settings. Evidence-based practices encompass: ACT, CBT for psychosis, cognitive adjustment, psychoeducation, illness self-management, social skills development and supported employment. Promising interventions include: cognitive adaptive therapy, first-episode psychosis support, integrating treatment for co-occurring disorders, peer support.			Level II	High	Low
Munro et al. 2014 Scotland	Anorexia Nervosa	Anorexia Nervosa Intensive Treatment Team (ANITT)	"A new service model for the treatment of severe anorexia nervosa in the community: The Anorexia Nervosa Intensive Treatment Team". Implemented a high intensity outpatient and in-community Anorexia Nervosa program. Program lasts for up to 24 months with gradually less intensive support. Support involves therapy x2 per week and between 2-10 meal support.	1 psychiatrist, 7 psychologists, 2 dieticians, 1 nurse, 1 administrator	Cost effective and with high patient satisfaction scores.	Level III	Low	Moderate
Murray et al. 2015 Australia	Individuals experiencing late stage bipolar disorder	Ehealth ORBIT (online, recovery-focused, bipolar individual therapy)	"Online mindfulness-based intervention for late-stage bipolar disorder: pilot evidence for feasibility and effectiveness". ORBIT modules aim to support consumers across areas of mindfulness, self-acceptance and sleep enhancement.		Online mindfulness therapy appears to have clinical value.	Level IV	Moderate	High

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Myers et al. 2015 USA	Individuals experiencing serious mental illness with a recent hospitalisation	Case Management Opening Doors to Recovery (ODR) Program	"A potential role for family members in mental health care delivery: The family community navigation specialist". The family community navigation specialist (F-CNS) maps out community based resources for consumers and their families. These specialists hold at least an undergraduate qualification while also having experience with a significant other who has utilised mental health supports.	ODR team: three community navigation specialists; one peer specialist, one mental health expert, and one family CNS	ODR F-CNS has capacity to improve service access to consumers as well as their families	Level IV	Moderate	Low
Nagel et al. 2008 Australia	Indigenous people experiencing psychosis or depression	The Brief Intervention	"Motivational care planning -- self-management in Indigenous mental health". The Brief intervention supports consumers through motivational therapy, collaborative problem solving and self-management techniques.		The brief intervention can assist mental health consumers who are acutely ill	Level II	High	High
Naslund et al. 2015	Individuals experiencing serious mental illness	Ehealth and mhealth technologies	"Emerging mhealth and ehealth interventions for serious mental illness: A review of the literature". Remote e-health and m-health interventions to support people with serious mental illness include online support groups, smartphone apps, SMS measures and personal digital assistants.		Remotely provided technological interventions show potential to effectively support people with serious mental illness	Level I	High	High

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Neacsiu et al. 2014	Women with borderline personality disorder at high risk of suicide (>2 attempts previous 5 years)	Dialectical Behavioral Therapy	"Impact of dialectical behavior therapy versus community treatment by experts on emotional experience, expression, and acceptance in borderline personality disorder" Standard DBT vs. Expert therapy over a 12-month period. Weekly individual sessions, weekly group sessions, telephone support, therapist team meetings.	DBT trained therapists (45 hours training)	Decreased anger and 'experiential avoidance' in group receiving DBT compared to expert therapist	Level III	High	High
Newman-Taylor et al. 2016	All people with mental ill-health	Recovery College	"The Recovery College: A Unique Service Approach and Qualitative Evaluation". Qualitative evaluation of a Recovery College in the South of England. Semi-structured interviews with 11 consumers. Recovery College offered courses on managing health and practical life skills. Sponsored by NHS Trust.		Recovery College involvement allowed consumers to take more responsibility for life and ill-health through offering confidence and skills	Level IV	Low	Moderate

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Newton et al. 2013 Australia	Eating disorders	Eating disorder service: Body Image Eating Disorders Treatment and Recovery Service (BETRS)	"Bridging the gap: Does a specialist eating disorder service, aimed at developing a continuum of community care, make a difference?" Developed an individualised eating disorder service based around group work for consumers, group work for families, individual therapy using CBT-E, family therapy and a day program centred around supported meals and, for family members, skills in supported meals. Included outreach into the home to set up meal routines at home.	4.2 FTE staff – doctor, nurse, dietician, OT, psychologist	Improvement in BMI, mental health, eating disorder symptoms and quality of life	Level III	Moderate	Moderate
O'Brien et al. 2012 Ireland	People experiencing severe mental illness: schizophrenia, bipolar and other psychosis	Case management Intensive Case Management (ICM) Program	"A randomized-controlled trial of intensive case management emphasizing the recovery model among patients with severe and enduring mental illness". ICM works by encouraging collaborative care planning between consumers and their case managers. Care plans cover goal setting, crisis resolution strategies, employment training, as well as accessing other community services.	Case manager to consumer ratio 1:5	Notable functional and psychopathological gains	Level II	High	Low
Olthuis et al. 2016	People experiencing anxiety disorders	Ehealth Cognitive Behavioural Therapy (ICBT)	"Therapist-supported Internet cognitive behavioural therapy for anxiety disorders in adults". Therapists provide CBT to consumers via telephone and email options.	Therapists	ICBT with therapist assistance can help to reduce anxiety	Level I	High	High

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Palmer et al. 2015 Australia	Consumers, carers and staff	Co-design	"The CORE study protocol: A stepped wedge cluster randomised controlled trial to test a co-design technique to optimise psychosocial recovery outcomes for people affected by mental illness in the community mental health setting." Protocol for a RCT which is co-designing a mental health intervention to create recovery-oriented practice within 11 Victorian community health services			Level II	Low	High
Parikh et al. 2015	People experiencing mood disorders	E-Health programs	"E-health: an overview of the uses of the Internet, social media, apps, and websites for mood disorders". e-health support interventions to assist people with mood disorders include: social media, psychotherapy websites, mental health forums, blogs, and games.			Level IV	Moderate	Low
Paulik et al 2010 Australia	Community mental health service clients (mixed diagnoses)	Mindfulness Based Stress reduction	"Benefits of a 12-Week Mindfulness Group Program for Mental Health Consumers in an Outpatient Setting". 12 weekly 2 hour sessions of mindfulness practice and discussion around mindfulness and stress reduction.	Occupational therapist and psychologist	Improvement in mental health and coping, continued to 12 month follow up	Level IV	Low	High

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Penn et al. 2011 USA	People who have experienced their first psychosis episode	Case management add on. The Graduated Recovery Intervention Program (GRIP)	"A pilot investigation of the Graduated Recovery Intervention Program (GRIP) for first episode psychosis." GRIP sessions encompass: setting goals, psychoeducation, mental ill health management, and preventing relapse.	Three therapists	Analysis of 'within-group changes' indicate GRIP has better performance than TAU in increasing functional outcomes (e.g. Social skills, life quality)	Level II	High	Low
Perkins et al. 2014 UK	All people experiencing mental ill-health	Recovery Colleges	"Recovery Colleges. Implementing Recovery Through Organisational Change". Provides an account of the key principles of and practices of recovery colleges.	Mental health practitioner and peer trainers	No outcomes included – just describe program	Level IV	Low	Moderate
Perroud et al. 2010 Switzerland	People receiving outpatient treatment	Intensive Dialectical Behavioural Therapy idbt	"Predictors of response and drop-out during intensive dialectical behavior therapy". 4 week intensive DBT course with 447 participants. 103 participants offered second course.	Psychologists, psychiatrists and nurses offered 2 week DBT training	Improvement in depression and hopelessness	Level IV	Low	Moderate
Perry et al. 2015 Australia	People experiencing first episode psychosis	CBT add on CBT for Early Psychosis	"The development and implementation of a pilot CBT for early psychosis service: achievements and challenges" CBT for early psychosis supports including deliberative goal setting, cognitive reassessments, and activity planning.		Feedback from referrers is supportive of the program and consumer outcomes feedback has been positive	Level IV	Moderate	Low
Pilbeam et al. 2014 Australia	Review of rural mental health care systems		"Rural mental health service delivery models – a literature review." Reviews the needs of rural mental health systems.			Level III	Medium	High

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Reupert and Maybery 2014 Australia	Practitioners with potential to provide family sensitive practice.	Family Sensitive practice	"Practitioners' experiences of working with families with complex needs". Practitioners recounted barriers and facilitators to family sensitive practice.	Welfare workers, social workers, mental health nurses	Barriers are a complex service environment, complex needs and high workloads for practitioners. Enablers were the use of family centred practice at intake and crisis.	Level IV	Low	Moderate
Robinson et al. 2011	Women with eating disorders and BMI over 17.5 (excludes Anorexia Nervosa) transitioning out of outpatient treatment	SMS based health prompts	"Aftercare intervention through text messaging in the treatment of bulimia nervosa -- feasibility pilot". Asked women transitioning out of eating disorder outpatient treatment programs to send text messages. Received semi-automated text messages in response.	Automated program. One staff member checked texts for plausibility.	Consumers had low motivation to be involved in the program.	Level III	Moderate	Low
Rogers et al. 2007	People with severe mental ill-health including 50% with schizophrenia or psychosis	Consumer operated Service programs	"Effects of participation in consumer-operated service programs on both personal and organizationally mediated empowerment: Results of multisite study".	Peer support workers	Empowerment increased significantly in some services but not at all in others	Level IV	Low	Low

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Roger et al. 2013 USA	Individuals with a borderline personality disorder (BPD)	The Care Programme Approach (CPA)	"A qualitative study on the use of the care programme approach with individuals with borderline personality disorder: a service user perspective". CPA does the following: 1) ascertains consumer needs, 2) collaboratively develops action plans and 3) undertakes progress assessments.	Care coordinator	Consumers described treatment access issues and follow up gaps. They also struggled to be heard in CPA meetings	Level IV	Low	Low
Roldán-Merino et al. 2013 Spain	People with schizophrenia	Personalized In-Home Nursing Care Plan.	"Impact of Personalized In-Home Nursing Care Plans on Dependence in adls/iadls and on Family Burden Among Adults Diagnosed With Schizophrenia: A Randomized Controlled Study". Following a functional assessment that is undertaken on the first visit, an individualised care plan is developed and evaluations and modifications are made in following sessions.	Nursing staff	Intervention can improve consumers' independence and reduce family pressures	Level II	High	Low
Ronngren et al. 2014 Sweden	Individuals with serious mental illness	Community program PHYS/cognitive adaptation training (CAT)	"LIFEHOPE.EU: lifestyle and healthy outcome in physical education". The program offers personalised support via cognitive adaptive training (CAT) to encourage consumers to make healthy dietary and exercise changes in their lives.	Community mental health workers	The intervention is described effective in promoting regular physical activity	Level IV	Moderate	Low
Ruwaard et al. 2012 Netherlands	People experiencing panic disorder, depression or PTSD	Ehealth Online Cognitive Behavioral Treatment (CBT)	"The effectiveness of online cognitive behavioral treatment in routine clinical practice". Consumers receive online therapist-supported CBT	Therapists	Online CBT is an effective option for consumers who may not desire traditional ways of receiving mental health care	Level IV	Moderate	High

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Salyers et al. 2009b USA	People experiencing severe mental illness	Assertive Community Treatment (ACT) + Illness Management and Recovery (IMR)	"Implementing the illness management and recovery program for consumers with severe mental illness". IMR supports consumers through education, cognitive therapy and motivation techniques.		Significant adjustments recorded in self-managing conditions	Level IV	Moderate	Low
Salyers et al. 2014 USA	People experiencing schizophrenia disorders	Illness Management and Recovery (IMR)	"A randomized controlled trial of illness management and recovery with an active control group". IMR supports clients via psychoeducation, cognitive treatments, as well as social/coping skills development.	Clinician and psychologist as co-facilitators	Persons in both intervention and control groups lowered their symptoms, had better quality of life and less ED experiences	Level II	High	Low
Salyers et al. 2011 USA	Consumers experiencing serious psychiatric conditions	Assertive Community Treatment (ACT)+ Illness Management and Recovery (IMR) Program	"Impact of illness management and recovery programs on hospital and emergency room use by Medicaid enrollees". IMR educates consumers about effective methods in managing mental illness. Consumers receive psychoeducation, coping strategies and relapse avoidance tools.	Illness management and recovery specialist a peer who is successfully recovering	Consumers receiving illness management and recovery treatment were hospitalised less that people solely receiving ACT services	Level IV	Moderate	Low

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Salyers et al. 2009 USA	Individuals experiencing severe mental illness	Assertive Community Treatment (ACT) Illness Management and Recovery Program (IMR) - Peer provided	"A pilot to enhance the recovery orientation of assertive community treatment through peer-provided illness management and recovery". Peers educate consumers via information handouts, interactive learning and review. Sessions also include cognitive behaviour methods (e.g. Role playing; cognitive realignment; relaxation education).	ACT staff and peer support specialists	Reports of consumers participating in new activities and being more hopeful	Level IV	Moderate	Low
Schmidt et al. 2012 USA	Adults experiencing mental illness	Intensive Family Support Services (IFSS) Program	"Intensive family support services: A consultative model of education and support" Family support specialists provide information to significant others of a person (aged 18 or older) about: treatment alternatives, crisis avoidance and intervention techniques, community services, as well as coping mechanisms for the entire family.	Mental health support specialists	For more than 20 years the Program has recorded a high level of satisfaction while also lowering family care support problems	Level IV	Moderate	Low
Segal et al. 2010 USA	Individuals with serious mental illness: major depression 70%, substance dependence 60%, schizophrenia 9%	Case management - Add on Self-Help Agencies (SHA) Community Mental Health Agencies (CMHA)	"Self-help and community mental health agency outcomes: a recovery-focused randomized controlled trial". CMHA offer clinical treatment and case management support. SHA are 'drop-in' facilities that provide consumers with social assistance and employment opportunities.		Participatory shas combined with CMHA services can deliver better recovery-oriented results that stand-alone CMHA services	Level II	High	Low

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Seikkula et al. 2014 Finland	First episode psychosis	Open Dialogue Approach	"Five-year experience of first-episode nonaffective psychosis in open-dialogue approach: Treatment principles, follow-up outcomes, and two case studies." Full Open Dialogue Approach program compared to basic program.	Variety of staff as needed by individual	Significantly lower rates of hospitalisation in the Open Dialogue group	Level III	Low	Low
Sells et al. 2006	People with severe and complex mental ill-health	Peer-provided case management	"The treatment relationship in peer-based and regular case management for clients with severe mental illness." Peer providers were provided training in case management then worked beside regular case managers in teams. Peer case managers had half the case load.	Peer –providers and regular case managers	Better early treatment acceptance and positive feelings towards staff	Level III	Moderate	Moderate
Shattell et al. 2014 USA	People with severe mental illness	Community crisis care The Living Room (TLR)	"A recovery-oriented alternative to hospital emergency departments for people in emotional distress: "the living room"". TLR offers a crisis intervention setting that is more welcoming than that which is found in an emergency department. This setting includes items which are typically found in living rooms (e.g. Television, fridge, comfortable seating etc)	Peer support, counsellors and psychiatric nurses,	Distressed consumers can receive caring support from TLR staff in a non-clinical environment	Level IV	Moderate	Low

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Simon et al. 2011 USA	People experiencing bipolar disorder	Ehealth myrecoveryplan	"An online recovery plan program: can peer coaching increase participation?" This intervention assists people experiencing bipolar disorder to develop and implement their recovery plans.	Peer specialist	Having a peer coach supporting myrecoveryplan can improve consumer participation and retention with the Program. However, more studies are required to determine the Program's impact upon clinical outcomes	Level IV	Moderate	Low
Slade et al. 2015 England	People using community mental health services: patients with complex needs, forensic system consumers, people with psychosis, low needs	REFOCUS	"Supporting recovery in patients with psychosis through care by community-based adult mental health teams (REFOCUS): a multisite, cluster, randomised, controlled trial". Measured recovery orientation of consumers and staff members, change in consumer needs and functioning. REFOCUS is a structured program improving recovery orientation of services.	Care coordination staff	No increases in recovery orientation of consumers or staff. Increase in functioning of consumers.	Level II	High	High
Smith et al. 2016		Community based interventions for complex conditions	"Interventions for improving outcomes in patients with multimorbidity in primary care and community settings". Cochrane review of multimorbidity interventions			Level I	High	Medium

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Smith et al. 2014	People with psychiatric illness	Employment Support Model Virtual Reality Job Interview Training (VR-JIT)	"Virtual reality job interview training". VR-JIT is an internet based interview training simulator that has been developed to improve interviewing techniques for people with psychiatric illnesses.		VR-JIT shows potential to increase job interviewing skills as well as consumer confidence	Level II	High	High
Stafford et al. 2015 Australia	Individuals experiencing psychotic-like experiences (ples)	Ehealth Get Real Program	"The acceptability, usability and short-term outcomes of Get Real: A web-based program for psychotic-like experiences (ples)" This e-health internet based program endeavours to educate consumers about PLE coping strategies while encouraging mental health service support where needed.		Get Real has medium to high levels of acceptance and usability while potentially impacting on ples in a positive way	Level IV	Low	High
Stankovic 2011	War veterans with PTSD	Irest – Mindfulness meditation	"Transforming trauma: a qualitative feasibility study of integrative restoration (irest) yoga Nidra on combat-related post-traumatic stress disorder". Mindfulness meditation program borrowing from a wide variety of third wave therapies and based on the Yoga Nidra. 8 week program.	Yoga instructor	Qualitative data showed "reduced rage, anxiety, and emotional reactivity, and increased feelings of relaxation, peace, self-awareness, and self-efficacy"	Level IV	Low	Low

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Stirman SW, et al. 2009 USA	Target consumers include people from outpatient, substance abuse, schizophrenia, forensic and school settings	Case management - add on (case conceptualization model and ACCESS training model) The Beck Initiative	"The Beck Initiative: A partnership to implement cognitive therapy in a community behavioral health system." The Beck Initiative involves: 1) training staff to provide cognitive therapy 2) delivering personalized care to consumers; and 3) monitoring program results.	At least four clinicians per agency	More than 1000 clients have received clinical support from the Beck Initiative. Consumers have recorded strong satisfaction with the program	Level IV	Moderate - preliminary evaluation data only	Moderate web-based training for clinicians is under development.
Taylor et al. 2010 Australia	Persons experiencing mental illness	Rural community mental health The Station Community Mental Health Centre Inc	"The Station Community Mental Health Centre Inc: nurturing and empowering". The station is a consumer-driven mental health service based in a rural location where consumers and their cares receive information and peer support while participating in activities.	Management committee paid coordinators peer workers	Consumer-driven services can harness the energy of rural communities and improve member wellbeing	Level IV	Moderate	High
Tempier et al. 2012 England	People experiencing early episode psychosis	Community Early Intervention in Psychosis program	"Does assertive community outreach improve social support? Results from the Lambeth Study of early-episode psychosis" In addition to usual CBT, the ACT program supports consumers through areas of family counselling and psychoeducation.		ACT early intervention has potential to improve clinical outcomes through bonds formed between consumers and their significant others	Level II	High	Low

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Tierney et al. 2011 USA	People with serious mental ill health. 62% schizophrenia/ schizoaffective disorders, 13% bipolar, 21% major depression	Case management - add on The Wellness Enhancement and Recovery Program (WERP)	"Promoting wellness and recovery for people with serious mental illness: a program evaluation". Within WERP consumers are provided with case management support along with crisis resolution assistance wherever this is deemed necessary.	Case managers, psychiatric nurse peer support specialist	WERP consumers expressed that they were satisfied with services received and were experiencing a fair to good life quality	Level III-2	Moderate	Low
Titov et al. 2015 Australia	People experiencing anxiety and depression	Ehealth mindspot Clinic Program	"mindspot clinic: An accessible, efficient, and effective online treatment service for anxiety and depression". An online course that provides consumers with CBT messages and automated bi-weekly emails encouraging the performance of therapeutic exercises. Therapists can be contacted by consumers on a weekly basis via email and/or phone.	Therapist to consumer ratio = 1:20 up to 1:50	Anxiety and depression treatments can be provided online to many consumers	Level IV	Medium	High
Todd et al. 2014 England	People experiencing bipolar disorder	Ehealth Living with Bipolar' (LWB)	"A web-based self-management intervention for Bipolar Disorder 'living with bipolar': a feasibility randomised controlled trial" LWB is an internet application that encourages consumers to: 1) be educated about bipolar disorder issues; 2) better manage their mental illness; 3) develop self-management strategies.		The trial demonstrates the potential effectiveness of internet based treatment	Level II	High	High

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Tondora et al. 2010 USA	African Americans and Latinos experiencing psychosis	Case management - Add on Peer Supported Person-Centred Care for Psychosis (PCP)	"A randomised controlled clinical trial of peer-based culturally responsive person-centered care for psychosis for African Americans and Latinos". Peers support consumers by providing culturally sensitive treatment planning assistance.	Peer providers	Peer staff were challenged to address a diversity of multi-cultural factors with extra competency development deemed necessary.	Level II	High	Low
Tse et al. 2015	People with serious mental illness	Review of Strength based interventions	"Uses of strength-based interventions for people with serious mental illness: A critical review". As the name implies, strength based interventions build on consumers' strengths by promoting such things as confidence, problem solving, hope, understanding and humour. Examples include ACT, peer support, Pathways to Recovery (PTR) and Strengths Model of Case Management (SMCM).		PTR and Peer Support group studies recorded consumer gains in hope, social support and self-efficacy. In terms of ACT, consumers appreciate assertiveness being complemented by strong engagement.	Level I	High	Low
Turkington et al. 2006 England	People with psychosis	Case management - Add on Brief CBT	"Outcomes of an effectiveness trial of cognitive behavioural intervention by mental health nurses in schizophrenia". Under this intervention, nurses are trained to deliver brief but intensive CBT sessions to consumers who are diagnosed with schizophrenia.	Mental health nurses	The intervention helped to guard against depression while reducing inpatient time. However, psychosis treatment and support for long term depression were not recorded.	Level III-1	Medium	Low

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Turkington et al. 2014 USA	Individuals experiencing psychosis	Case management - add on CBT for psychosis clients (CBT-p)	"High-yield cognitive behavioral techniques for psychosis delivered by case managers to their clients with persistent psychotic symptoms: an exploratory trial". CBT-p is a modified version of traditional CBT to specifically cater for consumers with psychosis. This intervention provides consumers with techniques in relapse avoidance recovery planning.	Case managers	The intervention supported benefits in terms of reducing overall symptoms and depression	Level IV	Medium	Low
Ulland et al. 2014 Norway	Variety of programs for people with mental ill-health	Open Dialogue Approach	"Generating dialogical practices in mental health: experiences from southern Norway, 1998-2008". Various programs developed around Open Dialogue Approach which puts dialogue between consumer and their friends, family members and treatment team at the centre of treatment.		Findings show that the programs were implemented successfully	Level IV	Low	Moderate
Ünlü Ince et al. 2013 Netherlands	People with depression	Ehealth: Everything under Control program (AOC).	"Internet-based, culturally sensitive, problem-solving therapy for Turkish migrants with depression: Randomized controlled trial". AOC is a culturally-cognisant internet base self-help intervention that has been developed to support Turkish migrants who are experiencing depression.	Self-help support workers	Study findings did not report a major lessening of depression	Level II	High	High

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Van Den Berg et al. 2015 Germany	People experiencing anxiety and depression	Telemedicine	"A telephone-and text message-based telemedicine concept for patients with mental health disorders: Results of a randomized controlled trial". Telemedicine involves nurses telephoning and sending text messages to consumers to discuss and support their therapeutic goals.	Nurses	Telemedicine can deliver statistically significant impacts on reducing anxiety	Level II	High	High
Van der Haas et al. 2006 New Zealand	Consumers were primarily diagnosed with schizophrenia or bi-polar disorder.	Case management - Add on Occupational Mental Health Therapy (CMHT)	"Occupational therapy: how effective do consumers think it is?" OTs offer support to consumers so that they may progress particular goals.	Occupational therapists	OT described as supporting personal development, vocational satisfaction as well as confidence	Level IV	Medium	Low
Van Lith 2015 Australia	People experiencing mental illness	Art Therapy	"Art Making as a Mental Health Recovery Tool for Change and Coping". Art Therapy has potential to encourage self-exploration among participants.	Art therapists	Art therapy can promote change and coping capacity	Level IV	Moderate	Low
Van Vugt et al. 2012 Netherlands	Consumers with severe mental illness	Assertive Community Treatment (ACT) Consumer Providers	"Consumer-providers in assertive community treatment programs: Associations with client outcomes." Under this intervention, consumers bring their lived experiences to mental health care. Such experiences can shed a new perspective about mental health services.		Consumer-providers can assist clients in accepting their disorders and recovery process	Level III-2	Moderate	Low

Author, date, country	Target population	Intervention type	Paper title and intervention description	Staffing	Client outcomes	Level of evidence (NHMRC guide)	Quality of evidence (high… very low)	Applicability (rural-regional LHD context)
Velligan et al. 2016 USA	People with serious mental illness transitioning out of hospital	Transition support MONARCH clinic	"Following AACP Guidelines for Transitions in Care: The Transitional Care Clinic". MONARCH is an internet based referral system linking people with serious mental illness leaving hospital settings with longer term outpatient care supports. The system is capable of checking on whether appointments are met.		Consumer mental health treatment appointments can be made as early as the day following hospital release	Level IV	Moderate	High
Vernmark et al. 2010 Netherlands	People experiencing major depression	Ehealth Online guided Cognitive Behavioral Treatment (CBT)	"Internet administered guided self-help versus individualized e-mail therapy: A randomized trial of two versions of CBT for major depression." Guided self-help is where therapists support consumers through online modules and CBT techniques with exercises to complete. Email therapy involves consumers receiving individualised emails that mimic face-to-face therapy interactions. Content across the two treatments are very similar.	One therapist per five participants	Study findings indicate a significant lowering of symptoms across both groups	Level II	High	High
Waegeli et al. 2014 Australia	People self-identifying as experiencing mental illness	Peer support program Recovery Rocks Community of Peers in Recovery.	"The Recovery Rocks Community story." The program provides community-based peer support with the aim of assisting people on their recovery journey. Recovery is put into 'action' by the intentional provision of peer support.	Peer support	Peer support communities may improve members' wellbeing	Level IV	Low	Low

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Ware, 2013	Indigenous people with mental health illness	Government review of Health Services Accessibility	"Improving the accessibility of health services in urban and regional settings for Indigenous people". Accessible services are defined as services which are available to consumers, economically inclusive and appropriate in terms of what is being offered.		Appropriate services can be designed to meet the long term needs of consumers	Level IV	Moderate	High
Waynor et al. 2015	Consumers with serious mental illness	Employment Support Model Individual Placement and Support (IPS) ACT program - nursing support	"Improving employment outcomes in assertive community treatment (ACT)". Nurses can offer clinical assistance that allows consumers to search for and attain employment.	ACT nurses vocational specialists	ACT nurses can support employment outcomes by applying IPS principles	Level IV	Moderate	Low
Whitley et al. 2009	Individuals with severe mental illnesses	Case management - Add on Illness Management and Recovery (IMR) Program	"Implementing the illness management and recovery program in community mental health settings: facilitators and barriers." IMR endeavours to educate consumers in mental ill health self-management techniques. Consumers are informed via a ten-module program.			Level IV	Moderate	Low

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Wilhelmsen et al. 2013 Norway	Individuals experiencing mild to moderate levels of depression	E-health (moodgym) Internet-based cognitive behavioural treatment (ICBT)	"Motivation to persist with internet-based cognitive behavioural treatment using blended care: a qualitative study". moodgym is a free internet based self-help program that aims to help consumers to relax and manage their thoughts and relationships. Consumers undergo five ICBT modules and have face-to-face therapist meetings that are conducted in-between online modules participation.	Therapist	Consumers persisted with ICBT when they self-identified with the intervention and felt connected to the therapist in face-to-face meetings	Level II	High	Moderate
Williams et al. 2010	People with treatment resistant eating disorders	Community Outreach Partnership Program	"Setting the eating disorder aside: an alternative model of care." Offered individualised social and functioning support which did not focus on the eating disorder, but quality of life and hope. Worked with the consumer to meet their individual needs.	Outreach support worker with mental health related qualifications Staff ratio 20:1	Improvements in symptoms, BMI, distress and hope	Level IV	Low	High
Wilson 2014	People experiencing mental health crisis	Art Therapy - Grass Roots Mental Health Quilting Project	"Mental Health Recovery and Quilting: Evaluation of a Grass-Roots Project in a Small, Rural, Australian Christian Church." This 'grass roots' project was conducted in a small, rural church environment. Here a mental health nurse and community members worked together on a quilt to be given to a community member experiencing mental illness.	Mental health nurse	Project can promote social capital that may assist community member recovery following mental health crisis and reduce stigma through mental health conversations	Level IV	Moderate	High

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Winness et al. 2010	People experiencing mental health crisis	Crisis Resolution and Home Treatment (CR/HT) teams	"Service users' experiences with help and support from crisis resolution teams. A literature review". CR/HT teams offer 'comprehensive' support to people experiencing a mental health crisis. Such support includes but is not limited to assistance with: work; shopping; transport and personal care.			Level I	High	Moderate
Yoshida et al. 2012 Japan	Individuals with mental ill health	Community Outreach Services Program	"Recovery-oriented community-based mental health service in Japan". Japanese community outreach services include ACT, home-visit life skill coaching and psychiatric home-visit nursing (PHVN). ACT offers team based support for people with mental illness. PHVN services are less intensive than those offered under ACT. Life skill coaches encourage clients to achieve the social skills that may allow them to remain within their communities.	Psychiatrists therapists nurses social workers life skills coaches	ACT is suited to people with ongoing mental health support needs. PVNH is restricted to essential support needs and crisis resolution. Life skill coaching is suited to assisting people who have undergone long periods of hospitalisation.	Level IV	Moderate	Low

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Zautra et al. 2012 USA	Spanish and English speaking community members with depression	Mindfulness and Mastery Control. Telephone guides	"Phone-based interventions with automated mindfulness and mastery messages improve the daily functioning for depressed middle-aged community residents." An initial in-home visit teaching mindfulness and mastery control was followed up with automated telephone calls each morning which provided guided meditation or tips.	Research assistants with no specific training	Decreases in depression and improved sense of physical and mental health	Level III	Moderate	High