

# DRUG & ALCOHOL FINDINGS *Review analysis*

This entry is our analysis of a review or synthesis of research findings considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original review was not published by Findings; click [Title](#) to order a copy. Free reprints may be available from the authors – click [prepared e-mail](#). The summary conveys the findings and views expressed in the review. Below is a commentary from Drug and Alcohol Findings.

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## ► A meta-analysis of the efficacy of case management for substance use disorders: a recovery perspective.

Vanderplasschen W., Rapp R.C., De Maeyer J. et al.  
**Frontiers in Psychiatry: 2019, 10(186).**

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*How does an intervention designed to enhance coordination and continuity of services, known as 'case management', compare to treatment as usual? Is there any evidence to suggest that it can directly or indirectly improve recovery outcomes?*

**SUMMARY** Case management is a client-centred approach that seeks to improve coordination and continuity of services, especially for people with multiple and complex support needs. Several models of case management [have been identified](#), each facilitating recovery and service engagement goals somewhat differently:

- **Brokerage** case management is intended to work in a very minimalist manner in one or two contacts.
- Assessment, planning, linking, monitoring, and advocacy are core case management functions and central to **generalist** or standard case management.
- **Intensive** case management involves intensive contact between case manager and client.
- **Assertive** community treatment includes the provision of services by a multidisciplinary team, as well as referral to outside services and resources.
- **Strengths-based** case management focuses on the individuals' strengths and assets, and the use of informal rather than formal supportive networks.
- The **clinical** model of case management combines case management with clinical activities such as psychotherapy and counselling.

The featured review set out to determine the effectiveness of case management. To do so it compared the outcomes of people randomly allocated to case management versus people randomly allocated to 'treatment as usual' (the definition of which differed between studies). Participants in the studies all had substance use problems, though not necessarily confirmed by an official diagnosis, and were eligible to participate if they had other physical or mental health problems, but this was not a requirement for inclusion.

Case management has been associated with over 450 different types of outcomes in trials of its effectiveness, which suggests very unfocused expectations about where case management's value lies. In the featured review the relative effectiveness of case management was judged against 10 different clusters of outcome, which could be categorised into two broad groups:

1. Service engagement outcomes: linkage with substance use and ancillary services, retention in substance use and ancillary services, and attitudes toward treatment.
2. Recovery outcomes: substance use, health status, legal involvement, risk behaviour, and social functioning.

Of the 21 trials identified (which generated 31 articles in total), 19 reported service engagement outcomes, and 15 trials reported recovery outcomes. A [meta-analysis](#) was conducted using recognised procedures to combine outcomes from several studies to arrive at single composite scores for service engagement outcomes and recovery outcomes, as well as client outcomes overall.

Studies included in the review differed in various ways, which meant that they did not offer like-for-like evaluations of case management versus treatment as usual:

- Type of substance use problem: participants had problems relating to alcohol in two studies, multiple substances in 13 studies, and injecting drug use in six studies.
- Treatment as usual involved probation or parole in three studies, residential treatment in one, referral to treatment in 13 studies, outreach in one, aftercare in one study, and standard treatment in two studies.
- Case management involved assertive community treatment in three studies, intensive case management in four studies, strengths-based case management in six studies, generalist in four studies, and a miscellaneous type of case management in four studies.

### Main findings

There was a small overall difference in effectiveness favouring case management. This difference was statistically significant, indicating an advantage (albeit small) for case management that was unlikely to be due to chance.

### Service engagement outcomes



#### Key points From summary and commentary

Case management is designed to enhance coordination and continuity of services, especially for people with multiple and complex needs.

The featured review found that case management was more effective than treatment as usual. However, the overall difference in the size of the effect was small.

This evidence suggests that case management can be an important supplement to available services for improving linkage to and retention in treatment. A stronger relationship between case management and improved service engagement outcomes might be found if future studies compared case management with less intensive interventions.

A very small to moderate difference in effectiveness was found for service engagement outcomes in favour of case management – a difference that was statistically significant. The largest difference was found for retention in substance use treatment. Smaller differences were found for linkage with substance use services, satisfaction with treatment, retention in non-substance use services, and linkage with other types of services.

### Recovery outcomes

The overall difference in effectiveness for recovery outcomes was very small and was not statistically significant, suggesting that the difference may have been due to chance. The biggest differences – although still small and non-significant – were found for social functioning (eg, housing and employment) and substance use outcomes. Even smaller, non-significant differences favouring case management were found for risk behaviour and legal involvement. There was also a small difference (but again, non-significant) regarding health outcomes, this time favouring treatment as usual.

### The authors' conclusions

Confirming the results of two earlier meta-analyses (1 2), the featured paper found case management to be more effective than treatment as usual for improving client outcomes, although the overall difference in the size of the effect was small. There was also only a statistically significant difference between the effectiveness of case management and treatment as usual for service engagement outcomes, not recovery outcomes, putting a question mark against its impact on an individual's recovery journey.

Relevant to the interpretation of the findings, improved linkage to and retention in substance use and ancillary services has been associated with [improved](#) abstinence rates, [less frequent](#) hospital re-admissions, and [adequate](#) functioning in the community. Given the challenges inherent in delivering and coordinating ongoing support for people with substance use problems and multiple and complex needs, anything that can help link people to and remain in treatment should be considered a necessary prerequisite, and something that can at least have an indirect impact on someone's recovery.

Overall the evidence suggests a positive role for case management. However, the conclusions that the meta-analysis could offer about its relative effectiveness compared with treatment as usual were limited by the studies that were reviewed.

- There was huge diversity in the outcomes measured in clinical trials – from substance use and criminal involvement, to parenting skills and linkage with treatment. Such broad expectations of a single intervention [seem unwarranted](#), "as it is unlikely that any single psychosocial intervention can affect so many different areas of participants' lives".
- Treatment as usual varied widely in its intensity, providing very different comparisons to case management. In ten of the trials, treatment as usual involved 'existing referral', a broad category that was usually ill-defined. In three trials, the comparison was either residential or aftercare treatment, both of which would quite possibly be more intensive than case management. Finally, in four trials treatment as usual actually consisted of probation or parole, which is an intensive comparison condition given the possibility of clients being incarcerated. The finding that case management had a weak to small effect across all outcomes, even when some of the comparison conditions were relatively intense, suggests that the estimated magnitude of the effect of case management compared with treatment as usual is conservative and would have been larger if case management was compared to no treatment or waitlist [control](#) groups.

There is an emerging international mental health recovery movement which stresses the importance of personal and subjective experiences of recovery; the [deeply personal](#) process of change and "living a satisfying, hopeful and contributing life, within the limitations imposed by illness". This differs from clinical conceptualisations of recovery such as the absence of symptoms and illness. As case management is primarily for people with multiple, severe problems, a focus on subjective and person-centred outcomes may be more likely to demonstrate the benefits of case management in people's daily lives. Introducing a "recovery perspective" to randomised controlled trials of case management would allow measurement of its impact on individuals' satisfaction with life and participation in society, as well as factors directly or indirectly affecting it.

**FINDINGS COMMENTARY** Case management has taken root in the UK as a compassionate and practical way to facilitate treatment and support for people with co-occurring problems, especially those with substance use and mental health problems who have been [vulnerable to](#) being shifted between services or falling through the gaps in services. Focusing on people known to have substance use problems, the featured review found that case management was more effective than treatment as usual, which the authors concluded makes case management an important supplement to available services for improving linkage to and retention in treatment. However, it is difficult to extract from the findings whether there is evidence that case management makes a clinically meaningful difference to patient outcomes.

The overall difference in effectiveness was statistically significant, indicating that it was unlikely to have been due to chance, but it was also small, indicating that the [relationship between](#) the intervention and better outcomes overall may not be very strong. Only finding a small difference in the effectiveness between two different types of intervention doesn't necessarily mean an unimportant difference. This interpretation depends at least in part on what the difference would look like in tangible outcomes for clients, the ethos of the treatment system, and whether case management can deliver from a cost-savings perspective. The small difference overall may also not reflect the relative effectiveness of case management in real life. The authors pointed out that treatment as usual constituted a relatively intensive intervention in some studies, which may have produced a more conservative picture of the effectiveness of case management than if compared to no treatment or waiting list [control](#) groups.

Breaking the results down by type of outcome, case management only retained a statistically significant advantage for service engagement outcomes (eg, linkage with substance use and ancillary services, retention in substance use and ancillary services, and attitudes toward treatment), not recovery outcomes (eg, substance use, health status, legal involvement, risk behaviour, and social functioning). As the primary function of case management is to improve engagement with treatment, at a minimum we would expect service engagement outcomes to be superior among clients in case management. In this respect the findings support the role of case management. However, it might surprise the reader that the relationship between case management and improved service engagement outcomes was not stronger, given its central purpose. The largest difference (on a scale from a very small to moderate difference in effectiveness) was found for retention in substance use treatment. Smaller differences were found for linkage with substance use services,

satisfaction with treatment, retention in non-substance use services, and linkage with other types of services. In the substance use field, retention has [arguably shifted](#) from being viewed as a probable predictor of or means to achieving positive treatment outcomes, to a positive treatment outcome in itself, which may have led to an unwarranted reframing of engagement and retention in treatment services as a sign of effectiveness. The findings of the featured review may be another example of it being possible to increase retention and engagement without any impact on the desired outcomes or at least those measured by researchers.

One of the challenges for determining the effectiveness of case management is its [diverse applications](#) and broad expectations of where its value may lie, resulting in studies evaluating its effectiveness against potentially hundreds of outcomes.

*"There is no universally accepted definition of case management, and practice varies due to diverging aims, target populations, programme and system variables, and local concerns."*

This being said, case management does tend to have a number of [core attributes](#), which themselves may have an intrinsic value from the point of view of the client:

- ✓ community-based
- ✓ client-driven
- ✓ pragmatic
- ✓ flexible
- ✓ culturally-sensitive
- ✓ offers a single point of contact
- ✓ aims to anticipate potential problems

Case management was the subject of an [article](#) authored by some of the featured authors and adapted for the Drug and Alcohol Findings magazine in 2006. In this, an expert European-United States collaboration identified six key questions and trawled the literature for answers clarifying what the different case management approaches can and can't be expected to achieve.

*"In Britain case management is now seen as the core mechanism for transforming isolated episodes of care into coherently staged and comprehensive recovery and reintegration programmes, but engineering this transformation is complex and vulnerable to influences beyond the programme's control."*

Several authors of the featured review have been closely involved in researching case management, including one author who was involved in two trials ([1](#) [2](#)) that were analysed for the review (declared a conflict of interest in the paper).

In the social sciences, overlaps between the development of interventions and research into their effectiveness raise the possibility of a 'researcher allegiance' effect, which refers to the finding that people with an interest in a programme's success tend to record more positive findings than fully independent researchers ([1](#) [2](#) [3](#) [4](#)).

The present review reached the same conclusion as two earlier reviews, that case management is more effective than treatment as usual among people with substance use problems. However, for context these involved the same group of researchers. A [2017 review](#) from another team, conducted using a descriptive method rather than meta-analysis, came to slightly different conclusions about case management. These authors noted the positive findings about case management but did not determine its overall effectiveness compared with other interventions:

*Most of these studies reported improvement in some of the chosen outcomes. Treatment adherence mostly improved, but substance use was reported to decrease in only a third of the studies. Overall functioning improved in about half of the studies.*

The authors of the 2017 review [found that](#) differences between studies in terms of outcome measures, populations, and intervention characteristics made it difficult to compare results. Furthermore, they noted that most studies only set substance use problems as a criterion for inclusion despite case management being particularly relevant to specific subgroups who are unable to use existing healthcare services. As well as affecting the applicability of the results to real-life situations in which case management might be most useful, they suggested that this could impact the results. When case management is applied to a wider group, "the effect on a smaller subgroup would likely be diluted and not as visible in the outcome measures".

Two of the authors of the featured paper worked on a [2007 meta-analysis](#) conducted according to rigorous Cochrane Collaboration procedures. This was superseded by a 2014 meta-analysis by the same group of authors, but the findings are not available for comparison. This later paper was [subsequently withdrawn](#) from the Cochrane database "because it is out of date and the authors are currently not available for updating it". Why the 2014 report was withdrawn for being out of date but the 2007 report remains in print is unclear.

Case management emerged from the need to help people with complex and overlapping needs navigate (often fragmented) treatment and support services. An Effectiveness Bank [hot topic](#) discusses these and other barriers to care for people with mental health and substance use problems.

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