Assertive Engagement Review: A Rapid Evidence Assessment of the Use of Assertive Engagement Strategies

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Report prepared by:

Child Health, Development, and Education Team, Telethon Kids Institute (inclusive of the Fraser Mustard Centre)

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For more information about this report, please contact:

Child Health, Development, and Education, Telethon Kids Institute
Level 15, 31 Flinders Street
Adelaide, SA 5000
(08) 8226 1206 / (08) 8207 2039
www.telethonkids.org.au
Yasmin.harman-smith@telethonkids.org.au

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1 EXECUTIVE SUMMARY

1.1 Background

In March 2019, the Government approved a Strategy for a new Child and Family Support System (CFSS) to address the rising numbers of child abuse and neglect notifications and increasing numbers of children entering care. In late 2019 an extensive co-design process was undertaken across government and non-government that documented shared directions across the sector. In February 2020 Cabinet approved the next steps for overall system reform following the completion of the co-design process. This included the initiation of the CFARN evaluation and the approval of ongoing funding for the program with a focus on assertive engagement of families with complex needs.

The CFARN's were originally established after the South Australian Royal Commission into Child Protection Services specified the need for a Child and Family Assessment and Referral Network (CFARN) in order to act as an entry point for screening, risk assessment and coordination of services. The network was established to facilitate a collaborative approach to the provision of intensive support to vulnerable families by linking universal, tertiary and statutory services in the government and non-government sector.

Vulnerable children and families who are at risk of statutory child protection involvement face considerable barriers to engagement and retention in relevant support services[1]. As such, engaging at risk children and families in early intervention and support in order to divert them away from the statutory child protection system presents an ongoing challenge to policy makers and service providers in this context.

In order to address system dysfunction and increase support to families, CFARN employs a range of key principles, including assertive engagement strategies. In this context assertive engagement aims to reduce barriers to service engagement by placing the onus of engagement on practitioners to develop respectful relationships and increase the likelihood of family engagement and retention[2].

The recent evaluation of the CFARN service conducted by the Telethon Kids Institute in partnership with the *BetterStart* Group at the University of Adelaide, found it to be meeting the needs of families and provided early evidence of positive impacts[2].

1.2 Purpose of Review

At the request of the South Australian Department of Human Services, the Telethon Kids Institute was engaged to conduct a review of assertive engagement strategies which are currently used within the CFARN model. The recent CFARN evaluation is used to guide the review and target populations. This review seeks to build on the promising findings within the CFARN evaluation, particularly in light of a number of new services being implemented to support families with complex needs with children at risk of going into out of home care.

1.3 Methods

The review took a rapid evidence assessment approach, limiting the scope of the review in order to streamline the process whilst still maintaining a systematic, reproducible approach with clear inclusion and exclusion criteria. A total of 998 publications were identified through the search strategy which was then narrowed down to 15 studies included in the review.

A brief policy review was also conducted in order to gain contextual insight into practice and policy responses within the Australian and International child protection context, reviewing the practice challenges to engagement and the use of assertive engagement strategies across jurisdictions.

1.4 Summary of Findings

Findings from the literature review indicate an overall positive direction in the literature for the use of assertive engagement strategies, with all included studies reporting improvements or higher rates of engagement. This indicates the effectiveness of assertive engagement in engaging and retaining vulnerable populations in services and treatment.

The quality and longevity of this engagement was not demonstrated in this review and requires further investigation. Additionally, a lack published literature on this topic in the Australian child protection context warrants additional research, particularly for Aboriginal and Torres Strait Islander families.

Our policy review indicated that while family characteristics play an important role, it is the characteristics of services which have a greater impact on engagement in the child welfare context and therefore require a considerable focus on alternative approaches to connecting with and retaining families in services. The characteristics of these services will be of high importance in the context of developing new and existing services as part of the CFSS reforms.

Use of strategies similar to assertive engagement is also evident within various Australian jurisdictions as well as the UK, suggesting that policy makers are already responding in a comparable way. Programs and services using assertive engagement require further evaluation over time to assess the effectiveness of these approaches in the child protection context.

The following recommendations are made based on the findings of the review:

1. Continue to deliver the CFARN model with a strong assertive engagement component.
2. Consider the way assertive engagement practices are expanded and tested in other intensive family support services.
3. Conduct ongoing analysis and evaluation on the quality of client-practitioner relationships and collaboration achieved by assertive engagement strategies, as well as the long term effectiveness of assertive engagement on child and family outcomes and retention (both within CFARN and other family support services).
4. Undertake further research regarding the use of assertive engagement within the Australian child protection context, particularly with culturally diverse populations and Aboriginal and Torres Strait Islander families.
5. Disseminate findings to inform future service development models for this client group.

2 BACKGROUND

2.1 Engaging Vulnerable & At Risk Families

Families who come into contact with the child protection system often experience a multitude of complex and interrelated problems which require various levels of specialist services and supports in order to reduce risk and increase the safety and wellbeing of children[1]. However, this risk and vulnerability is also a precursor to higher service refusal and attrition rates[3]. Many of these families face extensive barriers to sustained engagement with services such as costs, transport, language and resistance due to stigma, fear, mistrust, trauma, or past experiences[2]. Families facing such barriers are often labelled as complex, difficult, or hard to reach and pose a significant challenge to current systems which are disproportionately skewed towards reactionary or incident based statutory responses[4].

Research conducted by the *BetterStart* group using linked data from the South Australian Early Childhood Data Project (ECDP) show that by age 10, 1 in 4 (~25%) children born each year are the subject of at least one notification to the child protection system[5]. Of this cohort, 80% do not receive any mainstream child protection response[5]. Additionally, children who are notified to child protection but either do not meet a threshold for a child protection response or are not prioritized for a response are at twice the risk of poor development and wellbeing by the time they reach school age[5]. This highlights a significant prevention opportunity for earlier, non-statutory interventions to support these potentially vulnerable children and their families.

The National Framework for Protecting Australia's Children (2009-2020) outlines the need for a public health model in order to reduce child protection risk by prioritizing universal supports for all families and more intensive secondary interventions for families who need additional support with a focus on prevention and early intervention to avoid or minimize statutory involvement[6]. In order for these interventions to be successful in minimising risk and statutory encounters, special attention must be given to parents and families who have traditionally been classed as difficult to engage.

Attempts to divert families away from child protection and statutory responses have been wide-ranging, from new entry points, changes to confidentiality and information sharing, multi-agency teams and services, new professional roles (such as system navigators), and the introduction of various services and programs to enhance capacity in prevention, early intervention and intensive family support[7]. However a lack of consistency in the comprehensiveness, content and approach of child protection practice frameworks highlights the need for more evidence to guide practice in this space.

Echoing this, the recent Royal Commission into Child Protection Services highlighted the vital role pre-statutory services can and must take in working to engage these hard to reach families and not allow them to 'drift away'[8]. A key recommendation of the royal commission was the establishment of a child and family assessment referral network within each region of SA to act as an entry point for screening, risk assessment and coordination of services.

2.2 The Child and Family Assessment and Referral Networks

The network was established to facilitate a collaborative approach to the provision of intensive support to vulnerable families by linking universal, tertiary and statutory services in the government and non-government sector. The CFARN program, operates in the secondary level of prevention. At this level, risk factors have already been identified and families require support to reduce escalations to a tertiary level; where a statutory response by the Department of Child Protection is deployed to keep a child safe. Families who typically need secondary interventions present with multiple issues and require access to a range of specialised services. The services required to intervene are those that address adult issues that have flow on effects for children in their care (e.g., domestic violence, drug and alcohol treatment, and mental health services).

The CFARN model is guided by seven key principles which aim to address system dysfunction and increase support to families, one of these key principles being assertive engagement. In the context of CFARN, assertive engagement aims to reduce barriers to service engagement by placing the onus of engagement on practitioners to develop respectful relationships and increase the likelihood of family engagement and retention[2]. This involves persistent and respectful approaches to clients. Where other services might consider a client as unwilling to engage, CFARN persists in contacting families where child protection concerns have been identified, using multiple modes of phone, home visiting, and approaching with other existing services, so that families can make an informed choice about their involvement with pre-statutory services.

A recent evaluation of the CFARN service found it to be meeting the need for families and provided early evidence of positive impacts. Following this evaluation, the Telethon Kids Institute was commissioned to review the evidence for the assertive engagement component of the CFARN service model.

2.3 Purpose of the Review

The aim of this review is to capture and present the current evidence for use of assertive engagement strategies to engage and retain at risk populations in relevant support services. The primary goals of assertive engagement within the CFARN service model are to reduce barriers to service engagement and retention of hard to reach families, thus ‘engagement with services’ serves as the primary outcome of interest for this review.

3 METHODS

This review adheres to the methods of a rapid evidence assessment (REA) or rapid review in which the process for conducting a traditional systematic review is streamlined and / or purposefully limited in order to produce evidence to key stake-holders in a resource and time efficient manner[9]. A rapid evidence assessment differs from a full systematic review primarily in its scope and level of synthesis, however still utilizes a systematic, reproducible approach with clear inclusion and exclusion criteria offering a sense of the volume and direction of available evidence addressing the topic of interest[10].

3.1 Search Strategy

In this rapid review, four distinct databases were searched including Web of Science, Google Scholar, MEDLINE and Embase. These databases were selected based on evidence which suggests the combination of Web of Science, Google Scholar (first 200 results minimum), MEDLINE and Embase yields an overall recall of 98.3%[11]. This enabled an extensive coverage of literature whilst also limiting the amount of databases and time needed to conduct the search in line with REA methods.

The PICO method was used to develop and brainstorm search terms based on the populations, intervention, context and outcomes of interest (see table 1).

Table 1: PICO

Population	Intervention	Context	Outcome
Adult	*Assertive engagement*[1]	Child welfare	Engagement
Parent	*Assertive outreach*	Mental health	
Family / families	*Active engagement*	Drug and Alcohol	
Carer	*Active outreach*	Housing / homelessness	
'Hard to reach'	*Intensive outreach*	Community services	
'Difficult to engage'	*Assertive community treatment*		

[1]Phrases italicised represent the final search terms employed

After consultation with key stakeholders to sense check the direction and purpose of the review, search terms were refined based on initial test searches of different combinations of the key terms presented above (see Appendix A). Initial searches found very few relevant articles. As such, the search terms were broadened to include literature from a wider range of disciplines and settings.

The final search was conducted in May of 2020 using the selected databases with key words including variations of terms referring to assertive engagement and families to yield the best results.

3.2 Eligibility

Resulting articles were screened for eligibility first by title and abstract and the remaining studies then assessed by full-text review.

A hand search of the reference lists of included studies was also conducted to ensure all relevant material was considered and surveyed. This search resulted in three additional publications being found and included in the final review, once subjected to the same screening process above, bringing the total number of included studies up to 15 (see Appendix C).

Table 2: Database Search Inclusion & Exclusion Criteria

	Include	Exclude
Study Type/Design	▪ Systematic reviews, meta-analyses, randomised controlled trials or quasi-experimental studies.	▪ All other non-experimental study designs.
Population	▪ Parents / carers or adults experiencing concerns/issues as outlined in CFARN evaluation[2], including mental health concerns, drug and alcohol concerns, domestic or family violence concerns, parental / adult experience of childhood trauma, unemployment, housing security concerns, child protection concerns.	▪ Children / youth / adolescents who aren't parents.
Study Setting	▪ All settings	▪ n/a
Intervention	▪ Interventions using assertive engagement (or with an assertive engagement component) for issues outlined in CFARN evaluation[2], including mental health concerns, drug and alcohol concerns, domestic or family violence concerns, parental/adult experience of childhood trauma, unemployment, housing security concerns, chid protection concerns.	▪ Interventions not/without assertive engagement ▪ Assertive engagement intervention for issues not outlined in inclusion (i.e. health problems).
Measure-ment	▪ Measures the effect of assertive engagement on participant's service engagement, retention or adherence.	▪ Does not measure effects of assertive engagement.
Publication Status	▪ English language ▪ Peer-reviewed journal publications or reports	▪ Non-English language ▪ Non-peer-reviewed ▪ Unpublished studies / reports

3.3 Data Extraction

A standardised form was used to extract data from each study based on authors, publication year, study aims, study design, description of participants, setting (including country where research was conducted), interventions, relevant outcome measures (and how they were measured), relevant results, key findings, and limitations (see Appendix D). Due to the nature and purpose of the review, only outcomes and results primarily related to engagement were extracted and synthesised.

Where the review included multiple reports on the same studies, these were collated as a single result by extracting data from all reports directly into a single data collection form (Higgins, 2019). There were five publications reporting on the OPUS trial and two publications reporting on the REACT trial (see Appendix C and Appendix D – study #6 and #15).

A brief quality assessment of evidence was conducted for each study using a rating system based on the methodological rigor of each study (see table 3 and appendix D).

4 RESULTS

4.1 Database Search Results

The final database search returned 998 results, which after duplicates were removed, totalled 615. After screening by titles and abstracts a total of 122 publications were then assessed with a full text review narrowing the included studies to 15 (see Appendix C).

Whilst not included in the final synthesis, trends and characteristics of studies within the search results presented some relevant findings and insight and as such are presented below.

4.1.1 Integration with other services

It is important to note that assertive engagement is not a service in and of itself, and this is reflected in the literature. Of the studies which met criteria for quality of study type and the use of assertive engagement (122), 108 investigated the use of assertive engagement in conjunction with one or more other evidence based practices, approaches or treatments, with only 14 of the 122 investigating the use of assertive engagement or assertive outreach strategies in isolation.

Similarly, in studies reporting the use of assertive community treatment, of which assertive engagement is a key element, this kind of treatment was frequently reported as an adjunct to services or integrated with other therapeutic interventions, as opposed to a comprehensive service system in itself. Some of the common interventions which were integrated or combined with assertive engagement in the search results included:

- Cognitive Behavioural Therapy (CBT)
- Multi-Family Groups / Family Therapy
- Social Skills Training
- Psycho-education
- Motivational Interviewing
- Pharmacotherapy
- Supported Employment Programs / Individual Placement Support (IPS)

4.1.2 Outcome measures for interventions with assertive engagement

While the intent of services or supports is generally to improve an aspect of functioning, mental health, or behaviour, we do not report on these outcomes herein. The focus of our review was limited to outcomes measuring service engagement and the elements of service design that improve client engagement and retention. Thus studies were only included if engagement was measured; either on its own or alongside other outcomes.

Of the studies which met the criteria for study type and use of an assertive engagement intervention (122), 91 measured outcomes which did not include engagement, retention, or adherence and were therefore excluded from the final results. Other measures / effects that were reported by the studies included:

- Cost effectiveness
- Hospitalizations / bed days
- Service outcomes
- Model fidelity
- Family relationships
- Employment
- Housing situation
- Quality of life
- Symptoms / diagnosis
- Relapse (for substance abuse)
- Medication observance
- Family and social relationships

4.2 Description of Included Studies

The majority of the studies or reviews were conducted in the US (n = 7)[12-18], with two systematic literature reviews conducted in China[19] and Australia[20], and the remaining studies being conducted in Europe – two in the UK[21,22], two in Germany[23,24], and one each in the Netherlands[25] and Denmark[26].

The included sample comprised six randomized controlled trials[13,16,17,22,25,26], two systematic reviews[19,24], one meta-analysis[20], one quasi-experimental study[23], two longitudinal observation studies[14,21], two quantitative studies[12,18], and one qualitative study with some pre- and post-measurements[15].

A number of studies which were included in the initial stages of screening, upon further investigation of the study design, were found to be less robust in their methods and design. This is reflected in the quality assessment ratings in Table 3 and in Appendix D, and also signifies a deficiency in available high-quality research studies specifically investigating the impact of assertive engagement strategies on engagement outcomes for marginalised and vulnerable populations. Nine of the fifteen included studies are rated at the maximum quality (5 ticks) indicating an overall good-quality literature base.

Table 3 provides an overview of each study, including the intervention(s) studied and populations targeted, as well as the types of engagement measured and degree of measurement. Further detail about the studies including study design engagement outcome measures, results, key findings and limitations are provided in Appendix D.

4.2.1 Interventions Using Assertive Engagement

4.2.1.1 Assertive Community Treatment

Assertive community treatment was the most common intervention across the included studies (n = 10). In all of these studies, assertive community treatment interventions were targeted towards adults experiencing mental illness, primarily psychosis or schizoaffective disorders[19,20,22,23,25]. Three studies targeted people with an additional substance use disorder (dual diagnosis)[14,17,26], two targeted people experiencing homelessness or housing insecurity[13,26], and one targeted a population exiting the criminal justice system[15].

Where reported, common characteristics of assertive community treatment interventions across the ten studies included:

- Small / reduced caseloads[13,17,20,22,23,25]
- High staff to client ratio (e.g., a mini-team for each client)[13,15,23,25]
- 24 hour service availability[13,15,22,23] or extended availability hours[25,26]
- Flexible locations for appointments (e.g., within the community, going to where the client is)[15,22,25,26]
- Assertive engagement strategies (e.g., persistent and consistent contact, not giving up)[13,15,17,22,25,26]
- No drop out policies[22,23,25]
- Multi-disciplinary teams[13,15,17,20,22,23,25,26]
- A team approach to case management with shared responsibility and high frequency of meetings[13,17,20,22,23,25]
- A focus on collaboration and relationships with other services (e.g., housing, employment, etc.)[15,17,23,26]
- Goals of supporting community living and reducing hospitalisations[13,22,25,26]

Each of these characteristics were reported in at least two of the studies with assertive community treatment interventions, although most incorporated a majority of these. Two of the ten studies did not report any characteristics of assertive community treatment utilised, one being a systematic literature review. Four of the ten studies investigated assertive community treatment in conjunction with another program or as a modified version of assertive community treatment tailored to a particular setting.

4.2.1.2 Assertive / Active Outreach

Three studies investigated the use of assertive or active outreach interventions[16,18,21], where the primary goal in each study was to bring people in to services by means of intentional outreach. Two studies saw outreach in the form of home visiting[16,21] while the other enacted outreach through a telephone based service[18].

4.2.1.3 Case Management

Whilst standard or clinical case management was often the control condition to which assertive community treatment or assertive outreach was compared, one study saw elements of assertive engagement applied to typical case management with the goal of increasing engagement[24]. Another study saw the use of a more intensive case management to retain clients combined with active outreach as the mechanism for bringing clients in[18].

Table 3: Summary of Included Studies

STUDY NO.:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Intervention / program model (some overlap)															
Assertive community treatment / modified ACT	✓	✓	✓		✓	✓	✓		✓	✓	✓				✓
Assertive / active outreach				✓				✓					✓	✓	
Case management												✓	✓		
Target population															
Persons with mental illness	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓				✓
Persons experiencing homelessness	✓						✓								✓
Persons with substance use disorders		✓									✓	✓	✓	✓	✓
Persons in the criminal justice system					✓										
At risk families				✓											
Type of engagement measured															
Willingness to engage in service / treatment				✓										✓	
Service contact			✓			✓	✓			✓					
Service usage and engagement	✓					✓		✓			✓		✓		✓
Quality of engagement						✓			✓						
Service / treatment retention		✓		✓	✓							✓		✓	
Service disengagement or dropout rates	✓		✓			✓			✓						✓
Degree of measurement															
Measured explicitly (i.e. as a primary outcome / goal)			✓	✓			✓		✓					✓	
Measured secondarily (i.e. as a secondary outcome)	✓				✓	✓							✓		✓
Measured indirectly (i.e. as an ancillary / inadvertent result)		✓						✓		✓	✓	✓			
Quality of Evidence[1]	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓	✓	✓✓✓✓✓	✓✓✓✓✓	✓✓✓	✓✓✓✓✓	✓✓✓✓✓	✓✓✓	✓✓✓✓✓	✓✓✓	✓✓	✓✓✓✓✓

[1]Quality of evidence has been rated according to the following criteria, with five ticks indicating the most robust methodology and thus evidence, and one tick indicating the weakest level of evidence:
✓✓✓✓✓ - Randomised control trial (RCT), systematic literature review or meta-analysis
✓✓✓✓ - Quasi-experimental research
✓✓✓ - Mixed methods/quantitative research using pre- and post-measurements
✓✓ - Mixed methods/quantitative research that conducted measurement at one point in time
✓ - Qualitative research that was collected at one point in time
Where programs were evaluated by two or more studies, the best level of evidence among the studies is reported.

4.2.2 Common Elements across Interventions

Assertive community treatment was the most common intervention, being investigated in ten out of the 15 included studies, as such the common elements of this intervention are outlined in section 4.2.1.1. Here we present common elements of the differing assertive engagement approaches utilised in the remaining five studies reviewed (these used assertive outreach and case management). Common elements appeared to mirror many elements of assertive community treatment. Common elements are included in the list below if they were reported across at least two types of interventions including (n = the number of studies with this component in their intervention):

- Multi-disciplinary teams working together (n = 9)
- Initial assertive outreach to facilitate engagement (n = 7)
- Flexible locations for services and appointments (n = 8)
- Facilitating access to additional services and supports (n = 6)
- Inclusion of family members / family focus in intervention (n = 6)
- Focus on building relationships with clients (n = 6)
- No limits / ongoing access to services (n = 2)
- Information / support services not contingent on engagement or time taken to engage (n = 2)

4.2.3 Target Populations

Initial test searches identified a lack of high quality literature (i.e., randomised controlled trials, or pre- and post-test studies) for assertive engagement in the child protection context. Thus the search strategy was expanded to look at use of assertive engagement with adults experiencing risk factors common among parents referred to the CFARN[2].

The majority of studies saw interventions targeted towards persons with mental illness (n = 11)[13-15,17,19-23,25,26], of those, three studies specifically investigated populations with a dual diagnosis of mental illness and a substance use disorder[14,17,25,26]. Three studies targeted those with a substance use disorder alone[12,18,24], and three studies included homeless or insecure housing populations in their target group[25,26]. One study targeted persons experiencing mental illness with a history of frequent incarceration[15], and one investigated at risk families[16].

This array of populations reflects many of the risk factors experienced by parents and families referred to the CFARN.

4.3 Engagement Measures & Outcomes

Whilst all the included studies measured engagement, the way it was measured varied greatly, both in terms of how it was measured and the degree of measurement. The measures of engagement utilised across the studies and their degree of measurement are outlined in Table 3 and explored in detail below. Overall findings were mixed, with some reporting no differences in engagement and others reporting positive effects for engagement. No studies reported adverse effects on engagement.

4.3.1 Willingness to Engage in Services

Two studies measured their respective target population's willingness to engage in services or treatment. In both studies, this was measured by the rate at which eligible people approached or contacted to participate in a treatment or service agreed and followed through on participation. The studies reported similar levels of participation agreement. The first of these recorded 54% initially with 75% of these following through in a family service setting[16], and the second reporting one third engagement rate in a population of people who survived opioid overdose[12]. In the second study, reasons for non-engagement were reported to include low willingness for change or denial of need for service[12].

Degree of measurement for both studies measuring willingness to engage was explicit, meaning there was a clear and purposeful intent in measuring this outcome.

4.3.2 Service Contact

Service contact as an indication of engagement was reported in four studies. Three of these studies investigated assertive community treatment interventions in comparison to standard care or case management and one was a meta-analysis. Service contact was measured by the number of outpatient contacts or number of staff-client contacts (phone, face to face, etc.) over the respective study periods. Results across the studies indicated a higher or equivalent rate of service contact for the assertive community treatment interventions compared to standard care / case management. For two of these studies, positive differences in service contact rates were statistically significant[22,25], and in one of these studies, remained statistically significant after a three year period[22]. The meta-analysis reported similar rates of engagement for assertive community treatment compared to standard case management across it's sample of studies[20].

The degree of service contact measurement for these studies was either explicit or as a secondary outcome, meaning there was intent and mechanisms for measurement.

Importantly, study #10 (see Table 3), a systematic literature review investigating a range of approaches to psychosocial interventions including assertive community treatment, reported that the only benefits of assertive community treatment which could be replicated in studies outside of the US was its ability to maintain contact with service users[19].

4.3.3 Service Usage and Engagement

The most common measurements for engagement across the included studies was participant's service usage or engagement with services (n = 6). This was measured primarily by attendance or service use. Of these studies, three investigated assertive community treatment and specifically measured service usage by the number of inpatient days and / or outpatient visits. Two of the assertive community treatment studies reported statistically significant fewer inpatient days and more outpatient mental health visits than their control group counterparts, signalling less days in hospital and a higher usage of outpatient services[13,26]. The remaining study found no significant differences in inpatient days between the assertive community treatment group and control group[22]. One of these

studies also measured outcomes over a longer time period, finding that by the five year mark, differences in the groups were not maintained and inpatient hospital use was almost identical for the assertive community treatment group and control group[26].

Two studies followed patients after discharge and reported significant improvements in participant's re-engagement rates with services. The first following discharge from a substance use residential care in one study[18] and the second after release from custody[14]. The remaining study reported on service usage following engagement with an assertive outreach team, finding an association between higher inpatient hospital admissions and poor engagement[21].

Engagement or service use was consistently measured as a secondary outcome, still allowing for intentional measurement, however engagement was not the main focus of the studies.

4.3.4 Quality of Engagement

Quality of client engagement was measured in two studies investigating assertive community treatment and results were inconsistent. In the first study quality of engagement was measured as a primary outcome and was defined by the level of difficulty or ease of engaging on a dedicated scale. There were no statistically significant differences between the assertive community treatment group and standard care group. The other study reported higher quality engagement using an adapted homelessness engagement acceptance scale, included in the study as a secondary outcome[22].

4.3.5 Service Retention

Five studies measured service retention, which was consistently measured by the length of time clients were actively engaged with a service or treatment. All five studies saw initial higher rates of retention, particularly once participants were engaged in a treatment or service, the rate of participants completing the relevant programs or interventions were consistently high.

The length of intervention, however, varied greatly across studies. Of the five studies, three reported decreases in service retention over time. Higher retention rates lasted up to two years in some studies before a decrease[15,17] but dropped as soon as 90 days in another study with a shorter intervention period[12]. The two remaining studies did not measure retention rates past one initial follow up.

4.3.6 Service Disengagement or Drop-Out Rates

Five studies measured service disengagement or dropout rates. This was measured by the number or percentage of clients disengaging, dropping out, or rates of treatment non-adherence in one study. All of the studies measuring disengagement investigated assertive community treatment and had 'standard care' control groups for comparison. All five studies saw significantly lower rates of disengagement and dropouts for the assertive community treatment participants compared to their standard care counterparts. In the study measuring treatment non-adherence, assertive community treatment was superior to standard care, with less experiences or periods of non-adherence[26].

Dropout rates followed a similar pattern to service retention rates, by increasing over time. One study measuring disengagement over an extended period saw differences between the assertive community treatment group and control group become statistically insignificant at the five year mark, and remain similarly insignificant at the ten year mark[26].

4.4 Factors Contributing to Engagement

Whilst influencing factors were not measured or acknowledged in all studies, some studies which measured engagement as a primary or secondary outcome also reported on various factors decreasing or reducing likelihood of engagement. These factors included:

- Time since intervention[15,17,26]
- Poor or lack of previous service engagement[19,21]
- Unwillingness to change[12]
- Lack of family supports[16]
- Previous incarceration[14]
- High severity of symptoms (for mental illness / substance use disorders)[12]
- Low / poor intervention model fidelity[17]

Importantly, these factors are only attributable to a handful of studies (often only one study) and cannot be considered an all-inclusive evidence base for factors influencing engagement.

4.5 Overall Direction of Literature

All of the included studies reported improvements or a positive direction in at least one measure of engagement and/or consistent evidence of the effectiveness of assertive engagement (review studies). While the magnitude of the effect of assertive engagement strategies varied, the positive trend across all studies provides confidence in the efficacy of assertive engagement strategies in connecting at risk populations in relevant treatment or services. There were no reports of poorer engagement outcomes for interventions using assertive engagement compared to control groups or other interventions, indicating that assertive engagement strategies either improved or matched engagement outcomes within the literature.

Time was the most consistent factor in influencing engagement as the positive effects of assertive engagement strategies seemed to fade over time for some measures of engagement, including both service use and service retention decreasing over time and dropout rates increasing.

Importantly, as outlined in the methodology, only outcomes related to engagement were considered and synthesised for this review. However, a brief overview of other outcomes such as hospitalisations, symptoms, relapse, client satisfaction, and so forth, suggests not all interventions saw improvements in these outcomes. This is particularly pertinent compared to the consistent improvements or higher rates of engagement across the studies.

It is important to note, that there has been a history of bias in articles and journals publishing only positive results in the literature. In recent times more reputable journals have supported and promoted the publication of negative findings. This is, however, not yet standard practice in the fields of psychology and social work.

5 POLICY REVIEW

In addition to the database literature search, a grey literature search or policy review was undertaken in order to position the review within an Australian child protection context and provide relevant policy and practice evidence.

Despite the literature review returning no trials or studies of assertive engagement within the child protection context, the focus of this grey literature review was on the need for specialised engagement strategies for working with parents in child welfare and the use of assertive engagement in practice.

5.1 Search Strategy

The grey literature search was conducted in June of 2020, the various sources and relevant search terms employed as well as the resulting documents are outlined in appendix E. Not all sources found were included in the review, sources were excluded if they did not refer to specific engagement strategies or assertive engagement. Additional grey literature sources guiding service design in South Australia were provided by stakeholders and included in the review.

5.2 Findings

5.2.1 Services as 'Hard to Reach', not Just Families

It is often the characteristics of families such as perceived complexity, vulnerability or risk which label them 'hard to reach'. Consistent evidence from the grey literature suggests, that while family factors play a significant part, it is the characteristics of services and programs which more strongly predict engagement rates of families in child welfare services[27-30]. For policy and service providers, this signified the need for a shift in focus towards what makes services more accessible / inaccessible.

5.2.2 Service Challenges for Engagement

Grey literature sources report how, among other challenges, a disproportionate focus on the content of parenting programs or interventions as opposed to engagement strategies have historically hindered programs and services for this population (e.g. waiting for families to self-refer)[29]. High refusal and attrition rates were also reported as a consistent challenge for services in engaging families; not only getting families in to services but keeping them engaged regularly and over time[3,27,29,31]. Further, the challenge was consistently related to the quality of client's and family's engagement or commitment to change, as this was equally difficult to achieve and reflected in high attrition rates[32,33]. Additionally, system or organisational dysfunction characterised by a lack of resourcing, training, and provision of early intervention / prevention services outside of the statutory system, were noted as presenting ongoing challenges for client engagement.

Other service challenges, reported in the grey literature, that families face in accessing services included[28]:

- The location and hours of a service which can be a barrier for families who do not have private transport or who work.
- A service may be intimidating to a family that has had no experience of, or a negative experience, of other service environments.
- Lack of knowledge that services are available or that they are eligible to access the service.

5.2.3 Practice & Policy Responses

Practice wisdom presented in the grey literature provides insight into how other services have reoriented to respond to many of the challenges experienced in engaging families. Relevant programs and/or policy responses for various jurisdictions are described below, only programs with specific engagement or assertive engagement strategies have been included to provide a snapshot of approaches within the Australian child welfare context. For each we present the context and the approach utilised along with evaluation findings where available.

5.2.3.1 New South Wales

Brighter Futures Program

The Brighter Futures program involved the development of an evidence-based service model requiring caseworkers to use validated instruments for assessment and reporting, delivered through a cross-sectoral partnership between Community Services and non-government organisations[34]. It specifically targets families who are most at risk of entering the child protection system. While an evaluation showed the program was meeting the needs and improving outcomes for the majority of participant families on a modest level[34], there was a substantial proportion of families who did not benefit from the program, or who failed to engage in the program[34]. Results also showed a clear relationship between families' duration in the program and whether they achieved their case plan goals; suggesting that retention played a large role in family outcomes.

5.2.3.2 Queensland

Intensive Family Support (IFS) Program

The Intensive Family Support (IFS) Program provides case management support to families at risk of entering the statutory child protection system and actively collaborates with other agencies to provide families with services and support aligned to their case plan goals[35]. The process of IFS services starts with active engagement through assertive outreach to referred families encouraging their engagement with the service[35]. This includes unannounced visits or cold calling to make contact with families who may have been referred without consent, or perhaps reluctantly agreed to a referral, and actively encouraging them to engage with available support.

An evaluation found that IFS services were having a positive influence on outcomes for families experiencing multiple and/or complex challenges and that a substantial proportion of families had reduced or resolved their presenting needs by the time they exited IFS services[35].

Engaging with Families Practice Paper

The practice paper provides an evidence-based framework that guides the practice of departmental staff when engaging families in a child protection context[36]. Family engagement is positioned as the foundation from which change occurs. Principles underpinning the engagement practices of the Department include: being child centred and family-focused; strengths-based; participatory; based on clear communication; encouraging and supporting participation (particularly for Aboriginal and Torres Strait Islander children and families); inclusive and non-discriminatory; culturally sensitive; and collaborative between the child, their family and support services[36].

5.2.3.3 South Australia

Child and Family Health Service

In South Australia, a recent report by the Child and Family Health Service (CaFHS) identified the need for an assertive approach to working with complex families. The need was related to parental barriers to engagement and levels of family risk. The report called for an approach in which staff actively contact parents and support and encourage them to engage and remain engaged with services[30]. No implementation or evaluation of the service model was available at the time of writing this report.

5.2.3.4 Western Australia

Signs of Safety Framework

The Signs of Safety Framework was developed to address the need for a specialized and focused approach to engaging and working with families when there are child safety concerns. Whilst not explicitly assertive in nature, practitioners working under the framework use a specific set of practice tools and processes to engage in constructive working relationships and partnerships with families[37]. This constructive working relationship is reported to be a key factor in working with families and creating positive outcomes for children and families.

5.2.3.5 Tasmania

Strong Families: Safe Kids

Strong Families, Safe Kids presents a redesign of child protection services in Tasmania. The focus of the redesign was to address the need to better engage families at crisis point or who are unwilling to receive support. The service model employs assertive support strategies[38]. The program has not been evaluated.

5.2.3.6 Victoria

Roadmap for Reform

Roadmap for reform encompasses a systematic approach to improving the Victorian child and family system, incorporating the statutory child protection system, out-of-home care, and early intervention and prevention services for children and families experiencing vulnerabilities[39]. The purpose of this

project was to prepare a 'menu' of evidenced-based practices and programs relevant to six key areas, corresponding to a tiered continuum of services including families at risk of child maltreatment[39].

A review of evidence-based processes investigated convergent sources of evidence and found that they all pointed to the same overall conclusions: how services are delivered is as important as what is delivered, and the quality of the relationships between practitioners and parents are central to achieving the objectives of services[39].

5.2.3.7 UK

Given the paucity of local research, and the formation of local programs based on international examples a relevant example from the UK is included in this policy review.

Engaging Families Toolkit

The Engaging Families toolkit aims to provide guidance to practitioners in effective strategies for engaging families in early intervention and support. It provides guidance in recognising, understanding and responding to difficult to engage and risky behaviours which may be encountered when working with children, young people and their parents and carers[32].

The toolkit poses six elements as critical for engagement including: the quality of the relationship between the worker and family; persistence of workers to engage the family in the offer of support at the earliest opportunity; adopting a whole family approach; shared development of clear and timely plans of support as opposed to episodic intervention; and an authoritative approach to ensure the child's needs and outcomes remain in sharp focus[32].

No evaluation of the toolkit was found at the time of writing this report.

5.2.4 Common Elements across Policies & Programs

Present in each of the policy and practice models reviewed was an emphasis on the importance of family and staff/practitioner relationships as the main factor in facilitating positive or long lasting outcomes. Additional elements present in at least two or more programs, policies or reports (not all outlined above) within the grey literature included:

- Targeting at risk/vulnerable families
- Quick follow up
- *Creating a good first impression*
- Assertive/active outreach via home visits or phone calls
- Strong focus on quality of practitioner-family relationships as the driver of outcomes/change
- Going to where parents/families are
- Flexibility in engagement and service delivery
- Patience and persistence (in initial engagement and ongoing)
- Open and authentic communication
- Inter-agency partnerships (across NGO's and Government)

- Use of other agencies as ambassadors
- *Promoting and delivering services in a non-stigmatising/non-threatening way*
- Focus on strengths to empower families
- *Recruiting families through an agency which does not represent authority*
- Culturally appropriate / sensitive engagement strategies (particularly with ATSI children and families)

The majority of these strategies or responses are consistent with assertive engagement strategies found in the literature review. Italicised points are elements of practice that may conflict with aspects of the assertive engagement approach utilised within the CFARN model. Overall, the policy and practice review highlighted a clear need for alternative approaches to connecting with and retaining families in services. Recently, a number of jurisdictions have employed similar approaches to reduce service or systemic barriers and as these mature there will be a need to assess the effectiveness of these approaches.

6 DISCUSSION

6.1 Interventions

Assertive engagement strategies are consistently utilised as an element of intervention or treatment and not as an intervention in and of itself. This was consistently evident in the literature. All studies included in this review investigated assertive engagement strategies in conjunction with additional interventions, treatments, or therapies. This is also consistent with how assertive engagement is utilised within the CFARN service model, as one of seven key principles which aim to address system dysfunction and increase support to families [2].

Due to the way in which assertive engagement was studied (as a component of interventions) this also limits the ability to interpret engagement outcomes in the literature as solely a result of assertive engagement. Any changes or impacts on engagement could result from various factors such as the different services / therapy / treatment on offer and participant's interest or willingness to engage in this specific model of care / treatment. This is particularly important as none of the included studies were conducted in a child protection context.

Nevertheless, the use of assertive engagement as an element of a multitude of different interventions and services highlights its applicability across a broad range of settings. The review found that interventions with assertive engagement components were used in a wide variety of settings, including: inpatient and community mental health; drug and alcohol; corrections; homelessness; and education settings. These settings mirror those of the service networks in which CFARN operates and the risk factors that prompt a CFARN referral[2].

Existing research highlights chronically low engagement and retention rates for interventions in these settings and services targeted towards marginalised and vulnerable populations[40]. Thus even minor improvements in engagement may be interpreted as meaningful and worth considering in the development of services targeting vulnerable populations.

Additionally, whilst metrics of engagement were the primary focus of this review, the results also gave insight into other service outcomes of the various interventions. Improvements or a positive impact were seen consistently for measures of engagement, however results on other metrics were not consistently positive, particularly when compared to standard care or case management. This suggests the ability of assertive engagement strategies to potentially improve engagement rates, irrespective of other intervention outcomes or factors.

6.1.1 Assertive Community Treatment

Assertive community treatment was the most used intervention across the studies, importantly, many of the common characteristics of assertive community treatment reported across the studies reflect elements of the CFARN service model and provide a promising evidence base for the use of these elements or characteristics to engage vulnerable populations.

Some of the shared characteristics between assertive community treatment interventions and the CFARN model include: Persistent and consistent approach to contacting and engaging clients (e.g., not giving up); use of multiple methods to engage and retain clients such as home visiting and phone calls; and a focus on collaboration and relationships with other services.

6.2 Engagement

The literature review results illustrated how engagement may be interpreted and therefore measured in various ways, with the included studies offering up six different measures of engagement. Most of these measures were focused towards compliance (e.g. attending appointments, contacting services, time spent with a service, etc.) Only two studies reported on the quality of client engagement with services, providing mixed results.

Evidence from the grey literature strongly suggested that engagement alone is not sufficient for improved, long term outcomes in the child welfare context, but rather the relationships and trust built between families and practitioners drive and facilitate change. Key pieces from the grey literature advocate that both client compliance and quality collaboration between clients and services are necessary components of the engagement process[3,33]. Compliance is discussed as a way to initially bring clients in to services, whereas achieving collaboration in the goal of building a sound therapeutic relationship that may facilitate lasting change and outcomes over time.

Robust research is needed to quantify the impact of assertive engagement on collaboration and quality engagement between clients and services. Whilst the literature review suggests improvements in predominantly compliance based metrics, the quality of this engagement and nature of relationships with services/practitioners is not substantiated in this review.

Our policy review highlighted similar approaches taken in other jurisdictions in Australia and in the UK, as a result of practice redesign to address service or systemic barriers to supporting families. This review of policy and practice evidence revealed 'common elements' across programs designed to improve engagement of families in child protection contexts. In particular, elements such as: a focus on worker client relationships; flexibility in locations and service delivery; going to where the client is; linking to or partnering with other service providers; patient and persistent contact (e.g. not giving up); and the use of assertive outreach such as home visits or phone calls to facilitate initial engagement were all shared across interventions in the literature review such as assertive community treatment, assertive outreach, and case management, as well as programs included in the policy review.

6.3 CFARN Families

The main issues or risk factors which parents with child protection concerns face are often that of mental illness, drug and alcohol misuse, homelessness / housing insecurity, domestic violence, unemployment, and childhood trauma, many of which were included as target populations for the literature review studies. However, missing from the literature review is an explicit focus on individuals experiencing domestic violence, as well as Aboriginal and Torres Strait Islander populations. Although it is noted that persons experiencing domestic violence may be present within

the homeless populations targeted by some studies, it has not been explicitly identified or outcomes for these families analysed.

The policy review provided some context to the use of assertive engagement strategies or elements with a more relevant array of populations, suggesting characteristics of assertive engagement are already being actively utilized in some jurisdictions, even if it is not labelled as assertive engagement. However, there were a few elements of successful engagement strategies specific to the child protection context which may conflict with the CFARN model of assertive engagement, necessitating further investigation in this specialized context and in light of learnings from the CFARN evaluation.

In combining the results of the literature review and grey literature / policy review, assertive engagement strategies overall, appear to provide an effective response to the ongoing challenge in engaging 'hard to reach' populations, or more accurately, making services more accessible by placing a level of responsibility and onus on services and workers to engage these populations.

6.4 Australian Context

Finally, there is a clear lack of Australian context in the published literature, with most high quality studies coming from the US, UK or Europe. A need for more robust research in an Australian context, particularly with Aboriginal and Torres Strait Islander populations and families, who are overrepresented in child welfare service populations. While recent qualitative research shows promising outcomes with use of assertive engagement in remote Aboriginal communities[41], this requires more robust and widespread investigation.

6.5 Recommendations

The following recommendations are made based on the findings of the review described in the preceding section:

1. Continue to deliver the CFARN model with a strong assertive engagement component.
2. Consider the way assertive engagement practices are expanded and tested in other intensive family support services.
3. Conduct ongoing analysis and evaluation on the quality of client-practitioner relationships and collaboration achieved by assertive engagement strategies, as well as the long term effectiveness of assertive engagement on child and family outcomes and retention (both within CFARN and other family support services).
4. Undertake further research regarding the use of assertive engagement within the Australian child protection context, particularly with culturally diverse populations and Aboriginal and Torres Strait Islander families.
5. Disseminate findings to inform future service development models for this client group.

7 LIMITATIONS

In order to provide a rapid evidence assessment or rapid review of the literature, concessions were made in the breadth and depth of the search process. As a consequence, some relevant studies utilising less robust research methodologies may have been missed. A second limitation concerns the critical appraisal of the studies included: this REA did not incorporate a comprehensive review or assessment of the measures used for engagement, although the degree of measurement is acknowledged and reported.

A third limitation concerns the fact that the evidence on some moderators is often based on a limited number (sometimes only one) of studies. Although most of these studies were of a high quality (experimental or quasi-experimental studies), no single study can be considered to be strong evidence in and of itself. Finally, due to the focus of this REA on mostly high-quality studies, that is, experimental or quasi-experimental studies and studies with a pre- and post-test measurement, new, promising findings that are relevant for practice may have been missed. Given these limitations, care must be taken not to over interpret the findings presented in this REA.

8 CONCLUSION

Assertive engagement provides a promising initiative for increasing the engagement of traditionally hard to reach or vulnerable populations in services and treatment by focusing on how services can better serve and engage vulnerable or at risk populations.

The main populations targeted by interventions that report using assertive engagement reflect those who engage with the child protection system, and more specifically CFARN.

Importantly, both the long term outcomes and quality of engagement is poorly evidenced in the literature. Future research must assess the quality and extent to which this strategy serves its goals of increased engagement, collaboration, and retention over time.

Additionally, the suitability of assertive engagement strategies for culturally diverse populations, in particular Aboriginal and Torres Strait Islander families, who make up a high proportion of child protection statutory responses in Australia, is not well researched and requires further investigation in the Australian context.

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10 APPENDICES

Appendix A – Database Test Searches

Appendix B – Database Search Strategy

Appendix C – PRISMA Flow Diagram

Appendix D – Data Extraction Table

Appendix E – Policy Review Search Strategy

10.1 Appendix A – Database Test Searches

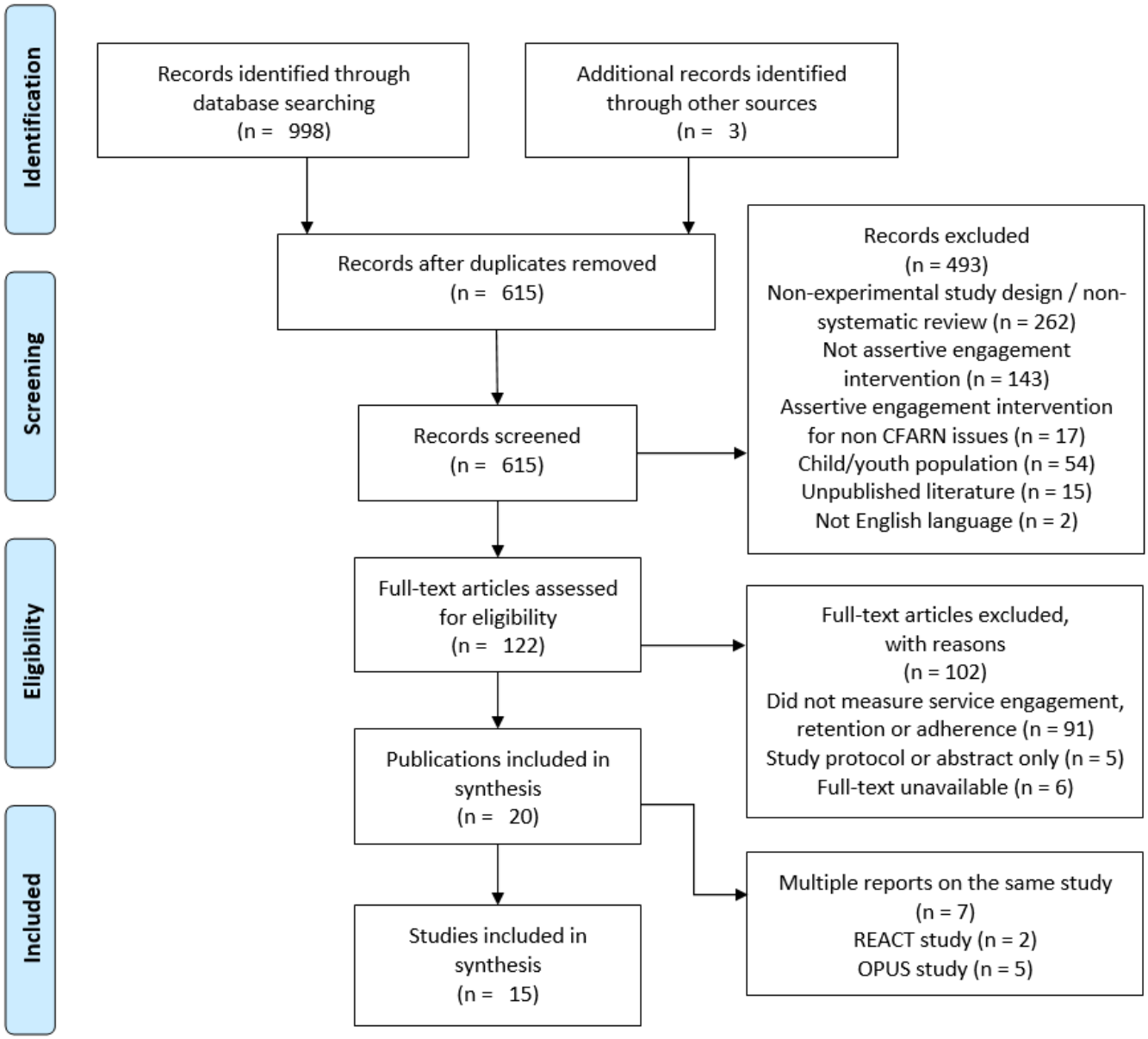
Database searched	Date of Search	Search Terms	Filters / Limiters applied[2]	# of Records retrieved	Relevance
		SEARCH TEST #1 (assertive engagement, ACT, child, and parent/family)			
MEDLINE	4/05/2020	("assertive engagement" OR "assertive outreach" OR "assertive community treatment" OR "active outreach" OR "intensive outreach") AND (child* OR infant OR antenatal) AND (parent* OR family OR families OR carer)	n/a	25	3 or more relevant
Web of Science	4/05/2020		n/a	43	5 or more relevant
Google Scholar	4/05/2020		n/a	11,000	Few relevant
		SEARCH TEST #2 (assertive engagement, child, and parent/family) - removed ACT			
MEDLINE	4/05/2020	("assertive engagement" OR "assertive outreach" OR "active outreach" OR "intensive outreach") AND (child* OR infant OR antenatal) AND (parent* OR family OR families OR carer)	n/a	15	One or two relevant (present in #1 but missing adult focus interventions
Web of Science	4/05/2020		n/a	21	One or two relevant present in #1 but missing adult focus interventions
Google Scholar	4/05/2020		n/a	6,660	Better relevance but still missing adult focus
		SEARCH TEST #3 (assertive engagement, child protection, parent/family) - replaced child terms with child protection terms			
MEDLINE	5/05/2020	("assertive engagement" OR "assertive outreach" OR "active outreach" OR "intensive outreach") AND ("child safety" OR "child welfare" OR "child protection" OR "child abuse") AND (parent* OR family OR families OR carer)	n/a	1	Only result present in search test #1 & #2
Web of Science	5/05/2020		n/a	1	Only result present in search test #1 & #2
Google Scholar	5/05/2020		n/a	1,990	Better relevance to topic but missing adult focused interventions
		SEARCH TEST #4 (assertive engagement, ACT, parent/family) - removed child terms			
Embase	11/05/2020	("assertive engagement" OR "assertive outreach" OR "assertive community treatment" OR "active outreach" OR "intensive outreach") AND (parent* OR family OR families OR carer)	n/a	326	Inclusive of all other searches (bar #3)
MEDLINE	5/05/2020		n/a	178	Inclusive of all other searches (bar #3)
Web of Science	5/05/2020		n/a	258	Inclusive of all other searches (bar #3)
Google Scholar	5/05/2020		n/a	12,800	Inclusive of all other searches (bar #3)

Database searched	Date of Search	Search Terms	Filters / Limiters applied[2]	# of Records retrieved	Relevance
		SEARCH TEST #5 (assertive engagement, ACT, service, parent/family) - added service engagement terms			
MEDLINE	8/05/2020	("assertive engagement" or "assertive outreach" or "assertive community treatment" or "active outreach" or "intensive outreach" or "service participation" or "service engagement") AND (parent* or family or families or carer)	n/a	226	Lacking relevance to assertive engagement
Web of Science	8/05/2020		n/a	331	Lacking relevance to assertive engagement
Google Scholar	8/05/2020		n/a	16,800	Lacking relevance to assertive engagement
		SEARCH TEST #6 (assertive engagement, ACT, service, parent/family) - added service engagement as AND			
MEDLINE	8/05/2020	("assertive engagement" or "assertive outreach" or "assertive community treatment" or "active outreach" or "intensive outreach") AND (parent* or family or families or carer) AND ("service participation" OR "service engagement" OR "difficult to engage" OR "hard to engage")	n/a	2	too narrow
Web of Science	8/05/2020		n/a	4	too narrow
Google Scholar	8/05/2020		n/a	0	no results
		SEARCH TEST #7 (assertive engagement and parent/family) - removed ACT			
MEDLINE	7/05/2020	("assertive engagement" OR "assertive outreach" OR "active outreach" OR "intensive outreach") AND (parent* OR family OR families OR carer)	n/a	45	Missing adult focused / mental health interventions
Web of Science	7/05/2020		n/a	56	Missing adult focused / mental health interventions
Google Scholar	7/05/2020		n/a	7,570	Some relevance, again missing mental health focus
		SEARCH TEST #8 (assertive engagement, ACT)			
MEDLINE	7/05/2020	("assertive engagement" OR "assertive outreach" OR "assertive community treatment" OR "active outreach" OR "intensive outreach")	n/a	1,074	too many results, low relevance
Web of Science	7/05/2020		n/a	1,646	too many results, low relevance
Google Scholar	7/05/2020		n/a	17,600	too many results, low relevance

10.2 Appendix B – Database Search Strategy

	Database searched	Date of Search	Search Terms	Filters / Limiters applied[2]	# of Records retrieved	# of Records included
Record identification and Screening	Embase	12/05/2020	(("assertive engagement" OR "assertive outreach" OR "assertive community treatment" OR "active outreach" OR "intensive outreach") AND (parent* OR family OR families OR carer))	incl all years, limited to English language	325	12
	MEDLINE	12/05/2020	(("assertive engagement" or "assertive outreach" or "assertive community treatment" or "active outreach" or "intensive outreach") and (parent or family or families or carer)).af.	incl all years, limited to English language	186	0
	Web of Science	12/05/2020	(ALL=(("assertive engagement" or "assertive outreach" or "assertive community treatment" or "active outreach" or "intensive outreach") and (parent or family or families or carer)))	incl all years, limited to English language	287	4
	Google Scholar	12/05/2020	(("assertive engagement" OR "assertive outreach" OR "assertive community treatment" OR "active outreach" OR "intensive outreach") AND (parent* OR family OR families OR carer))	incl all years, limited to first 200 results	12,900 (total) 200 (included)	3
				TOTAL:	998	19
	OTHER SOURCES (e.g. hand searching)				3	
	RECORDS AFTER DUPLICATES REMOVED:				615	
Eligibility	**PUBLICATIONS AFTER FULL-TEXT ASSESSED FOR ELIGIBILITY:**				20	
	TOTAL STUDIES INCLUDED IN SYNTHESIS:				15	

10.3 Appendix C: PRISMA Flow Diagram



10.4 Appendix D: Data Extraction Table

Ref no.	Author(s)	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
1	Lehman, A. F. Dixon, L. B. Kernan, E. DeForge, B. R. Postrado, L. T.	A randomized trial of assertive community treatment for homeless persons with severe mental illness[13]	1997	To evaluate the effectiveness of an innovative program of assertive community treatment (ACT) for homeless persons with severe and persistent mental illnesses.	Randomised controlled trial Experimental condition: Assertive community treatment program (n = 77) Comparison condition: Services as usual, not controlled (n = 75)	152 individuals with severe and persistent mental illness (SPMI) (or a history of SPMI or other psychological disorders) experiencing homelessness.	Inpatient and community mental health / homelessness setting Baltimore, Maryland, USA	Intervention: Assertive community treatment (ACT) Length of intervention: Ongoing Characteristics: The ACT team's long-term commitment was to promote continuity of care, and the team was available 24 hours a day. The ACT team consisted of 12 FTE staff including program director, psychiatrist, medical director, 6 clinical case managers (social workers, psychiatric nurses, and rehab counsellors), 2 consumer advocates, secretary-receptionist, and part-time family outreach worker. Each participant was assigned a 'mini-team' consisting of a clinical case manager, attending psychiatrist, and consumer advocate. The entire ACT team, including the consumer advocates, worked together in decision making and each staff member was knowledgeable about most of the patients. Team work was fostered through daily sign-out rounds and twice weekly treatment planning meetings.	Data collected at baseline (after randomisation) and at 2, 6 and 12 month follow ups for: Current diagnosis – measured at baseline only using the Structured Clinical Interview for DSM-III-R (SCID); Life satisfaction, functional status and **access to resources and opportunities** – measured using the Lehman Quality-of-Life Interview (QOLI); Other psychometric measures – measured using the Colorado Symptom Index (CSI) and the Medical Outcomes Study 36-Item Short Form Health Survey (SF-36). Data on housing and **service usage** was also collected at monthly intervals. Adherence to ACT model was high.	Service usage results: *Mental health service usage* – The ACT program subjects accumulated significantly fewer inpatient days than the comparison subjects and fewer emergency department visits for mental health related issues. The ACT program subjects used significantly more outpatient mental health visits. *General medical service usage* – The two groups did not differ significantly on cumulative general medical inpatient days, emergency department visits, or outpatient visits for general medical care. *Substance use service usage* – The two groups were similar in the amounts of inpatient care and emergency department visits for substance use disorders. Overall service attrition by 12 months was higher among comparison subjects (services as usual) than control subjects (ACT program).	Overall the ACT program subjects were seen to utilise less crisis oriented services (i.e. emergency department visits or inpatient stays) and more ongoing / regular service engagement (i.e. outpatient visits) for mental health concerns. The observed patterns of care confirm that the 2 service conditions differed in the ways hypothesized for ACT programs vs usual community care. Conceptually, ACT programs are designed to provide continuous, comprehensive care that can intervene rapidly to avert emerging crises and that can reduce the risk for future ones. The fact that the conditions of many of the subjects improved over time may indicate that the existing service system, while not optimal, afforded a reasonable safety net for this population.	Study was only conducted in a single demonstration city, limiting its generalizability. Short follow ups limit assessment of longer term outcomes and group differences. Contamination of the comparison condition leaves open the possibility that the experiment underestimates the relative value of an ACT program for these participants	✓✓✓✓✓ (RCT)
2	McHugo, G. J. Drake, R. E. Teague, G. B. Xie, H. Y.	Fidelity to assertive community treatment and client outcomes in the New Hampshire dual disorders study[17]	1999	The New Hampshire dual disorders study: To examine the association between fidelity of programs to the assertive community treatment model and client outcomes in dual disorders programs.	Parent study: Randomised clinical trial of the effectiveness of assertive community treatment versus standard case management. Current study: Secondary analysis of data.	87 clients with a dual diagnosis of severe mental illness and a comorbid substance use disorder who were exposed to assertive community treatment programs as part of the New Hampshire dual disorders study (223 participants).	Inpatient /outpatient and community mental health setting New Hampshire, USA	Intervention: Assertive community treatment (ACT) Length of intervention: 3 years Characteristics: Community locus, **assertive engagement**, high intensity, small caseload, continuous responsibility, team approach, multidisciplinary staff, working closely with support systems. Additional essential components of the dual disorders programs were: individualised substance abuse treatment, dual disorders model, dual disorders treatment groups, dual disorders focus.	Primary outcome measures: Objective and subjective quality of life – measured using the Lehman Quality of Life Interview (QOLI); Current psychiatric symptoms – measured using the 24-item Brief Psychiatric Rating Scale (BPRS); Overall functional status – measured using the Global Assessment Scale (GAS). Assessment of model fidelity: Ratings on program components were made throughout the study period by research staff, using information drawn from interviews with clinical and administrative staff, activity logs kept by case managers, clinical records, and direct observation. Specific details on how **service retention** was measured were not provided.	Clients in high-fidelity programs had higher rates of **retention in treatment** and fewer hospital admissions than those in low-fidelity programs over the three year study period. Better adherence to the ACT model resulted in greater service engagement overall.	Despite its shortcomings, this study provides evidence that more complete and more faithful implementation of the model components of assertive community treatment is associated with better client outcomes. Items related to the extent of **community outreach** and **assertive engagement** are factors that may be associated with the difference in rate of hospitalization and **retention in treatment**.	Participants not randomly assigned to high-fidelity and low-fidelity assertive community treatment interventions (as this distinction among the programs arose during the initial study period). External validity of the study is constrained by its sample size and constitution.	✓✓✓✓✓ (RCT)

Ref no.	Author(s)	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
3	Ziguras, S. J. Stuart, G. W.	A meta-analysis of the effectiveness of mental health case management over 20 years[20]	2000	To investigate the effectiveness of case management and to compare outcomes for assertive community treatment and clinical case management	Systematic literature review with meta-analysis Controlled studies of case management published between 1980 and 1998 were identified from reviews and through database searches.	n/a	n/a	Intervention: Assertive community treatment (ACT) Characteristics: The assertive community treatment programs provided intensive support and many 'typical' case management functions such as: However differed from typical case management in several ways: They operated with teams of two or more that were responsible for each client, they had lower caseloads, and they often (but not always) provided more services from within the program rather than referring clients to other services.	Each study was coded for client characteristics as well as several aspects of the study design, including sample size, study period, number of outcome measures used, attrition rates, and the method of assigning subjects to treatment groups. Standardized measures of outcomes were calculated for 12 domains, including: Improvement in symptoms (which include both symptoms and level of social functioning); number of hospital admissions; length of hospital stay; proportion of clients hospitalized; **contacts with mental health services**; **contacts with other services**; **dropout rates from mental health services**; level of social functioning, (measured as quality of life rated by clinicians and clients on the basis of clients' level of social functioning and improvement in their housing situation); clients' satisfaction; family members' satisfaction; family burden of care; and cost of services.	Service contact / dropout rate measures: *Contact with mental health services* – Higher frequency of contact with mental health services was found for clients in both assertive community treatment and clinical case management, however, the number of contacts was significantly greater for clients in clinical case management programs than for clients in assertive community treatment programs. *Contact with other services* – No statistically significant difference in outcomes for contacts with other services between usual treatment and case management. *Dropout rates from mental health services* – Compared to usual treatment, case management (including clinical case management and assertive community treatment) was associated with more contacts with both mental health and other services and lower dropout rates from mental health services. *For differences between CCM and ACT on dropout rates, the number of studies was too small to allow comparison.	Assertive community treatment has demonstrable advantages over clinical case management in reducing hospitalisation. Both ACT and CCM have similar effects in improving clinical symptoms, client and family satisfaction with services and the client's level of social functioning.	Some uncertainty about the extent to which the programs described in the reports analysed fit the definitions of assertive community treatment and clinical case management provided in the literature. Limited ability to derive outcomes for assertive community treatment	✓✓✓✓✓ (meta-analysis)
4	McDonald, L. Goodson, B. Couture, C. Howard, I.	Community Based Multi-Family Groups* and Mental Health Disparities: A Randomized Controlled Trial with Low-Income, African American Children[16]	2002	The four goals for the intervention included strengthening the family, increasing school success, reducing substance abuse for the child and parent, and reducing stress of daily living.	Randomised controlled trial (RCT) Experimental condition: FAST intervention (n = 206 children, n = 194 families) Control condition: Commercially available behaviourally oriented parenting pamphlets (n = 197 children)	403 children and their respective families from low income households with primarily single parents from communities with a high background level of social issues	School / educational setting New Orleans, Louisiana, USA	Intervention: Multi-Family Groups (MFG) with an active outreach element Length of intervention: 8 weeks Characteristics: The MFG engagement process includes: **1) Active outreach** with personal home visits; **2)** 8 weekly, school based, MFG, co-led by a trained team of parents and professionals who represent the culture and ethnicity of the invited families; **3)** 20 monthly, community based, parent led MFG, with support for appropriate referrals into mental health services. Goals of the program included: **1)** To strengthen the family; **2)** To increase school success; **3)** To reduce substance abuse of child and of the parent; **4)** To reduce stress of daily living.	Assessments conducted before and after a FAST cycle and one year later. **Engagement** was reported via percentage of families agreeing to participation in the study and subsequent attendance at MFG sessions. Domains for which data were collected included: children's social activities, social skills and behaviour; children's school experience and academic progress; family environment and parenting; learning environment and literacy activities; parent's social support and connectedness; parent mental health; school-family connection; and **community participation**. Children's psychosocial functioning was also measured at pre, post and one year follow up using the Child Behaviour Checklist (CBCL)	**54% percent of families approached for FAST agreed to be in the study** (n = 194 families); of these 25% never actually attended a session; of those families who did attend one MFG, 78% attended six or more sessions and graduated. 50 families (25%) attended 0 sessions; 19 families attended 1-2 sessions, 22 families attended 3-5 sessions, and 103 families attended up to 6-8 sessions. In contrast, 73% of families assigned to the control condition who were approached by a team member to be in the control group were recruited into the research study (this involved three paid interviews).	The community based MFG engaged and retained marginalized parents, the children assigned to the FAST condition improved and maintained those mental health and social skills gains a year later, and the FAST parents reported increases in parent involvement and parent leadership in the community. This study demonstrates the benefits of community based multi family groups, with the values of shared governance and parent empowerment, as an outreach and engagement strategy.	Not reported.	✓✓✓✓✓ (RCT)

Ref no.	Author(s)	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
5	McCoy, M. L. Roberts, D. L. Hanrahan, P. Clay, R. Luchins, D. J.	Jail linkage assertive community treatment services for individuals with mental illnesses[15]	2004	To illustrate how participants of an assertive community treatment jail-linkage program experience factors that contribute to recidivism and decompensation. Program outcomes are also explored.	Qualitative study using semi-structured Interviews collecting pre and post data to assess program outcomes	24 CJLP participants, criteria for participation outlined as: a history of frequent incarcerations and inpatient hospitalisations (non-violent crimes and low risk to community prioritised)	Corrections or criminal justice / community setting Cook County, Illinois, USA	Intervention: The Thresholds, State, County Collaborative Jail Linkage Project (CJLP) based on models of Assertive Community Treatment. Characteristics: CJLP parallels traditional ACT models with a higher staff to participant ratio. A multidisciplinary team is on call 24 hours a day, makes frequent visits to participants' apartments, and **works hard to engage people in treatment**. Team members share responsibility for a group of participants. They develop strong communication ties with landlords and other community contacts, and pay special attention to participants' criminal justice record, risk factors, and contacts. They work closely with the police department and with parole officers to track interaction with law enforcement.	Interview data was collected during the start-up period (within three months after an individual's entry into the program). Interviews explored demographic and family backgrounds, clinical treatments for mental health and/or substance use disorders, legal and criminal justice system involvements, vocational, educational, previous living arrangements, and homelessness histories. Probes were also used for family history and traumatic events. Data about current sources of income, current social network and interviewees' perspectives on experiences with CJLP were also collected. Data sources for pre- and post-hospital use and arrests included state mental institution records, arrest records from the Illinois Department of Corrections and the Chicago Police Department, and **clinical records from Thresholds**.	*Treatment retention outcomes* All 24 participants remained in the program for two years.	CJLP succeeded in engaging and maintaining participants in treatment, as well as reducing psychiatric hospital use and jail recidivism.	Not reported	✓ (qualitative study with some pre- and post-measurement)
6	Killaspy, H. Bebbington, P. Blizard, R. Johnson, S. Nolan, F. Pilling, S. King, M.	The REACT study: randomised evaluation of assertive community treatment in north London[22,42]	2006	REACT trial To compare outcomes of care from assertive community treatment teams with care by community mental health teams for people with serious mental illnesses.	Non-blind randomised controlled trial Experimental condition: Assertive community treatment (n = 127) Control condition: Continuation of care from community mental health team (n = 124)	251 men and women under the care of adult secondary mental health services with recent high use of inpatient care and difficulties engaging with community services. Two inner London boroughs (Camden and Islington)	Inpatient and community mental health setting Inner London, UK	Intervention: Assertive community treatment (ACT) Characteristics: Total team case load – 80 to 100; maximum; individual case load – 12; availability – extended hours (0800 to 2000 every day); locations for appointments – not office based ("in vivo") meet client at home, in cafes, parks, etc.; contact with clients – **assertive engagement**, multiple attempts, flexible and various approaches (for example, befriending, offering practical support, leisure activities); commitment to care – "no drop-out" policy, continue to try to engage in long term care; case work style – team approach, all team members work with all clients; frequency of team meetings – frequent (up to daily) to discuss clients and daily plans; source of skills – team rather than outside agencies as far as possible	Data was collected at 18 months after randomisation and 3 years follow up Primary outcome measures: Inpatient service use measured by number of inpatient bed days. Secondary outcome measures: Symptoms, social function, client satisfaction, and **engagement with services**. Engagement with services measured by numbers lost to follow up (defined as out of contact for over three months) and an adapted homeless engagement acceptance scale.	Results at 18 months: No significant differences were found in inpatient bed days or in any other indicator of inpatient service use for the two treatment groups. Ratings on the adapted homeless engagement acceptance scale indicated **greater quality of engagement with services for clients assigned assertive treatment**; fewer clients in the assertive community treatment group were lost to follow-up than those in the community mental health team group. Serious incidents were equally distributed between the groups. Results at 3 year follow up: There were no statistically significant differences between the ACT and CMHT participants in total inpatient days over the 36 months. The mean **face to face contacts made between staff and clients** over the preceding three months at 36 month follow-up was statistically significantly greater for ACT than CMHT participants.	Community mental health teams are able to support people with serious mental illnesses as effectively as assertive community treatment teams, but assertive community treatment may be better at engaging clients and may lead to greater satisfaction with services.	Participants were not blind to their assignment into the experimental or control group.	✓✓✓✓✓ (RCT)

Ref no.	Author(s)	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
7	Sytema, S. Wunderink, L. Bloemers, W. Roorda, L. Wiersma, D.	Assertive community treatment in the Netherlands: a randomized controlled trial[25]	2007	To compare the effectiveness of ACT with the standard care for patients with severe mental illness (SMI). The primary aim of the assertive approach (the core element of ACT) is to prevent loss to follow-up.	Open randomized controlled trial Experimental condition: Assertive community treatment (n = 59) Control condition: Standard community mental health care (n = 59)	118 patients with severe mental illness	Inpatient / outpatient and community mental health setting Winschoten, Netherlands (small rural town; 18 000 inhabitants)	Intervention: Assertive Community Treatment (ACT) Characteristics: Maximum caseload – 10 patients; work style – shared caseload, all patients are discussed in weekly and daily team meetings; location – always where the patient is; engagement with client – **assertive**, keep trying to make contact, no drop-out policy; working hours – office and 24 hour service; skills – multidisciplinary team, all skills are available for each client because all team members may have contact with each client; disciplines available – psychiatrist, psychologist, psychiatric nurse, social worker, client worker, dependency specialist.	Data was collected at regular intervals over 2 years. Primary outcome measure: Number of patients who were out-of-contact with mental health services during the last 12 months of observation (Out-of-contact defined as not having any registered contact with the mental health services). Secondary outcome measures: Number of homeless patients at the end of observation, and the number of admission days (data retrieved from patient files).	ACT was statistically significantly superior over standard care in maintaining contact with patients. The mean number of out-patient contacts doubled in ACT to about a mean number of five contacts a month, almost all of them home based. This is significantly higher than in standard care.	ACT may be a valuable tool to strengthen contact between SMI patients and the treatment staff. ACT alone is not sufficient to improve outcomes. At present too much attention is directed towards the implementation of fidelity criteria that do not include much treatment content. To improve its effectiveness, ACT should be enriched with the implementation of evidence based interventions.	The results might be valid only for patients with long-term mental illness and not for first episode psychosis. The study was conducted in a rural area and therefore the results might not be representative for ACT in urban areas.	✓✓✓✓✓ (RCT)
8	Carpenter, J. Luce, A. Wooff, D.	Predictors of outcomes of assertive outreach teams: a 3-year follow-up study in North East England[21]	2010	To determine the predictors of location, mental health, social functioning and hospitalisation of AO service users at 3-year follow-up. It was hypothesised that improvements would be associated with AO model fidelity and greater use of evidence-based psychosocial interventions.	Naturalistic longitudinal observational study (pre and post-test)	33 integrated assertive outreach teams in the North East of England	Community mental health setting North East England, UK	Intervention: Assertive outreach teams (AO) Characteristics: Not reported in detail, matching that of assertive community treatment teams	Data was collected between 2002–2003 and 2005–2006, allowing for a 3 year interval. Assertive outreach model fidelity – measured using the Dartmouth Assertive Community Treatment Scale (DACTS) Other outcomes – measured using Matching Resources to Care (MARC-1) (collects demographic data, psychiatric diagnosis, admissions to psychiatric hospital, concordance with use of psychotropic medication, co-operation with care and treatment, alcohol and illegal drug use, risk to self and others, and severity of social problems); and The Health of the Nation Outcome Scales (HoNOS). Primary outcomes measured: Number of inpatient psychiatric hospital admissions; HoNOS total score and M3; and whether individuals' status had 'improved'. Potential predictor variables were: Demographic characteristics; psychiatric history; diagnosis (psychosis, drug and alcohol problems) and use of psychotropic medication; **relationships with services (problems in cooperation with help given, concordance with medication, and keeping appointments)**; and features of AO teams.	*Model fidelity outcomes* – Assertive outreach teams conformed highly on measures of fidelity including: intensity of service, **assertive engagement**, in vivo services, small caseloads, team approach, responsibility for treatment, admission and discharge, and time-unlimited services. There was low model fidelity on measures including: having a psychiatrist, substance abuse and employment specialists on staff, dual disorder treatment groups, and service users on the team. *Predictors of outcomes* – A higher number of admissions and higher HoNOS scores were associated with poor concordance with medication and keeping appointments.	Assertive outreach appears to have been quite successful in keeping **users engaged over a substantial period** and to have an impact in supporting many people to live in the community and to avoid the necessity of psychiatric hospital admission. Poor **engagement with services**, in particular poor concordance with medication and keeping appointments were the important predictors of admission as well as poorer mental health and social functioning.	There is no comparison group so it is not possible to say whether the outcomes for service users were directly associated with their engagement with AO.	✓✓✓ (longitudinal observational study)

Ref no.	Author(s)	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
9	Lambert, M. Bock, T. Schöttle, D. Golks, D. Meister, K. Rietschel, L. Bussopulos, A. Frieling, M. Schödlbauer, M. Burlon, M. Huber, C. G. Ohm, G. Pakrasi, M. Chirazi-Stark, M. S. Naber, D. Schimmelmann, B. G.	Assertive community treatment as part of integrated care versus standard care: A 12-month trial in patients with first- and multiple-episode schizophrenia spectrum disorders treated with quetiapine immediate release[23]	2010	ACCESS trial: To examine the 12-month effectiveness of continuous therapeutic assertive community treatment (ACT) as part of integrated care compared to standard care in a catchment area comparison design in patients with schizophrenia spectrum disorders treated with quetiapine immediate release.	Non-randomised design Experimental condition: ACT as part of integrated care – UKE (n = 64) Control condition: Standard care – AWR (n = 56)	120 patients with first- or multiple-episode schizophrenia spectrum disorders, aged 18-65 and receiving treatment with quetiapine IR. Carried out in 2 catchment areas in Hamburg, Germany (University Medical Center Hamburg-Eppendorf [UKE] and Asklepios West hospital Rissen [AWR]), with similar catchment area of approx. 300,000 inhabitants and similar health care structure.	Inpatient / outpatient mental health setting Hamburg, Germany	Intervention: ACT as part of integrated care Characteristics: The ACT integrated care program comprised a specialized psychosis inpatient unit, 2 day clinics, a psychosis outpatient centre with specialized treatment offers, an occupational therapy centre, and a network of 8 private psychiatrists. Within this treatment program, each study participant was designated to a team consisting of 1 ACT therapist and 1 psychiatrist (from the ACT team or a private psychiatrist) who offered 12 months continuous treatment. The caseload ratio was 15 patients per ACT therapist. Additionally, study participants could use all treatment options within the integrated care program such as psychoeducation groups, social skills training, family groups, motivational addiction therapy, and meta-cognitive training.	Assessments were carried out at baseline and at 4, 12, 26, 38, and 52 weeks' follow-ups, assessments of relevance include: **Level of service engagement** with the Service Engagement Scale (SES). The SES is a 14-item scale were a client's engagement is rated on a 4-point Likert scale from 0 ("not at all or rarely") to 3 ("most of the time"). Higher scores reflected clients' greater levels of difficulty engaging with services. Primary outcome measured: Time to **service disengagement**, measured by days in service. Secondary outcomes measured: Medication non-adherence; improvements of symptoms; functioning; quality of life; satisfaction of care from patients and relatives perspectives; service use data.	*Level of service engagement (SES) results* – SES measurements were not statistically significant between ACT group and standard care group. *Service disengagement results* – 17 of 120 patients (14.2%) disengaged with service, 4 patients (6.3%) in the ACT and 13 patients (23.2%) in the standard care group. The mean Kaplan-Meier estimated time in service was 50.7 weeks in the ACT group (95% CI, 49.1–52.0) and 44.1 weeks in the standard care group (95% CI, 40.1–48.1). This difference was statistically significant (P = .0035). Those, who disengaged with service did so after a median time of 29.6 weeks in ACT and 13.1 weeks in standard care. Accordingly, the patients disengaged with service more often and earlier in the standard care group compared to the ACT group.	In this study, ACT as part of integrated care had a significant advantage over standard care in reducing the rate of and time to service disengagement. This advantage of ACT is in line with other studies. The positive effect of ACT on sustained service engagement may be explained by the lower and shared caseload, the higher contact frequency, the no drop-out policy, the 24-hour-a-day availability, and by the possibility to visit patients in the community, especially if at risk for disengagement. Overall, larger improvements for ACT compared to standard care were observed regarding symptoms, illness severity, global functioning, quality of life, and client satisfaction as perceived by patients and relatives over a 1 year period.	Non-randomised design (chosen because severely ill patients and those at risk for service disengagement tend to refuse study participation if randomization to the potentially worse treatment arm is an integral part of the design). Important confounders were not assessed resulting in potential selection bias. Limited generalisability.	✓✓✓✓ (quasi-experimental study)
10	Chien, W. T. Leung, S. F. Yeung, F. K. K. Wong, W. K.	Current approaches to treatments for schizophrenia spectrum disorders, part II: Psychosocial interventions and patient-focused perspectives in psychiatric care[19]	2013	To identify the common approaches to psychosocial interventions for people with schizophrenia. Treatment planning and outcomes were also explored and discussed to better understand the effects of these interventions in terms of person-focused perspectives.	Systematic literature review EMBASE, MEDLINE, and PsycLIT and identified relevant literature in English from these databases.	n/a	n/a	Interventions: Cognitive therapy (cognitive behavioural and cognitive remediation therapy), psychoeducation, family intervention, social skills training, and **assertive community treatment**.	n/a	In the literature, Assertive community treatment was found to be particularly effective for those who make particularly high use of inpatient services, **have a history of poor engagement with services** leading to frequent relapse and/or social breakdown (e.g., as manifested by homelessness, noncompliance with treatment, social withdrawal, **loss of contact with routine services**, or seriously inadequate accommodation), or need urgent or immediate access to assistance or support in crises. Recent studies have suggested that most benefits of ACT could not be replicated outside the United States; for example, in the United Kingdom and other European countries, **except for maintaining contact with these patients**. Limited evidence for patient outcomes in other domains.	The comparative effects between these five approaches have not been well studied; thus, we are not able to clearly understand the superiority of any of these interventions.	Not reported.	✓✓✓✓✓ (systematic review)

Ref no.	Author(s)	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
11	Luciano, A. Belstock, J. Malmberg, P. McHugo, G. J. Drake, R. E. Xie, H. Essock, S. M. Covell, N. H.	Predictors of incarceration among Urban adults with co-occurring severe mental illness and a substance use disorder[14]	2014	To examine sociodemographic, clinical, economic, and community integration factors as predictors of incarceration among people with co-occurring disorders.	Parent study: Randomised controlled trial (RCT) comparing assertive community treatment with standard clinical case management Current study: Secondary analysis of data in the treatment group only	198 people with co-occurring mental and substance use disorders from two urban areas. Participants were all newly admitted to an outpatient treatment facility.	Mental health setting	Intervention: Assertive community treatment (ACT) Characteristics: not reported	Data was collected at baseline and every six months for the following three years. Initial researchers tracked incarceration, **clinical engagement and status**, employment, living situation, social relationships, and substance use. This study used bivariate analyses and logistic regression analyses to compare individuals who were incarcerated during the study period with those who were not.	In multivariate analyses, previous incarceration, lack of positive social support, and **lack of engagement in substance use treatment** predicted incarceration.	Facilitating engagement in substance use treatment and providing help to find positive social supports within the community may help individuals with co-occurring mental and substance use disorders reduce the risk of incarceration.	Generalizability is limited to individuals receiving treatment in highly urbanized environments. The small number of sites was also a limitation of the study, as was the age of the data.	✓✓ (longitudinal observation study)
12	Penzenstadler, L. Machado, A. Thorens, G. Zullino, D. Khazaal, Y.	Effect of Case Management Interventions for Patients with Substance Use Disorders[24]	2017	To assess the effectiveness of case management interventions for patients with SUD	Systematic review of case management interventions for patients with SUD (done by analysing randomized controlled studies published on the subject between 1996 and 2016 found on the electronic database PubMed).	In some studies, the population had SUD and no further differentiation was made, whereas other studies considered specific subgroups such as patients in methadone programs, women with SUD, and participants with court judgments who were either incarcerated or in court-ordered treatments	Most studies were done in the United States, except for one in Canada and one in Sweden.	Interventions: case management interventions including intensive, community, assertive case management, strengths-based, clinical, transitional case management, coordinated care management, and probation case management. Characteristics: CM services were conducted by case managers with a professional background in nursing, social work, or mental health care (22). CM services were delivered mainly in the patients' communities and not at the treatment centre or hospital (20–22). The length of interventions varied from 1 month (25) to 3 years (20), although 6 months to 1 year was the most common.	The most frequently used outcome measures were change in drug or alcohol use, as well as adherence to SUD treatment (frequently measured in attendance rates) and linkage to other health-care providers. The other important outcome measures were health- care use in terms of days of hospitalization, emergency ward visits, or health costs.	Of the 14 studies included in analysis, only two studies did not find any additional value in CM when treating addicted patients. The other 12 papers found significant improvement of some or all the outcome measures. Five studies showed that substance use decreased, two papers showed that the likelihood of initiating SUD treatment increased, and four publications showed greater treatment retention when a case manager was involved in treatment. Four studies showed improved access to health care and/or linkage between health-care providers. One research showed fewer days spent in hospital but others reported an increased number of days in hospital, which is explained by the higher treatment retention. Seven publications showed better global functioning, which was described as more employment days. No specific results reported for assertive style of case management which was the intervention of interest.	Most of the analysed studies showed improvement in the chosen outcome measures, although these varied in different studies. Treatment adherence mostly improved, but substance use decreased in only a third of the studies. Overall functioning improved in about half of the studies. The differences in chosen outcome measures make it difficult to compare the results. No conclusions to be drawn as assertive nature was not specified or compared.	The studies are heterogeneous in their clinical approach, which limits our ability to generalize specific implications for practice.	✓✓✓✓✓ (systematic review)

	Authors	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
13	Proctor, S. L. Wainwright, J. L. Herschman, P. L. Kopak, A. M.	AiRCare: A Naturalistic Evaluation of the Effectiveness of a Protracted Telephone-Based Recovery Assistance Program on Continuing Care Outcomes[18]	2017	This study sought to evaluate the effectiveness of three formats of an intensive 12-month post-discharge telephone-based case management approach (AiRCare) on adherence to continuing care plans and substance use outcomes.	Quantitative pre and post measurement.	379 patients in the case management program	Substance use disorder setting California, USA	Intervention: AiRCare – telephone based case management approach with an active outreach element. Length of intervention: 12 months Characteristics: AiRCare involves the provision of individualized, telephone-based support to patients and/or patients' families following discharge from the residential level of care in an effort to maintain treatment gains from primary treatment and continue treatment gains through increased adherence to continuing care plans and **engagement in treatment**.	Primary outcomes measured: Past 30-day abstinence at 12 months, and continuous abstinence through the entire 12-month period post discharge. Secondary outcomes measured: Re-admission rate at 30 days, re-admission rate at 12months, **re-engagement rate**, quality of life, and continuous abstinence rate at 6 months, and patient compliance with continuing care plans at 6 and 12 months. Reengagement rate was calculated by determining the number of patients who attended their first scheduled in-person aftercare appointment within 7 days of discharge from residential treatment.	Results revealed that nearly three-fourths or more of AiRCare patients attended their first scheduled aftercare appointment within 7 days of discharge. Given that many patients are likely to encounter a variety of high-risk situations immediately following discharge as they return to their pre-treatment home environment, attendance at their first scheduled aftercare appointment is a priority and may be considered a behavioural proxy for **patient motivation and engagement in their continuing care plans**.	Findings demonstrate that the studied intensive telephone-based intervention was associated with high rates of patient adherence and may have the potential to lead to successful short- and long-term outcomes.	Lack of generalisability outside of tested sample. Research design did not include a control group or random assignment. Inability to draw any conclusions regarding whether participation in AiRCare may result in better outcomes relative to patients who do not receive protracted care plan management.	✓✓✓ (quantitative study with pre- and post-measurement)
14	Langabeer, J. Champagne-Langabeer, T. Luber, S. D. Prater, S. J. Stotts, A. Kirages, K. Yatsco, A. Chambers, K. A.	Outreach to people who survive opioid overdose: Linkage and retention in treatment[12]	2020	To examine if the use of a specialized mobile response team (assertive outreach) could help identify, engage, and retain people who have survived an overdose into a comprehensive treatment program.	Observational study.	34 individuals with non-medical opioid use (including heroin) in the past 30 days with a recent overdose and lack of current enrolment in opioid use disorder treatment.	Substance use disorder setting Huston, Texas, USA	Intervention: Mobile assertive outreach for opioid substance abuse treatment Characteristics: An outreach team, comprised of a peer recovery coach and a licensed paramedic, were dispatched to the locations of individuals in the surveillance system. Peer coaches provided non-clinical recovery support to serve as a positive role model and to help guide participants through the initial stages of recovery. All patients, including those that chose to enrol and those that did not enrol, received information resources about local treatment programs, information about opioid use disorder, education on Naloxone reversal medication, and contact information to reach out by phone or email. Enrolled participants received medication and behavioural support (i.e. weekly counselling sessions, group therapy, education) as well as linkage to outpatient treatment clinics for disease management.	Primary outcomes measured: Level of willingness to engage in a medication and behavioural treatment program and percentage retained in treatment after 30 and 90 day endpoints. Engagement was defined as the patient's willingness to participate and attend a treatment program. Measured as the percentage of eligible individuals who elected to participate in the treatment program divided by the total number of people approached. Participation was documented by counsellors, social worker, peer coaches, and physicians. Secondary outcomes measured: Numbers of subsequent relapses and overdoses in the enrolled sample.	**Nearly two-thirds of the population contacted did not respond to outreach efforts** (103 individuals contacted, 69 elected not to participate, leaving 34 included in sample (33%)). The primary reasons given were low willingness for change (n = 15), denial of substance use issues (n = 50), or deceased at time of visit due to overdose (n = 4). The primary outcome, retention in treatment, was 88% (30 of 34 patients still active in treatment) after 30 days. One was lost to follow-up and three discontinued the intervention. Retention in treatment for 90 days decreased to 56% (19 of 34), with 6 lost to follow-up and 9 discontinuing the intervention. Using weekly follow-up from peer recovery coaches for all active patients, we identified 3 patients with subsequent relapses. Relapse was operationalized here as re-use of an opioid for non-medical purposes after a period of remission or abstaining. All three patients who relapsed however continued in the treatment program. There were no subsequent overdoses or deaths in this sample over the 90-day period.	Results from our preliminary study of first responder surveillance data utilization to initiate outreach suggest that a strategic intervention can successfully motivate at-risk individuals into treatment. This is encouraging as this high-risk patient population might otherwise not receive care. By providing comprehensive medical, behavioural and recovery services, the program enrolled nearly one-third of the persons contacted, and a majority of these remained in active treatment for 30 and 90 days. Given the high rates of relapse using conventional models which wait for patients to present to treatment, preliminary results suggest that **outreach could be a promising strategy for engaging and retaining people in treatment**.	Unable to locate many of the individuals who met inclusion criteria of a recent overdose, it is possible there were differences in the groups between those we did locate and those which we did not locate. This study was not controlled or randomized, and therefore cannot attribute causality. Also, we report only preliminary findings from this study which has a small sample size and only included English speakers.	✓✓ (quantitative study)

	Authors	Title	Year	Study Aim(s)	Design	Participants	Setting	Intervention(s)	Relevant Outcomes Measured (and how they are measured)	Relevant Results	Key Findings	Limitations	Quality of Evidence
15	Petersen, L. Jeppesen, P. Thorup, A. Abel, M. J. Ohlen-schlaeger, J. Christensen, T. Krarup, G. Jorgensen, P. Nordentoft, M. Ostergård, T. Melau, M. Iversen, T. Bertelsen, M. Hjorthøj, C. R. Hastrup, L. H. Secher, R. G. Austin, S. F. Mors, O. Albert, N. Jensen, H. Emborg, C. Jepsen, J. R. M. Fagerlund, B. Gluud, C.	Multiple[26,43-46]	2005-2017	To evaluate the effects of integrated treatment versus standard care for patients with a first episode of psychotic illness	Randomised clinical trial Experimental condition: Integrated treatment Control condition: Standard treatment (treatment as usual)	547 patients with first episode of schizophrenia spectrum disorder who had not been given antipsychotic drugs for more than 12 weeks of continuous treatment. Patients were included from all inpatient and outpatient mental health services in Copenhagen and Aarhus County from January 1998 until December 2000.	Inpatient mental health setting Copenhagen Hospital Corporation and Psychiatric Hospital Aarhus, Denmark	Intervention: Integrated assertive community treatment Length of intervention: Administered over two years Characteristics: Assertive community treatment enhanced by better specific content via family involvement and social skills training. Two multidisciplinary teams in Copenhagen and one in Aarhus. Caseload reached a maximum level of 10. Each patient was offered integrated treatment for a period of two years. A primary team member was designated for each patient and was then responsible for maintaining contact and coordinating treatment within the team and across different treatment and support facilities. Patients were visited in their homes or other places in their community or at their primary team member's office according to their preference. The office hours were Mon-Fri 8am-5pm. A crisis plan was developed for each patient. If the patient was reluctant about treatment, the team stayed in contact with the patient and tried to motivate the patient to continue treatment.	Primary outcomes measured: Diagnosis, positive symptoms, sociodemographic factors, functioning, social networks, client satisfaction, suicide attempts / ideation, duration of untreated psychosis. Secondary outcomes measured: **Treatment non-adherence** (measured by discontinuation of treatment for ≥1 month, discontinuation of treatment in spite of need, and not making / attending any outpatient visits); **Service use** (measured by hospitalisations, days in hospital, and number of outpatient contacts and visits).	During intervention period (over two years): **Treatment non-adherence –** During the first year, patients were significantly less likely to discontinue integrated treatment for at least a month than standard treatment (8% v 22%). Integrated treatment was also clearly superior to standard treatment when non-adherence was measured in terms of treatment discontinued in spite of need (3% v 15%) or in terms of not making any outpatient visits (3% v 15% in first year, 7% v 31% in second year). **Service use –** Patients given integrated treatment spent significantly fewer days in hospital in the first year than did patients given standard treatment (mean 62 days v 79 days). After intervention period: *Two year follow-up* **Treatment non-adherence –** As a measure of non-adherence, we found that patients with no outpatient visits during the last year were none (0%) from integrated treatment (OPUS) compared with seven (18%) from standard treatment, which is highly significant. **Service use –** Patients receiving standard treatment also spent significantly more days in hospital (n = 167 days) during the 2 years post intervention than OPUS patients (n = 109 days). *Five year follow-up* **Treatment non-adherence –** Proportion without outpatient contacts, 32.3% (86) for integrated treatment (OPUS) and 36.2% (92) for standard treatment, not statistically significant. **Service use –** Mean number of days in hospital were basically identical for integrated treatment (20.5) and for standard treatment (20.4). *Ten year follow-up* **Treatment non-adherence –** Proportion without outpatient contacts, 47.9% (123) for integrated treatment (OPUS) and 52% (130) for standard treatment, not statistically significant. **Service use –** Mean number of days in hospital were higher for integrated treatment (20.5) than for standard treatment (20.4), although was not a statistically significant difference.	*Initial study findings* Integrated treatment improved adherence to treatment compared to standard treatment. *5 and 10 year follow-ups* Most of the short-term effects of the OPUS intervention were no longer present 8 years after the intervention ended. However, although the difference between the interventions in the 10th year was not significant, the OPUS patients used significantly fewer psychiatric bed days over the whole 10-year period.	Interviewers were not blind to which treatment patients had been assigned. This may be associated with a biased rating of Psychopathology. Analyses of use of bed days were not influenced by the differential attrition, as the analyses were based on complete information from the Danish Psychiatric Case Register. Participants in the 5 and 10 year follow-up study did better on baseline GAF and were younger than those who did not participate. Therefore, the participants in the 10-year follow-up may, as would be expected, be doing better than those not participating and the sample may be biased in this way. The population of people with incident schizophrenia could differ now from 10 - 15 years ago, e.g. due to enhanced efforts into early detection or different practices regarding psychiatric admissions.	✓✓✓✓✓ (RCT)

10.5 Appendix E: Policy Review Search Strategy

Source	Search Terms	Results/Useful Literature
Analysis and Policy Observatory Website https://apo.org.au/	child protection	▪ AIHW: Child Protection Australia 2018-2019 ▪ Cahill et al (2020) Service systems responses to children and young people in the statutory child protection system who have experienced or witnessed family ▪ Price-Robertson (2020) Working together to keep Children and families safe ▪ National Framework for Protecting Australia's Children 2009-2020 ▪ SVA Research Paper the economic case for early intervention in the child protection and out of home care systems in Victoria_ November 2019
Google	child protection engagement strategy	▪ Ivec (2013) Anglicare Tasmania: A necessary engagement - an international review of parent and family engagement in child protection ▪ Victorian State Government (2007) - A strategic framework for family services ▪ Parenting Research Centre (2017). Engagement of birth parents involved in the child protection system: A scoping review of frameworks, policies, and practice guides. Melbourne, Australia. Report prepared for the NSW Department of Family and Community Services
	Strong Families Safe Kids	▪ https://www.communities.tas.gov.au/children/strong-families,-safe-kids ▪ Strong Families – Safe Kids: Implementation Plan 2016 – 2020 Tasmanian Government: Department of Health and Human Services, Published May 2016 ▪ Redesign of Child Protection Services Tasmania: 'Strong Families – Safe Kids', March 2016, Tasmanian Government: Department of Health and Human Services
	Child protection.vic.gov	▪ Report of the Protecting Victoria's Vulnerable Children Inquiry: Chapter 7: Preventing Child Abuse and Neglect, January 2012 ▪ Report of the Protecting Victoria's Vulnerable Children Inquiry: Chapter 8: Early Intervention, January 2012
	The Orange Door	▪ PWC (2019) The Orange Door 2018 Evaluation Report ▪ The Orange Door (Support and Safety Hub), Operational Guidance between Support and Safety Hubs, Child Protection and Integrated Family Services
	Child protection.nt.gov	▪ NT Government Policy: Family and Parent Support Services ▪ NT Government Policy: Strengthening Families
	Child protection.tas.gov	_____Results weren't recorded here_____
Victoria State Government Health and Human Services Website	Children Youth & Families; ChildFIRST	_____Results weren't recorded here_____
NSW Government: Communities & Justice website	Engagement; Child Protection; Families and Children	▪ Supporting the Roadmap for Reform: Evidence-informed practice, Centre for Community Child Health, The Royal Children's Hospital Melbourne, May 2016
Department of Communities Tasmania website	Child Protection; Engagement; Families and Young People; Intensive family support	▪ Strong Families – Safe Kids: Implementation Plan 2016 – 2020 Tasmanian Government: Department of Health and Human Services, Published May 2016 ▪ Redesign of Child Protection Services Tasmania: 'Strong Families – Safe Kids', March 2016, Tasmanian Government: Department of Health and Human Services ▪ Evolving practice in intensive family support: participant perspectives on uniting care Tasmania's southern outreach Newpin program ▪ Tasmanian Council of Social Service Inc. Responding to Strong Families – Safe Kids Advice and Referral Service Discussion Paper ▪ King, & Hunt (2012) Evaluation of the UnitingCare Tasmania Family Futures Program
Northern Territory Government	Territory Families > Publications and Policies	▪ NT Department of Children and Families, Practice Framework
Child Welfare Information Gateway (USA)	Child Protection; Assertive Engagement; Intensive family support; Active; Outreach	_____Results weren't recorded here_____

Australian Centre for child Protection	Assertive Engagement; Intensive family support; Active; Outreach; Diversionary	_____Results weren't recorded here_____
Anglicare	Child protection; Family support	_____Results weren't recorded here_____
UnitingCare	Child protection; Family support	_____Results weren't recorded here_____
Australian Institute of Family Studies	Publications; Assertive engagement; Active engagement; Resistant families; Intensive family support	_____Results weren't recorded here_____
Families Australia	Engagement; Family support	_____Results weren't recorded here_____
National Association for Prevention of Child Abuse and Neglect (NAPCAN)	Assertive engagement; Active engagement; Resistant; Difficult to engage; Outreach; Approach to case management; Intensive family support	_____Results weren't recorded here_____
Mission Australia	Child protection; Family support	_____Results weren't recorded here_____
Australian Government Department of Social Services	Child protection	_____Results weren't recorded here_____
Australian Institute of Health and Welfare	Child protection	_____Results weren't recorded here_____

About Telethon Kids Institute

We bring together community, researchers, practitioners, policy makers and funders, who share our mission to improve the health, development and lives of children and young people through excellence in research. Importantly, we want knowledge applied so it makes a difference.

Our goal is to build on our success and create a research institute that makes a real difference in our community, which will benefit children and families everywhere.

We do this together, with our values underpinning the way we work and make decisions.

Our values

- COLLABORATION Our work is better when we work together.
- COURAGE No problem is too big or too difficult.
- EVIDENCE We do not compromise on quality.
- RESPECT We are honest, ethical and fair.