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## RESEARCH LETTER

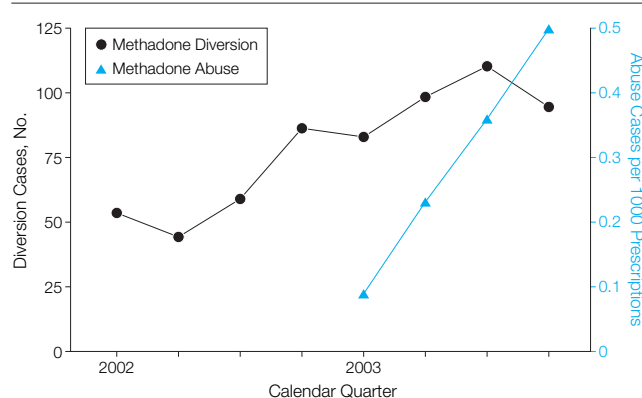
### Diversion and Abuse of Methadone Prescribed for Pain Management

**To the Editor:** In late 2003-2004, the White House Office of National Drug Control Policy, the General Accounting Office, and several state authorities reported that diversion and abuse of methadone was emerging as a major problem in a number of metropolitan areas across the United States.<sup>1-4</sup> In some states, it was asserted that methadone had surpassed controlled-release oxycodone as the most widely diverted and abused drug, an assertion reinforced by newspaper accounts.<sup>1-5</sup> This increase in reported methadone abuse was attributed to the increase in licit and illicit exposure to methadone resulting from its inappropriate use as a safer alternative to drugs with greater potential for abuse. To examine the accuracy of these reports, we quantified information from an abuse and diversion surveillance system.

**Methods.** Purdue Pharma LLC has created the Researched Abuse Diversion and Addiction-Related Surveillance (RADARS) system, designed to obtain information on abuse of oxycodone and other prescription opiates. As part of this program, quarterly survey interviews were carried out with 237 drug diversion investigators (2002-2003) and 321 drug abuse experts (2003 only). For the studies reported in this article, these informants estimate that their catchment areas cover nearly 80% of the nation, including all urban and most rural areas, particularly areas in which abuse of prescription drugs has been endemic for decades (eg, Appalachia). For all cases in which abuse of methadone was reported, each informant was requested to fill out a case report form that included demographic data and whether the patient's drug-seeking behavior met *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* criteria for substance abuse and dependence. The accuracy of the number of abuse cases and diagnosis of substance abuse generated by the drug abuse experts was assessed by review of a sample of patient charts (>50) and by on-site interviews with 18 abusers at 12 sites. There was a 95% concordance between what was reported in questionnaires and our review.<sup>6</sup>

**Results.** Police investigators reported a total of 623 cases of methadone diversion during 2002 and 2003 (FIGURE), with a steady increase in the number of reports over the 2-year period. There was a 5-fold increase in rates of reported methadone abuse over the 4 quarters in 2003, expressed as cases

**Figure.** Methadone Abuse Cases per 1000 Prescriptions and Diversion Cases, 2002-2003



Rates were not applicable for diversion since a case frequently involves fake prescriptions and possession of 1 or 2 tablets, making rates based on legitimate prescriptions inappropriate. All of these data have been standardized using 150 informants/quarter as the baseline.

per 1000 prescriptions (Figure). These reports of abuse and diversion were widespread and included many small cities, suburban areas, and rural areas in more than 47 states, including areas in which abuse of prescription drugs is widespread. Methadone tablets were the form of use indicated in more than 80% of these reports. During this time, the number of prescriptions for methadone increased from fewer than 1 million in 2002 to 2.6 million in 2003 (data purchased from IMS Health Inc).

**Comment.** Methadone clinics typically dispense maintenance doses in either wafer or liquid form and do not normally use externally filled prescriptions. The number of methadone clients has remained stable for the last decade. The marked increase in prescriptions for methadone suggests that methadone is now being increasingly prescribed for pain management. Given this, the predominant use of tablets suggests that methadone was being diverted from the analgesic market as a result of the increase in availability to patients and perhaps adjunctively to recreational or habitual drug abusers.

Two limitations of this study should be considered. First, while there is evidence to support the general accuracy of the surveillance system, there was not complete validation of all abuse cases. Second, while our data suggest increasing levels of methadone abuse, it must be emphasized that in terms of relative rates of abuse methadone does not rank as highly as other more commonly abused analgesics, including most prominently oxycodone, the abuse of which is at least 5-fold more prevalent.<sup>1,4</sup> Nevertheless, our data show that physicians who choose to prescribe methadone as an analgesic need to do so carefully and be aware of the possibility of diversion and abuse, a number of reports of fatal overdose,<sup>1-5</sup> and the possibility

that it may not be correct to assume that methadone is a much safer and less abusable alternative to other opiate analgesics.

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**Access to Data:** Dr Cicero had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analyses.

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**Role of Sponsors:** Purdue Pharma LLC had no role in the design and conduct of the study; the collection, analysis, and interpretation of the data; or the preparation, review, or approval of the manuscript.

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## CORRECTION

**Errors in Data Reporting:** In the Special Communication entitled "Actual Causes of Death in the United States, 2000" published in the March 10, 2004, issue of THE JOURNAL (2004;291:1238-1245), there were multiple errors in reported data. On page 1238 in the Results section of the Abstract, "(400 000 deaths; 16.6%)" should be "(365 000 deaths; 15.2%)." On page 1239, in the third column, in the first paragraph, "23 (22.3%)" should be "23 (22.03%)." On page 1240, in Table 2, "400 000 (16.6)" deaths for "poor diet and physical inactivity" in 2000 should be "365 000 (15.2)." A dagger symbol should be added to "alcohol consumption" in the body of the table and a dagger footnote should be added with "In 1990 data, deaths from alcohol-related crashes are included in alcohol consumption deaths, but not in motor vehicle deaths. In 2000 data, 16 653 deaths from alcohol-related crashes are included in both alcohol consumption and motor vehicle death categories." Also on page 1240, third column, fifth paragraph, "18 539 deaths" should be "19 358 deaths." On page 1241, first column, first paragraph, "69 989 deaths" should be "70 808 deaths." On page 1242, first column, first paragraph, "remaining 270 deaths" should be "remaining 359 deaths" and in the second paragraph, "resulted in 14 578 deaths" should be "resulted in 14 478 deaths." Also on page 1242, third column, second paragraph, "roughly 400 000 deaths" should be "roughly 365 000 deaths."

### Call for Submissions: Archives of Internal Medicine

The editors of the *Archives of Internal Medicine* seek artistic photographs or photographs of artwork done by *Archives* readers for reproduction on the journal's cover. Submissions must be the author's own work; work that has to do with the themes of medicine is of particular interest. Sculpture, paintings, drawings, photography, fabric art, graphic art, metalwork, crafts, computer art, depictions of medical specimens—perhaps herbs or historical artifacts—and other forms of art are acceptable as long as they can be captured in a photographic submission. No recognizable persons should appear in the image. The image may be black and white or color and at least 3.5 × 5 in (7.6 × 12.7 cm) and no larger than 8 × 10 in (20.3 × 25.4 cm). See Instructions for Authors at the *Archives'* Web site (<http://www.archinternmed.com>) for submission information. Text of fewer than 250 words written by the artist about the work should accompany submissions.