EFFECT OF ONCE- VERSUS TWICE-DAILY METHADONE DOSING ON SUBSTANCE USE TREATMENT OUTCOMES AMONG PREGNANT WOMEN WITH OPIOID USE DISORDER

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Background:
Methadone, a highly effective medication for opioid use disorder (OUD), is typically taken as a single, once-daily dose due to its long half-life. However, metabolic changes that occur in pregnancy result in significant declines in methadone concentrations. Twice daily or "split dosing" is an alternative dosing strategy to more consistently maintain methadone concentrations above therapeutic levels during pregnancy. Despite this, outcomes among pregnant women utilizing alternative dosing approaches have not been evaluated.

Methods:
This is a retrospective cohort study of pregnant women with OUD who received methadone at our institution from 2023-2024. Patient characteristics, methadone dosing information, and substance use treatment outcomes at delivery were extracted from the medical record. Fischer's exact test, Student's t-test, and Mann-Whitney U tests were used to evaluate for each variable's association with once- versus twice-daily methadone dosing in pregnancy.

Results:
Among 89 participants, 53 (59%) utilized once-daily and 36 (40%) utilized twice-daily methadone dosing. The mean age was 33, 85 (96%) were white, 79 (90%) had public health insurance, and 21 (24%) had hepatitis C virus. Among those who utilized twice-daily dosing, the mean total daily dose (TDD) was divided as 55.6% in the AM and 44.4% in the PM. Across pregnancy, patients utilizing the twice-daily dosing had a smaller percent increase in their TDD (38.5% vs. 47.2%). Among 61 (68%) patients with delivery information, those utilizing twice-daily dosing were significantly more likely to remain engaged in methadone treatment (70.8% vs. 29.7%; p=0.003) and significantly less likely to have a urine drug screen (UDS) positive for IMF (29.2% vs. 70.3%; p=.003), xylazine (5.9% vs. 50.0%; p=.003), and cocaine (8.3% vs. 48.6%; p=.002) at delivery compared to patients utilizing once-daily dosing.

Conclusion:
Twice- versus once-daily dosing is significantly associated with a greater rate of methadone treatment retention and less illicit substance use at delivery.

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