



Safe Ordering, Verification, and Administration of IV opioids - Hydromorphone (Dilaudid)

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| Situation | Safe ordering, pharmacy verification, administration, and monitoring patients receiving opioids is paramount to keeping our patients safe. |
| Background | The purpose of this safety alert is to ensure the safety for our patients who are receiving opioids – especially IV opioids, with special consideration for Hydromorphone (Dilaudid). |
| Assessment | <p>At Virtua, we care for patients every day who are receiving IV opioids for pain management, and therefore it is extremely important that we carefully assess each individual patient’s potential risk for an adverse event – specifically, unintended sedation, opioid-induced respiratory depression, and death.</p> <p>Key risk factors to consider when prescribing, verifying, administering, and monitoring patients receiving opioids:</p> <ol style="list-style-type: none"> 1. Is the patient opioid naive (those who do not use opioids consistently or first-time users)? 2. Are they receiving polypharmacy (e.g., opioids and benzodiazepines, muscle relaxants, sleep aids, antihistamines, other central nervous system depressants, or potentially sedating medications)? 3. Are they very young or elderly (risk perpetually increases after age 60)? 4. Do they have comorbid conditions that lead to an inability to metabolize or excrete the opioids, leading to build up in their system (e.g., impaired liver or kidney function)? 5. Do they have a breathing disorder, or a condition that may obstruct their ability to ventilate (e.g., obstructive sleep apnea, asthma, history of smoking)? <p>Did you know?</p> <ul style="list-style-type: none"> • 2 mg of IV hydromorphone (Dilaudid) is equivalent to approximately 14 mg of IV Morphine. Understanding medication potency and drug to drug equivalents is important when ordering, verifying, administering, and monitoring (reassessing). • Capnography measures ventilation, pulse oximetry measures oxygenation. This is important because a drop in pulse oximetry can be a late sign of respiratory depression, especially for patients on supplemental oxygen. |
| Recommendation | <p>Use our HRO behaviors:</p> <ol style="list-style-type: none"> 1. Ordering: <i>Think critically</i> – validate and verify the patient’s individual risk factors and order medications/doses accordingly, especially in opioid-naive patients. 2. Pharmacy Verification: Cross check the orders and <i>have the ordering provider's back</i>. 3. Administration: <i>On Task</i> (Stop, Think, Act, Review-STAR) – does the dose make sense for this patient? 4. Monitoring: <i>No Harm</i> – monitoring for sedation and respiratory depression is critical. 5. Reversal & Emergency Readiness: Naloxone (Narcan) is the antidote to reverse the effects of opioids, including respiratory depression. |

If Dilaudid was a hamburger:

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| <p><u>1 mg</u> IV Dilaudid</p>  | <p>≈</p> | <p><u>7 mg</u> IV Morphine</p>  |
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Dilaudid is 7 to 10 times MORE POTENT than Morphine