

A Rapid Methadone Initiation Protocol for Stabilization of Opioid Withdrawal in the Fentanyl Era



Addiction Psychiatry
Consultation-Liaison Service
NYU Langone Health

Karanbir Padda, MD, Ilirjan Gjonbalaj, MD, Junona Elgudin, MD, Diego Garces Grosse, MD, & Simon A. Sidelnik, MD

INTRODUCTION

Patients with opioid use disorder (OUD) frequently leave the hospital due to undertreated opioid withdrawal (Simon et al., 2020). Patient-directed discharges contribute to the significant mortality and readmission risk in patients with OUD.

Increased synthetic opioids, including fentanyl, in the opioid drug supply has led to higher opioid tolerances and a need for innovative means to safely and rapidly titrate methadone (Hemmons et al., 2019). Rapid stabilization of opioid withdrawal symptoms is necessary to ensure patients with OUD receive adequate medical care and initiate OUD treatment.

We describe a novel rapid methadone initiation protocol for inpatient stabilization of opioid withdrawal in the fentanyl era.

METHODS

We present a series of three patients with OUD admitted to a tertiary center experiencing opioid withdrawal. A rapid methadone initiation protocol was implemented based on prior published literature (Hemmons et al., 2019). See "General Approach to Rapid Methadone Initiation Protocol." The Clinical Opioid Withdrawal Scale (COWS) was not used to manage opioid withdrawal. Instead, as needed methadone for opioid withdrawal was patient-initiated with hold parameters for sedation or respiratory depression. Equivalent IV methadone doses were used if the patient could not tolerate PO.

Cases were reviewed for primary outcomes of total methadone and short-acting opioids administered per day (Table 1). Secondary outcomes were collected including events of respiratory depression, patient-directed discharges (PDD), and continuation of medication for opioid use disorder on discharge (Table 2).

General Approach to Rapid Methadone Initiation Protocol

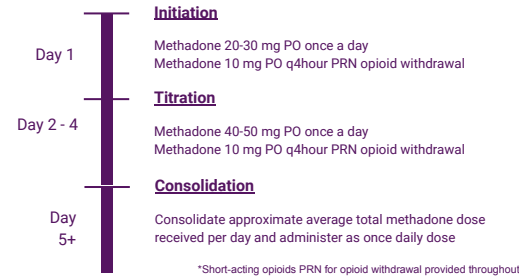


Table 1: Primary Outcomes

	Case 1	Case 2	Case 3
Day 1	Methadone 20mg x 1 Methadone 10mg x 3 <i>Hydromorphone 4mg x 1</i>	Methadone 20mg x 1 Methadone 10mg x 2	Methadone 20mg x 1
Day 2	Methadone 40mg x 1 Methadone 10mg x 4 <i>Hydromorphone 4mg x 1, 5mg x 1, 10mg x 4</i>	Methadone 40mg x 1 Methadone 10mg x 2	Methadone 20mg x 1 <i>Hydromorphone 15mg x 1</i>
Day 3	Methadone 50mg x 1 Methadone 10mg x 2 <i>Hydromorphone 10mg x 8</i>	Methadone 50mg x 1 Methadone 10mg x 2	Methadone 20mg x 2 Methadone 10mg x 3
Day 4	Methadone 50mg x 1 Methadone 10mg x 2 <i>Hydromorphone 5mg x 1, 10mg x 8, 15mg x 1</i>	Methadone 60mg x 2 Methadone 10mg x 2	Methadone 40mg x 1 Methadone 20mg x 1 Methadone 10 mg x 2
Day 5	Methadone 70mg x 1 <i>Hydromorphone 10mg x 4, 12 mg x 1, 14 mg x 1</i>	Methadone 70mg x 1	Methadone 50mg x 1 Methadone 20mg x 1 <i>Hydromorphone 20mg x 2</i>
Day 6	Note: Methadone reported as PO equivalents; <i>Hydromorphone reported as PO equivalents.</i>		Methadone 80mg x 1 <i>Hydromorphone 23mg x 2</i>
Day 7	Case 3 was not seen by the addiction consult service and rapid methadone initiation protocol was not started until Day 3 of admission.		Methadone 80mg x 1 <i>Hydromorphone 15mg x 2</i>

Table 2: Secondary Outcomes

	Case 1	Case 2	Case 3
Age	34	35	40
Admission Dx	Endocarditis	Gastroparesis	Hypoxic Respiratory Failure
Respiratory Depression	No	No	No
Patient-directed Discharge	Yes	No	No
Completion of medical care	No	Yes	Yes
Continuation of MOUD	N/A	Referral	Referral

DISCUSSION

Our results suggest that a rapid methadone initiation protocol can be well tolerated and promotes retention in medical care. There were no adverse events secondary to rapid methadone titration. This approach allows for a safe and rapid initiation of methadone to stabilize patients in the acute care setting, which is particularly valuable in the fentanyl era.

Current methadone prescribing guidelines recommend low dose initiation and slow titration to avoid the risks of respiratory depression and overdose (ASAM, 2020). This gradual approach does not account for high opioid tolerances associated with individuals using high potency synthetic opioids and often leads to undertreatment of opioid withdrawal. Challenges associated with implementation is prescriber unfamiliarity with safety and efficacy of protocol as well as possible hospital limitations on maximum daily dose of methadone indicated for OUD.

CONCLUSIONS

Early evidence suggests that the use of a rapid methadone initiation schedule is well tolerated and safe in patients experiencing opioid withdrawal in medical or surgical units. Appropriate management of opioid withdrawal symptoms can help improve retention and decrease patient directed discharges in patients with OUD admitted for other medical problems.

REFERENCES
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