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# Treatment for Opioid Dependence

## Quality and Access

Bruce J. Rounsaville, MD  
Thomas R. Kosten, MD

**A** MAJOR PRIORITY IN US MEDICINE IS THE NEED TO improve quality and access while containing costs. Two articles in this issue of THE JOURNAL address 2 important quality and access issues in opioid stabilization treatment: primary care methadone treatment,<sup>1</sup> which can improve access by broadening the prescriber base, and the abbreviation of methadone therapy,<sup>2</sup> which might improve access by allowing more patients per year in the available treatment slots. These articles address 2 strategies to enhance quality: directly observed methadone administration in primary care and intensified counseling in brief methadone treatment.

Office-based care can clearly increase access as current methadone maintenance delivery in specially licensed, centralized programs reaches only an estimated 14% of patients with opioid dependence because of limited treatment slots and geographical constraints.<sup>3,4</sup> Greater access is needed to cope with the recent upsurge in heroin use<sup>5</sup> and the increasing proportion of human immunodeficiency virus (HIV) transmission accounted for by injecting-drug use.<sup>6</sup> However, increasing access could compromise quality and will certainly increase immediate medical costs if many more heroin users are brought into treatment. Ensuring quality while broadening access requires compromises between simple office-based prescribing with no monitoring of the opioid being dispensed and the overly tight controls that characterize current methadone maintenance programs.

In their comparison of office-based prescribing programs in 2 Scottish cities, Weinrich and Stuart<sup>1</sup> report a 3- to 5-fold increase in the proportion of heroin injectors receiving methadone with comparable treatment retention. Furthermore, by requiring supervised consumption of methadone, the Glasgow program minimized methadone diversion and reduced opioid-related deaths—admirable achievements in quality assur-

ance. The risks of diversion and overdose can be reduced even further by using a recently available medication—buprenorphine plus naloxone—that will precipitate opioid withdrawal if diverted and taken intravenously.<sup>7</sup> Based on safety and equivalent efficacy to methadone,<sup>8-10</sup> buprenorphine is currently being evaluated for congressional approval for office-based practice.

However, quality of care entails more than simple recruitment and retention in treatment or even reduction in opioid-related deaths. Quality care should lead to psychosocial rehabilitation, which medications alone cannot provide. Provision of methadone without psychosocial supports has been shown to yield a poorer outcome than methadone plus weekly counseling.<sup>11</sup> However, intensive day program treatment within a methadone program leads to no better outcomes than once weekly counseling, supporting the greater cost efficacy of weekly counseling.<sup>12</sup> Weekly counseling can complement buprenorphine stabilization in a primary care office setting and have outcomes superior to buprenorphine provided in a methadone clinic setting.<sup>13</sup> In this buprenorphine study, the primary care intervention was evaluated for only 3 months.<sup>13</sup> However, much briefer detoxification of 30 days or less is the most common treatment for opioid dependence.

A critical issue for office-based treatment of opioid dependence is the value of brief or extended detoxification vs stabilization for a year or longer. The study by Sees et al<sup>2</sup> in this issue of THE JOURNAL was conducted at a methadone clinic rather than primary care sites and demonstrates the superiority of methadone stabilization vs extended discontinuation over 6 months. Detoxification has repeatedly shown substantially poorer outcomes than methadone maintenance.<sup>14</sup> In a recent review of ultrarapid detoxification for opioids,<sup>15</sup> the limited efficacy of this approach even at 3-month follow-up was found to contrast strongly with the long-term efficacy of methadone stabilization treatment. In the study by Sees et al, patients

**Author Affiliations:** Department of Psychiatry, Yale University School of Medicine, New Haven, and Veterans Affairs Healthcare Systems, West Haven, Conn.  
**Corresponding Author and Reprints:** Bruce J. Rounsaville, MD, Veterans Affairs Healthcare Systems, 950 Campbell Ave (151D), West Haven, CT 06516 (e-mail: bruce.rounsaville@yale.edu).

See also pp 1303 and 1343.

who were stable while receiving methadone maintenance had precipitous declines in heroin use, needle-related HIV risk behaviors, and drug-related crime. However, methadone stabilization is not a cure-all. Cocaine use, sex-related HIV risk behaviors, employment problems, and family problems persisted, and more than 50% of patients in both groups used heroin at least once during any given month of treatment.

The study by Sees et al<sup>2</sup> also suggests limited impact of intensifying delivery of traditional ancillary counseling. During the first 60 to 90 days, 3 times more psychosocial treatment was offered to (and required of) patients in the detoxification group. However, during that time, heroin use was nearly identical in the 2 groups. Moreover, requiring more psychosocial treatment may have been aversive, since attrition was higher in the detoxification group even during the first 90 days of treatment, when methadone dosing was comparable. It is particularly noteworthy that patients using cocaine were more likely to drop out of the detoxification program, which included an additional session of group therapy about cocaine for patients presenting with cocaine-positive urine specimens. Hence, more hours of traditional drug counseling did not appear to enhance efficacy. Thus, for cost-effective office-based practice, counseling should be provided, but the costs associated with high-intensity psychological interventions are not justified. This finding is consistent with previous work examining buprenorphine detoxification<sup>16</sup> and low- vs high-cost day program interventions<sup>12</sup> with this population. Other work has suggested that patients who continue to use heroin and cocaine may respond to psychological interventions that are more focused and manual-guided.<sup>17-19</sup>

The findings of Weinrich and Stuart and of Sees et al provide timely input for the public policy debate over cost, quality, and access for treating patients with opioid dependence.<sup>14,20-22</sup> Quick fixes for the problem have included false starts such as detoxification followed by "drug-free" outpatient care. This option has been examined carefully for more than 25 years to resounding disappointment in its failure either to prevent heroin relapse or accomplish public health aims such as preventing the spread of HIV infection.<sup>23,24</sup> Moving opioid stabilization into the mainstream of office-based medical care has national and congressional support<sup>25</sup> facilitated by the recent development of buprenorphine plus naloxone treatment. If the Scottish example<sup>1</sup> can be followed, this new approach can provide a 3- to 5-fold increase in access. It can also reduce cost per patient, although added access will clearly increase short-term substance abuse treatment costs while reducing long-term costs associated with overdose emergencies, HIV infection, and crime. The Glasgow study also suggests that the best investment in quality should focus on monitoring delivery of the pharmacotherapy such as supervised consumption during the first year of treatment. Sees et al<sup>2</sup> suggest that quality of care does not increase with expenditures on high-intensity psychosocial treatments exceeding routine care.

Much remains to be learned about implementing and optimizing effectiveness of primary care treatment for heroin dependence and other substance use disorders.<sup>1</sup> Guidance of the development of US primary care opioid stabilization programs requires empirically based evidence about optimal inclusion criteria for program participation, induction procedures for methadone and other opioid agonists, ancillary psychosocial treatments, duration of treatment, and dispensing strategies. However, implementation of primary care opioid treatment should not be delayed until definitive answers are available. While the case for primary care opioid stabilization treatment is the most compelling, the potential value for other substance use disorders is suggested by low treatment utilization rates for patients with alcohol and other substance use disorders<sup>26</sup> and the recent or impending availability of new pharmacological treatments including naltrexone<sup>27</sup> and acamprostate<sup>28,29</sup> for alcohol dependence. Implementation of primary care treatment for substance use disorders offers the possibility of increased access to care for these common and undertreated disorders. Careful study will be required to maintain and improve the quality of that treatment.

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## Vaccine Extrimmunization— Too Much of a Good Thing?

Robert L. Davis, MD, MPH

THE ARTICLE BY FEIKEMA AND COLLEAGUES<sup>1</sup> IN THIS ISSUE OF THE JOURNAL suggests that extrimmunization of children occurs considerably more often than previously appreciated. Using data from the National Immunization Survey, Feikema et al examined the immunization histories of more than 22 000 children aged between 19 and 35 months. The National Immunization Survey used 2 steps to collect information: in the first, parents with eligible children were identified, and in the second, the child's immunization records were obtained from their health care provider. The proportion of children who received extra immunization doses ranged, by individual vaccine, from 2.5% for measles-containing vaccine to more than 14% for poliovirus vaccine. Taken together, up to 21% of all children were reported to have received at least 1 extra immunization before their third birthday. In the multivariate analysis of risk factors for extrimmunization, Feikema and colleagues found that children with more than 1 health care provider were almost 3 times more likely to be extrimmunized compared with children with a single provider. Extrimmunization not only wastes vaccine, money, and labor, but unnecessary doses add to a child's stress and discomfort, increase the risk for adverse events following vaccination, and may lead to confusion among parents and health care providers about what vaccines have, and have not, actually been administered. The authors conclude that more attention needs to be focused on the problem of duplicate immunization.

Although these findings are striking, it is important to consider whether the rates of extrimmunization have been overestimated before they prompt changes in physician practice. Documentation errors occur in immunization records, as in other medical records, and can be substantial.<sup>2</sup> When records from different health care providers (or multiple records from the same provider) are combined for the purposes of research, some errors, such as date transpositions,

would cause a single immunization to appear more than once and thus be counted as an extra immunization. Other errors, such as misinterpretation of vaccine trade names while transcribing historical records, also could lead to errors in documentation. While these errors would have been counted in the current study as extrimmunization, in fact, extra vaccinations may not have been administered.

It is important to realize that not all extrimmunization is necessarily inappropriate. In recent years, the immunization schedule has become considerably more expanded; up to 16 injections currently are recommended during the first 2 years of life.<sup>3</sup> At some visits, up to 4 separate injections may be indicated, and this number will increase if the new pneumococcal conjugate vaccine is added to the schedule later this year, as anticipated. To reduce the number of injections a child receives during clinic visits, pharmaceutical companies have developed combination vaccines, but these present challenges to clinicians faced with patients in need of only 1 of the antigens at a single visit. In a report to help guide physicians on the use of combination vaccines, the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, and the American Academy of Family Physicians recognized the problems and expense of stocking all available vaccine types or products.<sup>4</sup> The report concluded that it is acceptable for physicians to administer extra antigens when a combination vaccine would reduce the required number of injections, or if it is the only means of delivering the indicated antigen.

Feikema et al also suggest that immunization registries would improve the quality of immunization data and help physicians vaccinate each child appropriately and on time. These registries would gather data from those who deliver vaccinations and supply this information to physicians, clinics, health

**Author Affiliation:** Immunization Studies Program, Group Health Cooperative Center for Health Studies, and Departments of Pediatrics and Epidemiology, University of Washington, Seattle.

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**Corresponding Author and Reprints:** Robert L. Davis, MD, MPH, Immunization Studies Program, Group Health Cooperative Center for Health Studies, 1730 Minor Ave, Suite 1600, Seattle, WA 98101-1448 (e-mail: rdavis@u.washington.edu).

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