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▶ Long-term outcomes of aftercare participation following various forms of drug abuse treatment in Scotland.

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On several measures, the few drug dependent patients who accessed aftercare after treatment in Scotland in the early 2000s did better than the majority who chose to or were left to fend on their own – but could this be attributed to the aftercare, or would they have done well anyway?

Summary Aftercare is the continuation of work carried out in prison or community treatment, with a particular focus on resettlement and integrating individuals back into society. Various studies have demonstrated its protective role, but mainly among drinkers, and by observing that outcomes improve among patients who take up the offer of aftercare. In such studies it is difficult to disentangle the effects of aftercare itself from whatever led that patient to participate in aftercare, factors which may have had a similar impact even in the absence of aftercare. Some studies which have tried to overcome this difficulty (for example, by randomly allocating patients to aftercare versus no aftercare) have found positive impacts, but many have not. Despite the potential for aftercare to sustain treatment gains, few treatment systems systematically provide it, probably largely because few agencies are funded to do so.

The featured report aimed to assess the role of aftercare in improving outcomes among drug users treated in Scotland, drawing on data collected by the Drug Outcome Research in Scotland (DORIS) study. Excluding users contacted at needle exchanges, this tracked the progress of 1007 drug dependent patients starting a new treatment episode in 2001–2002 at one of 33 drug agencies chosen to represent a range of modalities. Patients were re-assessed by researchers eight, 16 and 33 months later. The featured report was based on the responses of the 653 (67% of the surviving baseline sample) who completed all the assessments. For over 8 in 10, heroin was their primary drug. About 39% had been recruited from a prison treatment programme, 13% at a residential rehabilitation unit, 17% from methadone maintenance, and 32% from other community-based treatment

services such as detoxification, counselling, or group therapy.

Main findings

At the first eight-month follow-up, just 83 – about 1 in 8 – of the sample recalled having received throughcare or aftercare from their initial treatment service towards and/or after the end of their treatment. Such support was most often experienced following residential rehabilitation (28% of former residents said they had received it) but significantly less so (from 8% to 13%) after prison-based treatment, methadone maintenance, or other community treatment. Patients who in the past had more often used other treatments, mutual aid or medical or social services also more often received aftercare, as did those who said their treatment goal was to become abstinent rather than reducing or controlling their drug use. In contrast, how severe or entrenched the patient's drug problems were made no difference to whether they received aftercare.

The key issue addressed by the report was whether receiving aftercare support was associated with later being drug or heroin free, defined respectively as a "substantial" period free of all drugs including prescribed substitutes, and not having used heroin in the last three months. The raw figures strongly suggested this was the case, at least as assessed eight months and 33 months after the start of treatment. At these times, 48% and 29% of aftercare participants had been drug free and 48% and 64% had not recently used heroin, respectively 21%, 11%, 15% and 20% more than their counterparts who had not received aftercare in the eight months after starting treatment. They also spent less on drugs, felt their health had improved more, were less likely to have been imprisoned, had more contact with families and with friends who did not use drugs, and were more likely by the end to live in their own house, but were not significantly less likely to have engaged in revenue-raising or property crime.

Nevertheless, rather than aftercare being an active ingredient in the patient's recovery, it could be that both aftercare participation and the patients' progress reflected underlying factors such as problem severity or willingness to engage with helping services. As far as they could, the analysts tried to adjust for other possible influences on the patients' drug use in order to isolate the impact of aftercare itself, and to test whether it was still significantly associated with abstinence from all drugs or from heroin at the eight- and 33-month follow-ups.

The results were mixed. Having been completely drug free before the eight-month follow-up was still associated with having received aftercare, as was not having recently used heroin at the 33-month follow-up; in both cases the odds of a good versus a bad outcome were about twice as great in aftercare participants. But when all the other influences had been taken in to account, being heroin free at eight months and drug free at 33 months were no longer significantly associated with having received aftercare from the initial treatment agency. Among the other possible influences, at both time points having initially been in residential rehabilitation as opposed to other treatments was strongly associated with having recently been heroin free, and at the eight-month follow-up, with having been drug free for a period.

The study then probed whether aftercare was more important after some types of treatment than others. 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; at the 33-month follow-up, the figures were 35%, 15% and 22–23% respectively.

The authors' conclusions

Few drug users starting treatment in Scotland in 2001 and 2002 received throughcare or aftercare from their initial treatment agency Those who did appeared to experience better outcomes up to 33 months later in terms of substance use, their social lives, imprisonment, and in other ways. The implication is that providing aftercare after initial treatment is extremely important and significantly increases the chance of abstinence in the short and longer term. One explanation is that aftercare helps people learn to cope better with drugs and in particular with heroin, the primary drug in this study. It also seems likely that the people who took up the offer of aftercare were more motivated to stay abstinent when they finished treatment, and to use appropriate treatment agencies and other services to help them do so.

Stronger still than the link with aftercare was the link between being heroin or drug free and having initially been treated in residential rehabilitation. Despite being most commonly accessed, aftercare following this option was unable to further improve substance use outcomes. The findings are consistent with aftercare being important following less intensive and all-embracing treatments (and especially after release from prison, a high risk period for overdose), but minimal continuity of care being sufficient to sustain clients after intensive residential treatment. The findings are also consistent with participation in mutual aid groups helping to sustain abstinence, and also reinforcing the impact of aftercare.

It seems that in Scotland at this time aftercare was not necessarily provided to or accessed by those most in need of it. Participation was not determined by the length or severity of drug use or drug-related problems, but rather by the individual's previous and recent efforts to do something about their drug problem, their intention to become drug-free, and the treatment modality first entered. Aftercare is predominantly taken up by people who are ready to do, and who have (recently) already done, something about their problems. Moreover, the likelihood of aftercare was highest after residential rehabilitation, yet after this treatment it seemed least needed to promote abstinence.

Given its potential to enhance treatment outcomes, attractive modalities of aftercare and continuing care should be provided as a standard element of treatment, and services funded accordingly. Treatment agencies should promote both aftercare and mutual aid engagement as initial treatment comes to an end.

While the study's findings are consistent with these interpretations, the fact that patients were not allocated at random to have or not have access to aftercare limits the ability to

attribute improvements to this provision. However, patients who did or did not receive aftercare scored similarly on variables indicative of motivation and other characteristics.

FINDINGS As the authors acknowledged, the DORIS study was not designed to be able to attribute outcomes to interventions. All it could do is point out that certain interventions are associated with patients' progress, and test whether this association remains after other influences have been taken in to account. If it survives this sifting, the intervention *may* have been an active ingredient. This strategy relies on the identification and adequate measurement of all pertinent extraneous influences. In the featured report, it was particularly important to adjust for differences in the motivation of patients who did or did not access aftercare; since access was voluntary, there is a strong possibility that the minority of patients who accessed aftercare were those whose motivation was such that they would have done well anyway. In defence of a causal role for aftercare, the authors say the variables they measured which were indicative of motivation did not significantly differ between patients who did or did not access aftercare, but without detailing what these variables were. Some of the influences taken in to account in testing whether aftercare remained associated with outcomes might have reflected motivation and helped to level the playing field. Still, the suspicion remains that accessing aftercare reflected a general inclination to seek help by patients particularly committed to recovery through treatment and mutual aid. The very fact that such a small minority received aftercare suggests there was something quite distinctive about them, their situations, and/or the treatment service they first attended – a distinctiveness which could have accounted for their better outcomes.

Other factors complicate the interpretation of the findings. Among these is that, despite their possible successes, patients committed to recovery through methadone maintenance and who did well enough to stay in that treatment could neither access aftercare (because they remained in the initial treatment) nor claim to have been drug-free (prescribed substitutes invalidated that claim), meaning that on this yardstick, the study was not well placed to reflect success in this modality. Also, patients who have lived in a controlled residential setting should normally notch up at least that time free of drugs. Since no time scale seems to have been attached to the drug free period, their success in this regard might not reflect aftercare at all, but the protection afforded by the main treatment setting – perhaps one reason why aftercare seemed ineffective among patients who started the study in residential rehabilitation.

In DORIS as in other studies, over the years patients rarely confined themselves to a single modality, complicating the assessment of just what it was which led to the eventual outcomes. For example, the featured report sampled 108 patients from methadone programmes, yet 33 months later 433 of the sample had been prescribed methadone after their initial treatment. For at least 325 – over half the total sample – methadone must have followed other types of treatment. In particular, from an earlier report we know that about 44% of patients who started the study in residential rehabilitation went on to be prescribed methadone. It becomes a matter of choice whether such patients' progress is attributed to the initial non-methadone programme, whether transfer to methadone is seen as indicating that initial treatment had failed and their progress was due to the follow-on care, or whether the whole treatment journey is seen as the active ingredient.

Though the featured study was unable to determine whether aftercare actually *caused* improved outcomes, other studies with stronger designs have been able to address this critical issue. A US review included 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 − suggesting that the finding of no benefit in the featured study may have reflected anomalies in the type of people who get residential care in Scotland, how they access or not aftercare, and perhaps the nature of that aftercare, rather than post-residential aftercare truly being ineffective.

Given this international research, and the fact that the DORIS findings were at least consistent with aftercare often being an aid to abstinence, it seems reasonable for the authors to recommend it as standard provision. But in doing so they 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.

In both countries reintegration in to mainstream society and especially in to employment are seen as the bulwarks which can help prevent relapse and relieve the need for extended care. Much will depend on the receptivity of the broader society to the relapse-preventing reintegration of problem substance users, and especially problem drug users. Without sufficient receptivity in the form for example of routes in to suitable work opportunities, decent and stable housing, and social acceptance and support, extended care may be the most realistic way to prevent or intervene early in health- and life-threatening relapse.

For other findings from the DORIS study see the Findings reports on abstinence and on employment outcomes, and this initial report highlighting poorer outcomes from prison-based treatment.

Thanks for their comments on this entry to Wouter Vanderplasschen of the University of Ghent in Belgium. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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