# Maternity Care and Buprenorphine Prescribing in New Family Physicians

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## ABSTRACT

The American Board of Family Medicine routinely surveys its Diplomates in each national graduating cohort 3 years out of training. These data were used to characterize early career family physicians whose services include management of pregnancy and prescribing buprenorphine. A total of 261 (5.1%) respondents both provide maternity care and prescribe buprenorphine. Family physicians who care for pregnant women and also prescribe buprenorphine represented 50.4% of all buprenorphine prescribers. The family physicians in this group were trained in a small number of residency programs, with only 15 programs producing at least 25% of graduates who do this work.

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## INTRODUCTION

Morbidity and mortality associated with opioid use disorder (OUD) has steadily increased in the United States in recent years, with deaths related to opioid overdose increasing from 8,050 in 1999 to 42,249 in 2016.[1] The most recent epidemiological data from the Centers for Disease Control and Prevention have shown alarming spikes in overdose deaths related to the sudden surge in availability of synthetic opiate analogues (most notably fentanyl) with a corresponding increase in mortality in the last 3 years.[2] Data focused on OUD among pregnant women shows that opioid-related overdoses constitute a major contribution to pregnancy-related mortality, in particular in the postpartum period. Across multiple studies, up to 20% of pregnancy-related deaths are due to opioid overdose.[3]

Although OUD is associated with ever-increasing morbidity and mortality, effective treatments exist. Medication-assisted treatment (MAT) consists of using 1 of the 2 Federal Drug Administration (FDA)-approved medications in pregnancy (methadone or buprenorphine) for management of OUD. Buprenorphine may be prescribed by a physician, nurse practitioner (NP), or physician assistant (PA) with a Drug Enforcement Administration (DEA) "X" waiver (obtained by completing an 8-hour training course for physicians or a 24-hour training course for NPs and PAs) with management in the primary care setting. Methadone is obtained by visiting a federally certified outpatient treatment center daily to receive a dose and is not connected to primary care.[4] Given the integration with primary care and the less burdensome restrictions on prescribing, buprenorphine has become the preferred treatment option for OUD for many pregnant women. MAT has been shown in a number of studies to decrease mortality from OUD as well as to decrease overdose, acquisition of HIV and hepatitis C, and relapse, in comparison with abstinence-based treatment and detoxification programs.[5] Despite the efficacy of MAT, only 10.6% of patients with OUD are receiving treatment.[6] Women with OUD still experience high rates of overdose and mortality, particularly in the postpartum period.[7] Given the breadth of training of family physicians in the biopsychosocial model, we sought to characterize the recently trained

family medicine workforce that may be providing buprenorphine to pregnant patients.

## METHODS

We used data from the 2016, 2017, and 2018 National Family Medicine Graduate Survey. The survey is administered annually by the American Board of Family Medicine (ABFM) to all Diplomates who graduated from residency 3 years prior.[8] We used 2 questions asking whether "maternity care" or "buprenorphine treatment" were part of the respondents' practice. Another question asked whether the respondent was currently delivering babies. The survey did not directly ask about prenatal care, but we estimated this by identifying those who provide maternity care but do not deliver. Physician demographic and residency training data were obtained from ABFM administrative data sets.

We limited our sample to physicians who primarily provided outpatient continuity care as we were less interested in the cohort of physicians providing this care outside of the traditional primary care setting. We conducted bivariate analysis on the above variables to determine the characteristics of those physicians by their involvement in maternity care and prescribing of buprenorphine. Chi-square ($\chi^2$) and ANOVA tests were used to determine statistically significant differences in these characteristics by physician demographics. All analyses were completed in SAS Version 9.4 (SAS Institute Inc). This study was approved by the American Academy of Family Physicians Institutional Review Board.

## RESULTS

The response rate for each year was 67% to 68% with 6,483 total respondents. After exclusions, of the 5,103 respondents in our sample, 153 responded that they both deliver babies and prescribe buprenorphine. A further 108 respondents provide maternity care and prescribe buprenorphine but do not perform deliveries. More than 60% of these family physicians are female. See Table 1 for additional demographics.

Family physicians who care for pregnant women and prescribe buprenorphine represent 50.5% of all buprenorphine prescribers in our cohort. This compares to the 18.5% of family physicians overall who both prescribe buprenorphine and do deliveries, as well as the 7% of family doctors overall who prescribe buprenorphine but take no part in maternity care. Respondents who both care for pregnant women and prescribe buprenorphine were trained in a small number of residency programs. Of 614 total family medicine residencies with graduates in the survey, 15 trained 25% of graduates who provide this care. These residencies are largely located on the east and west coasts in urban areas.

## DISCUSSION

Despite the morbidity and mortality related to OUD among pregnant women, it appears that coordinated care for these patients is being provided by an exceptionally small workforce. Furthermore, we found that a very small number of family medicine residency programs appear to be training physicians to provide coordinated care to this vulnerable population.

A review of physicians with buprenorphine waivers in 2012 showed that there were 4,066 family physicians compared with only 181 obstetrician-gynecologists.[9] In our study, 50.4% of all buprenorphine-prescribing family physicians also provided care to pregnant women. Taken together, these data suggest that the family

**Table 1. Characteristics of Early Career Family Physicians Prescribing of Buprenorphine by Involvement With Maternity Care (N = 5,103)**

| | Deliveries (n = 829) No. (%) | | Maternity Care, No Deliveries (n = 619) No. (%) | | Neither Deliveries or Maternity Care (n = 3,655) No. (%) | | Total (N = 5,103) No. (%) | |
|---|---|---|---|---|---|---|---|---|
| | Prescriber | Non-Prescriber | Prescriber | Non-Prescriber | Prescriber | Non-Prescriber | Prescriber | Non-Prescriber |
| Total | 153 (18.5) | 676 (81.5) | 108 (17.4) | 619 (82.6) | 256 (7.0) | 3,399 (93.0) | 517 (10.1) | 4,586 (89.9) |
| Average age (SD) | 35.2 (3.6) | 34.9 (3.4) | 36.1 (4.3) | 35.6 (4.0) | 36.4 (4.3) | 35.9 (4.5) | 36.0 (4.1) | 35.7 (4.3) |
| Female | 96 (62.7) | 454 (67.2) | 69 (63.9) | 323 (63.2) | 131 (51.2) | 1,944 (57.2) | 296 (58.3) | 2,721 (59.3) |
| MD degree | 137 (89.5) | 558 (82.5) | 102 (94.4) | 434 (84.9) | 217 (84.8) | 2,758 (81.1) | 456 (88.2) | 3,750 (81.8) |
| US medical graduate | 138 (90.2) | 603 (89.2) | 76 (70.4) | 317 (62.0) | 187 (73.0) | 2,232 (65.7) | 401 (77.6) | 3,152 (68.7) |
| Rural practice location | 31 (20.3) | 224 (33.1) | 8 (7.4) | 67 (13.1) | 30 (11.7) | 450 (13.2) | 69 (13.5) | 741 (16.7) |

MD = Doctor of Medicine; US = United States.

Note: All comparisons within maternity care involvement category were significant at $P < .05$ with ANOVA or $\chi^2$ tests.

physician workforce caring for pregnant women with OUD may be up to 10 times larger than the comparable obstetrician-gynecologist workforce. While these data do not include NPs and PAs who may become waivered, the size of the waivered family physician workforce, and its more even distribution with rurality, demands policy actions to encourage these physicians to prescribe and to treat any patient with OUD. Robust data support the inclusion of buprenorphine waiver training into residency curricula as a means of increasing the size of the buprenorphine prescribing workforce.[10] Use of innovative incentive programs, such as the new National Health Service Corps Substance Use Disorder loan repayment program, may also be considered as potential motivators to train more physicians to provide MAT to pregnant women.

Our study is limited by several factors. First, it is not clear that physicians who are both participating in the care of pregnant women and prescribing buprenorphine are necessarily providing these aspects of care to the same patients. Although our overall sample size was large, the total number of these family physicians was small and generalization of their characteristics to the broader population of such physicians is imprudent. Finally, we excluded family physicians who do not practice outpatient care which may have excluded family physicians with a limited practice scope (eg, laborists or those who work in an emergency room) who may be providing care for OUD to pregnant women.

The workforce of family physicians providing coordinated care for pregnant women with OUD in the United States appears to be small, concentrated in urban areas, and is overwhelmingly comprised of family physicians who trained in a small number of residency programs. Innovative solutions for improving access to this particularly vulnerable patient population should focus on incentivizing integration of buprenorphine training into more family medicine and OB/GYN residency programs, especially those found in rural areas of the United States.

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