Table 5: Pharmacological Treatment for NOWS

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| Drug | Pharmacokinetics | Dose/Half-life | Treatment Considerations | Weaning |
| Morphine | Full mu receptor agonist | Oral: 0.05-0.2 mg/kg/dose every 3-4 hours  Short half-life | If no improvement with the initial dose of medication, it can be increased to obtain the desired effect.  Disadvantages: increased risk of sedation, respiratory depression, and evidence of prolonged hospital stay. | Weaned every 24–48 hours. Duration of treatment average is 38 days. |
| Methadone | Full mu receptor agonist | Oral: 0.05‒0.1 mg/kg/dose every 4-12 hours.  Longer half-life. | Less variability between peak and trough levels; allows for longer dosing intervals. Remains controversial due to long half-life and prolonged excretion rate that may prolong hospitalization. Contains ethanol. | Weaned over time as tolerated. |
| Buprenorphine | Partial mu receptor agonist | Sublingually: 4.5 mcg/kg every 8 hrs (0.075 mg per milliliter of solution in simple syrup and 30% ethanol).  Long half-life and duration of action. | A lower incidence of respiratory depression and abnormal heart rhythm. | Wean as tolerated. Average duration of treatment is 23 days. |
| Phenobarbital | a γ-aminobutyric acid agonist | Load dose of 5 mg/kg IV, IM, or PO with a maintenance dose of 3–5 mg/kg every 8 hours. Another approach: load dose of 20 mg/kg with a maintenance dose of 2–6 mg/kg day to achieve plasma concentrations between 20-30 μg/mL. | Long use history with sedative and anticonvulsant properties. Not effective for GI symptoms; causes CNS depression and impaired sucking reflex. | Weaned by 15% of the daily dose. |
| Clonidine | Non-opioid alpha2 receptor agonist | Initial dose: 0.5‒1 μg/kg, followed by 0.5‒1.25 μg/kg per dose every 3 hours with proposed increments of 25% of initial dose. | Eases the signs experienced but does not include the narcotic effects of opioids.  Can be used as adjuvant medication when opioids were initially used. Data is limited. Reported to stabilize infants in combination with a diluted tincture of opium more quickly than a diluted tincture of opium alone. | Weaning by 10% of the maximum dose every 48 hours. |

Adapted from Butcher et al., 2018; Gomez-Pomar & Finnegan, 2018; Kraft et al., 2017; Taleghani et al., 2019.