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▶ Implementation of evidence-based substance use disorder continuing care interventions.

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As this review comments, people treated for substance use often remain precariously balanced between recovery and relapse. Widely seen as valuable if not essential, aftercare is nevertheless more the exception than the rule. How to reverse that ratio is the issue addressed by these leading US analysts.

Summary Continuing care or aftercare is the stage of treatment following initial, more intensive, treatment. This review focused on psychosocial continuing care interventions (such as individual, telephone, couples, and group therapy; case management; home visits; and brief check-ups) and 12-step mutual aid support groups. Studies of brief continuing care interventions (up to six months) have usually involved standard programmes provided after residential treatment. In contrast, most longer interventions are adapt their frequency or nature in response to systematic assessments of how well the client is doing.

Despite a broadly supportive research record, few efforts have been made to implement and sustain these interventions, and in practice few clients who might benefit from continuing care services actually receive a sufficient dose, either because they do not complete the initial treatment, do not start continuing care, or do not remain in it for a significant time. Among other things, this review seeks to better understand this discrepancy and make recommendations for future implementation efforts.

Effectiveness of continuing care

Though this review and studies have focused on either continuing care treatment or mutual aid groups, it should be remembered that many individuals participate in both and that using both sources of support is associated with the most improved treatment outcomes.

Studies have shown that receiving continuing care services is generally but not always

associated with improved long-term substance use outcomes. This small and varied corpus of studies precludes conclusions about which approaches work best. However, the findings support certain general principles. Among these are increasing the duration of care to at least a year, ongoing monitoring of clients, reaching out actively to engage and link clients to care, and using incentives to improve treatment outcomes. Relatively low-cost practices can dramatically improve rates of sustained engagement in continuing care such as low level incentives and active outreach following discharge or drop-out. In contrast, the theoretical orientation and intensity of the interventions appear less important.

As well as or instead of continuing care treatment services, mutual aid groups are important continuing care resources. The most prevalent like Alcoholics Anonymous and Narcotics Anonymous follow 12-step principles. Several studies have shown that attending these groups after initial treatment is associated with positive substance use outcomes, though they are unable to prove that attendance causes these gains. Additional to attendance as such, being more involved in the groups (such as getting a sponsor or reading 12-step literature) has also been associated with better substance use outcomes. In practice though, while most US patients start attending groups, most of these are no longer attending a year later.

Interventions to promote participation in 12-step mutual aid groups can be traced to the Twelve Step Facilitation therapy trialled in Project MATCH. This large US study of treatment for alcohol dependence found this approach achieved significantly higher rates of continuous abstinence (and equivalent outcomes on other drinking measures) than cognitive-behavioural therapy and a therapy based on motivational interviewing, and did so because it led more patients to engage in 12-step activities. Similar results have emerged from other studies.

Implementing continuing care

A search for studies not of the effectiveness of continuing care, but of how to implement it, uncovered 28 relevant articles and others known to the authors of the review or referenced in the literature. To organise the analysis of these studies, the reviewers used the Consolidated Framework for Implementation Research. In respect of health care innovations in general, this model identifies five implementation domains, each divided in to several sub-domains. The five main domains with relevant examples are:

- *Characteristics of the intervention* (in this case, continuing care) such as the strength of the evidence for its effectiveness and how far it was adapted to fit the particular circumstances in which it was being implemented.
- *Outer setting*, which refers to the economic, political, and social environment surrounding and influencing the organisation undertaking the implementation – in this case, typically substance use treatment services; included here might be national political drivers, availability of funding, the demand from patients, and (especially in the case of 12-step groups) the degree to which the broader society is receptive to the intervention's philosophy.
- *Inner setting* is pertinent features of the implementing organisation including the degree to which its structures, internal communication mechanisms, resources, leadership, and culture facilitate the adoption of continuing care or the particular continuing care intervention being implemented.
- *Characteristics of the individuals conducting the intervention* – in this case, typically

addiction counsellors − such as what they believe about the intervention and how enthusiastic and ready they are to implement it.
• *Process of implementation* − the extent and quality of the implementation effort, including the degree to which relevant staff are actively engaged, the efficiency with which the implementation is carried out, the extent to which progress is appropriately monitored against specific goals and progress news fed back to the participants, and the extent to which this feedback is used to adapt and promote implementation.

Generally not enough research has been done to be able to designate specific interventions as 'evidenced-based'. However, in the aftercare area there is growing research supporting 'Contracting, Prompting and Reinforcing' aftercare attendance. This involves a written attendance contract specifying awards for attendance consisting of medallions and certificates, plus further reinforcement in the form of handwritten letters congratulating the patient on initiating and sustaining aftercare. Letters from the therapist, appointment cards and automated telephone reminders prompt patients to attend the next session in a few days time. Non-attendance is followed by a letter and phone call from the therapist.

The mutual-aid literature has one clear example of a specific and manualised intervention − Twelve Step Facilitation therapy, an approach which has been successfully adapted to different circumstances and populations. More general evidence-based interventions for promoting continuing care typically entail active and directive efforts to engage and retain clients, including education on the benefits of the groups, orientation to involvement with these groups, and connection with group members to help motivate involvement following initial treatment.

In more detail and organised under the main headings of the Consolidated Framework for Implementation Research, research offers the following guidance.

Intervention Characteristics Clinicians generally know that the evidence for continuing care is strong yet often continue to use interventions and practices without empirical support. A significant number of studies suggest that many interventions can be adapted to the needs of specific sites. Twelve Step Facilitation therapy has for example been successfully adapted to a group format, to focus on individuals' broader social networks rather than just 12-step groups, and to accommodate individuals with mental health as well as substance use problems. Similarly, treatment-based continuing care efforts have been conducted successfully using telephone and home-based visits and with different types of providers. One difficulty is the relative complexity of such interventions. Knowledge gaps include the relative advantages and cost-effectiveness of different continuing care interventions, and what are their core or essential components as opposed to those which can safely be adapted.

Outer Setting The most frequently cited factors related to successful continuing care implementation are located in the outer setting domain, especially the importance of client characteristics such as their needs and resources to support continuing care involvement. African-Americans (compared to Caucasians), and clients with more severe substance use problems, are more likely to engage in continuing care for a longer time. Psychiatric disorders seem no barrier to engagement in continuing care. Patients who see staff members as supportive and have more recovery resources are more likely to engage in treatment-based continuing care. Clients with beliefs consistent with a disease

model or spiritual approach to recovery, women, and those with less prior experience with 12-step groups, may be more easily engaged in mutual aid groups, and those mandated to attend by courts may do as well as those who are not. In addition to client characteristics, the convenience of continuing care is an important facilitating factor while lack of funding is a common and significant barrier. Additionally, inviting mutual aid group members to contact patients in the initial treatment service facilitates post-treatment linkages. The role of external incentives and policies appears to be an extremely important area for future implementation efforts to address and better understand.

Inner Setting Focusing on the treatment service, those oriented to 12-step approaches facilitate linkage to 12-step mutual aid. Low rates of staff and supervisor turnover and multi-stakeholder involvement are important to sustaining continuing care treatment interventions. Goals or benchmarks that allow programmes to monitor performance and modify interventions in response are important factors in successful continuing care implementation. Mutual aid group engagement is facilitated by strong therapeutic alliances, greater supportiveness, and spirituality during initial treatment. Use of incentives with staff to promote implementation of continuing care practices appear to be a potentially powerful, but underused facilitator. Little is known about the implementation climate, including goals and benchmarks for continuing care interventions, or about the role of programme readiness for change (eg, resources and knowledge) as they relate to continuing care implementation.

Characteristics of the individual provider Treatment and mutual aid continuing care implementation are facilitated by providers and programme leaders with beliefs and attitudes supportive of the particular intervention, while a lack of knowledge about the effectiveness of interventions can be a significant barrier. Additionally, clinicians who are in recovery themselves, who have fewer concerns about religion or spirituality as a part of treatment, without allegiance to non-12-step approaches to treatment, and those who require abstinence during treatment, are more likely to facilitate 12-step mutual aid involvement following treatment. It is clear that future implementation efforts will need to address important characteristics such as the knowledge, beliefs, motivation, and self-efficacy of both providers and clients to maximise the potential for implementation success.

Implementation Process Successful continuing care implementation efforts have tended to address the important constructs of planning, engaging, executing, and reflecting and evaluating implementation efforts. These activities will be critical in the development and testing of implementation strategies.

Implication for researchers and clinicians

Having summarised continuing care implementation research, the review ended by drawing out the implications of these findings for researchers and clinicians. Though scarce, viewed through the lens of the Consolidated Framework for Implementation Research, existing research provides a starting point for closing the gap between research and clinical practice. Formative evaluations intended to develop interventions to promote continuing care should be informed by this literature, and these evaluations should address all five domains, or deploy other comprehensive implementation models. Additionally, two primary recommendations emerge from this review.

Basic Continuing Care Implementation Research Is Needed Despite its clinical importance, continuing care implementation research has been relatively neglected. Both the treatment and mutual aid continuing care implementation literature have findings relevant to all five major domains of the Consolidated Framework for Implementation Research, but all the detailed strategies and factors within each domain have yet to be addressed. One of the most striking gaps is the lack of information on the relative advantages, disadvantages, and cost-effectiveness of continuing care interventions. Little is known too about and their core elements and the impact of incentives and/or consequences related to both the inner setting and outer setting domains.

Implementation Efforts Need to Address Multiple Domains The comprehensiveness of the Consolidated Framework for Implementation Research highlights that implementation efforts typically do not consider the importance of intervening across multiple domains. For instance, as already noted, the role of incentives and consequences in the inner setting and outer setting domains and at patient, counsellor and programme level, has been neglected. This review suggests that closing the gap between knowledge about continuing care interventions and their use will require a paradigm change in which both researchers and clinicians consider intervening across multiple domains rather than within a single domain, as has been typical thus far. Research-established interventions may have too few implementation facilitators and too many barriers for them to be adopted in particular settings without attention to all the relevant domains.

People treated for substance use often remain precariously balanced between recovery and relapse following initial treatment. As currently designed, the utility of treatment is limited by high post-treatment relapse and re-admission rates, and frequently prolonged addiction and treatment careers. Assertive linkage to continuing care helps individuals transition from brief experiments in sobriety (recovery initiation) to disease management and sustainable recovery maintenance, and an enhanced quality of life. It requires close connections between the worlds of professional treatment and community recovery support resources, and implementation of continuing care promotion procedures to enhance engagement and retention with these resources.

FINDINGS In the UK financial constraints and the recovery agenda have brought with them potentially conflicting expectations that treatment will end as soon as the patient seems able to manage on their own and rarely extend over years, yet will do more to reintegrate patients in society. More patients exiting briefer treatments would create an increasing potential caseload for aftercare services to ensure they remain safe and can rapidly re-enter treatment if relapse occurs or is threatened. How this configuration of forces will pan out and what it will mean for extended care in the form of aftercare or continuing care is unclear. Funders seeking to contain costs and maximise drug-free treatment exits may be reluctant to fund aftercare services, especially since UK research evidence that they make a difference is lacking, probably because studies have been few. On the other hand, low-cost, check-up style aftercare allied with free mutual aid groups may make it more acceptable to cut back on intensive and expensive initial treatment. These considerations are expanded on below.

The main recent British attempt to evaluate the contribution of aftercare was an analysis of the Scottish DORIS study. On several measures, it found that the few drug dependent patients who accessed aftercare after treatment in the early 2000s did better than the majority left to (or who chose to) fend on their own. However, it was unclear whether this could this be attributed to the aftercare, or whether these patients would have done

well anyway. An attempt to statistically control for differences between patients still left recently being heroin free at the last 33-month follow-up associated with having received aftercare from the initial treatment agency. Having received aftercare following methadone maintenance or residential rehabilitation made little difference to whether patients had experienced a period of being entirely drug free. But consistently at each of the three follow-ups, aftercare following non-methadone community treatment like detoxification or psychosocial therapy was associated with about double the chance of having been drug free.

Formal aftercare from the treatment agency was not the only way patients sought to sustain their abstinence. Over the 33 months of the follow-up, nearly a quarter attended mutual aid groups like NA and AA. At each of the follow-ups, patients who had accessed aftercare *and* mutual aid were most likely to have been drug free for a period, generally those who accessed neither were least likely, and those who accessed one but not the other were in between.

Whatever the meaning of these findings for aftercare's effectiveness, it was clear that few patients received it, and neither was it targeted at those most at risk of relapse.

An English study of problem drinkers could more securely attribute the results to aftercare enhancements, because patients were randomly allocated to normal aftercare – up to three weekly support groups plus access to the unit's recreational and social facilities – or to an additional 15 individual sessions modelled on an influential US approach called Early Warning Signs Relapse Prevention Training. During this, patients are helped to recognise personal warning signs of relapse by analysing their most recent attempts at recovery, and then to develop ways to manage these episodes without a return to drinking. Over the following year the benefits of more intensive aftercare were reflected in significantly fewer drinking days (22% of warning sign patients drank on a fifth or more of days compared to 40% in usual aftercare), fewer heavy drinking days (corresponding figures 18% and 28%), avoidance of any return to heavy drinking (45% v 26%), and improved mental well-being. In monetary terms, warning sign patients absorbed slightly less health service and rehabilitation resources, though slightly more if the warning sign regime was itself costed in. However, neither difference approached statistical significance.

In agreement with the featured review was a review of 11 studies which allocated patients at random or in a quasi-random manner to continuing care versus minimal or no continuing care. In terms of each study's main substance use outcome measures, seven of the 11 found a clear and statistically significant advantage for continuing care. The review's conclusions were endorsed by a panel of experts convened by the US Betty Ford Institute, who argued that extended and regular monitoring of the patient's progress was the key component of continuing care and the one with the greatest evidence of effectiveness. Both review and recommendations were based largely on studies of aftercare following residential treatment.

While international and to a degree UK research is at least consistent with aftercare often being an aid to lasting remission, recommendations that it be implemented run up against a strong contrary trend in current UK policy, which emphasises not continuing care, but exit from the treatment system. Without denying the need for long-term care for some patients, the English strategy on drug misuse said services needed "to become much more ambitious for individuals to leave treatment free of their drug or alcohol dependence so they can recover fully ... We will ensure that all those on a substitute prescription engage in recovery activities and build upon the 15,000 heroin and crack cocaine users who successfully leave treatment every year free of their drug(s) of dependence". Scotland's strategy too stressed the need for more patients to "move on from their addiction towards a drug-free life as a contributing member of society", implying a corresponding shift away from extended and/or indefinite treatment.

Set against this drive to contain treatment, the recovery agenda has brought with it a greater emphasis on sustained and extensive life change, and an accompanying expectation that treatment services will do more for their patients than a brief treatment for their addiction. At the same time resources are no longer increasing and probably diminishing overall. One way to square this circle is to draw on the free resource of mutual aid

groups which offer former patients 24-hour access to support, frequent support meetings, a new social circle, and a new way of life. It comes therefore as no surprise that they feature in recent commissioning guidance from England's National Treatment Agency for Substance Misuse, which sees them as providing "valuable support and positive social networks for individuals who are addressing their dependency through treatment". The advice to services is that "Details of how clients can access local recovery networks should be made available throughout their treatment journey. Services may wish to consider more active engagement with local mutual aid groups, for example making rooms within the treatment service or prisons available for meetings". The agency now sees (see annual reports for 2009–10 and 2010–11) promoting mutual aid networks as a key way to achieve its objectives. Local service commissioners are being called on to ensure that the treatment system is better integrated with wider supportive services, among which mutual aid organisations are seen as the most prominent.

To see all Findings analyses relating to aftercare and continuing care run this search.

Thanks for their comments on this entry in draft to Steven Lash of the Salem Veterans Affairs Medical Center in the USA. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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