Abstinence versus Agonist Maintenance Treatment: An Outdated Debate?

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After two decades of increasing acceptance and availability of agonist maintenance therapies, we hear more about limitations of this approach and about a new quest for abstinence-oriented recovery. What is the state of these trends, and what are the facts and arguments?

Part of this development is already visible from the differential terminology in use: abstinence is perceived as instrumental for health and social improvements (‘abstinence-based therapy’) or else as the final objective (‘abstinence-oriented therapy’). Recovery is used to describe a rehabilitation process in various shades (‘back to normal’), but also to describe a socialization process to model citizenship (‘better than well’). Maintenance therapy goes as a temporary approach to engage those in treatment who otherwise cannot be reached (‘maintenance to abstinence’) or else as the treatment of a chronic condition (‘unlimited maintenance’).

The diverse terms mirror dissatisfaction with the crude opposition abstinence versus maintenance, but in fact they present a new version of the old controversy: what are the goals of addiction treatment? Is the ultimate goal abstinence, or is it well-being with or without abstinence? In other words [1]: ‘To what extent is your program making peoples’ lives better, rather than simply suppressing alcohol/drug use? Structured assessment using appropriate brief wellbeing measures could facilitate discussions about broader life needs to be addressed. Further, insights from the literature on subjective wellbeing may inform services and interventions to help people establish happier, more meaningful lives within which addiction holds less attraction.’

The increasing acceptance and availability of agonist maintenance treatment is well documented: in Europe, the number of countries providing methadone maintenance increased from 7 in 1980 to 28 by 2005, and the number of countries providing buprenorphine maintenance rose within a few years to 21 [2]. Globally, opioid maintenance treatment was available in 70 countries by 2009 [3]. Even an increasing number of prison systems are offering methadone maintenance treatment to prisoners [4]. Driving forces were the HIV/AIDS epidemic among drug injectors with increasing risks for the general population, and the ensuing need to bring as many injectors as possible into treatment arrangements.

Have the expectations been met? The research evidence is quite clear and has been well documented and reviewed. The World Health Organisation has included methadone and buprenorphine, the two mainly used agonists in maintenance treatment, into the lists of essential medicines and summarized the state of research results...
Agonist maintenance treatment is an effective protector against blood borne infections in opioid injectors (by reducing injections of illicit or non-prescribed substances), and the increasing coverage of those out-of-treatment by offering maintenance treatment became a public health priority [7]. In addition, one review mentions a reduction of HIV risk behaviors (needle sharing if injecting, number of sexual partners), further contributing to protection from blood borne infections [8]. At the same time, maintenance therapies improve health status and reduce the addictive lifestyles and criminal involvement of those who are enrolled. Parts of the positive effects are linked to sufficient retention. An extensive review of the evidence for policy guidance therefore includes the recommendation to provide agonist maintenance treatment even as a minimum standard [9].

It must be added, however, that the quality of treatment delivery is uneven, and many national guidelines for agonist maintenance suffer from inconsistencies, mirroring more the concerns about misuse of prescribing than the available evidence [10]. Positive outcomes are linked to adequate practice rules; shortcomings have been documented, such as mortality risks during the induction period, and diversion to illicit use. Side effects may be heart problems with higher dosages of methadone (‘Torsade de pointes’) or interactions with other medications, most of which are manageable. Insufficient dosage invites continued use of nonprescribed substances [9]. Patient satisfaction may suffer from degrading attitudes and lack of competence in staff [11]; such limitations stem more from service characteristics than from the medication [12, 13]. Interestingly, poor quality maintenance treatment reduces the benefits, but may still have benefits [14].

The research evidence on the results of abstinence-oriented treatment is less extensive – a review mentions a gap in evaluation research [15] – but also quite clear. Detoxification without follow-up treatment suffers from high rates of relapse (including an increased risk for opioid overdose due to decreased tolerance); the results can be improved when accompanied by psychosocial interventions [16]; according to this Cochrane systematic review, however, there is no evidence that detoxification can substitute for long-term treatment in the management of opiate addiction [16]. Long-term abstinence-oriented treatment is mostly provided in residential facilities of the therapeutic community (TC) type. TC research has been performed in a range of countries, notably in the USA [17]. Some follow-up studies document the social and psychological outcomes of patients up to 12 years after their treatment in TCs. Long-term residential TCs are effective in reducing drug abuse and antisocial behavior, particularly in opioid dependence, and the extent of improvement is directly related to retention in treatment [17, 18]. However, most TC admissions do not complete the planned length of treatment. A recent systematic review of therapeutic effectiveness shows completion rates from 9 to 56%. All studies showed that substance use decreased during TC, but relapse was frequent after TC. Treatment completion was the most predictive factor of abstinence at follow-up. Long-lasting benefits were uncertain [19]. It must be added that attempts to overcome low patient preference and high drop-out rates by enforced abstinence are doomed to failure from poor outcomes, not to mention the ethical problems involved [20].

Comparing abstinence-oriented treatment and agonist maintenance therapies is rarely made by studies with randomized controlled design, for obvious reasons of patient preference. One randomized controlled trial compared methadone maintenance and enriched detoxification. According to this study, methadone maintenance therapy resulted in greater treatment retention and lower heroin use rates than did detoxification. Methadone maintenance therapy had a lower rate of drug-related but not sex-related HIV risk behaviors and in a lower severity score for legal status. There were no differences between groups in employment, family functioning or alcohol use [21].

More information is available from multimodality outcome studies with follow-ups of cohorts from drug-free treatment and maintenance programs. 12-year outcomes in the Drug Abuse Reporting Program DARP in the USA showed no significant differences in males from methadone maintenance and therapeutic communities regarding daily opioid use or any opioid use, but a higher reduction in alcohol use and higher rates of employment in the TC group. Outcomes from out-patient drug-free programs were less favorable [18]. A similar prospective comparative cohort study from the UK found, 4–5 years after intake, higher rates of abstinence from all drugs in patients from TCs compared to those from methadone maintenance. Reductions in regular heroin use, nonprescribed methadone and benzodiazepine use, in psychological health problems and suicidality, however, were similar in both groups. Acquisitive crime rates were comparatively lower in patients under methadone maintenance treatment after 2 years, in TC patients after 4–5 years [22, 23].

What do these findings show? Mainly that both therapeutic approaches, drug-free residential and agonist maintenance treatments, have long-term positive out-
comes when provided in regular services and following routine practices in indication and delivery. Differences in outcomes between the two modalities are minimal and may be due to different sample characteristics and/or service quality. No superiority of one or the other can be concluded.

Economic studies document lower costs per time unit for maintenance treatments, but the difference disappears with length of stay. The cost-benefit ratio is clearly in favor of both modalities.

On the other hand, the limitations of both modalities show major differences: residential drug-free treatments have lower retention and contribute much less to an overall coverage of opioid addicts in need of treatment in a competitive therapeutic market where both are freely available. Maintenance treatments have a longer, eventually indefinite duration, including variable restrictions for patients. For an evidence-based treatment planning at the system level, the consequence is to favor maintenance treatment in the interest of good coverage and public health, but with an adequate offer of drug-free treatment for those who are ready for it.

During the last years, a strict separation of drug-free and maintenance treatment started to be weakened. A new type of mixed approach came forward. Therapeutic communities started to accept clients on maintenance medication, and a specific concept was set up for an integration of pharmacotherapy and TC methods in a day treatment model [24]. The focus is on maintenance patients with persisting problems of nonprescribed substance use, comorbidity and deficient social adaptation. Other target groups also come to the forefront [25]: ‘Treatment in residential facilities, formerly the predominant approach to the treatment of heroin use in many European countries, is relatively less common nowadays, and the majority of opioid users are treated in outpatient settings. Residential services are, however, of growing importance in the care of elderly and long-term drug users with complex treatment needs because of the coexistence of serious somatic and psychological comorbidity. The philosophy of inpatient facilities and the way they work have changed considerably over the years, in response to changing needs.’

**Conclusion**

In view of these findings, the controversial debate makes little sense; prejudice and invested interests have more weight in it than an appreciation of the facts. In an era of individualized medicine, there is no argument against having multiple evidence-based treatment options where individual planning can be tailored to patient risks and needs. Instead of discussing which modality is superior, the debate has evolved into plans how to make best use of both. This includes the introduction of good quality of services in general, by standards and training. Another key word is integrated services in an organized network, covering the full range from harm reduction to structured treatment approaches [26]. Another is an effort to introduce stepped-care models, starting with self-help and offering more intense treatment only if previous steps prove inadequate or inefficient, in an interest of making best use of available resources at the system level [27, 28]. For future development, an appropriate combination of the ‘invisible hand’ of a competitive treatment market and the ‘visible hand’ of an evidence-based official policy seems best in order to improve therapeutic chances for all in need, for their environment and for the public good.

**References**


