

## IREDELL HEALTH SYSTEM

Use of IV Lidocaine in the Emergency Department for Acute Pain	
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P&T Committee	Date: 08/2021

**Purpose:** To describe the use of IV lidocaine as part of a multimodal acute pain management regimen for Emergency Department patients

**Contraindications:** Unstable or severe coronary artery disease, recent MI, heart failure, heart block, history of cardiac arrhythmias, significant electrolyte disturbances, severe renal insufficiency, severe hepatic insufficiency, seizure disorders, pregnancy, allergy to amide anesthetics

**Cautions:** The side effects of lidocaine are directly related to the serum lidocaine level. Mild side effects usually occur first as an early warning of lidocaine toxicity. If left unchecked, side effects can progress to seizures, cardiovascular collapse, and death. See monitoring section below.

**Policy:**

1. Lidocaine infusion is prepared using *preservative-free* lidocaine only, mixed in 100 mL NS.
2. Lidocaine infusion dose is 1-1.5 mg/kg IV over 10-15 minutes, using an infusion pump.
3. Patients over 65 years of age will be placed on a cardiac monitor.
4. During the infusion, the RN will monitor the patient every 5 minutes for vital signs and for the side effects listed below. The RN will contact the provider if the patient develops any of these side effects. If the side effects are mild, the provider may decrease the infusion rate by up to 50%. If the patient develops moderate or severe side effects, the RN will stop the infusion immediately and contact the provider.

Level of Toxicity	Adverse Effects	Management
<b>Mild</b>	<ul style="list-style-type: none"> <li>• Numbness and tingling in fingers and toes</li> <li>• Numbness and unusual sensations around and inside the mouth</li> <li>• Lightheadedness, dizziness, visual disturbances</li> <li>• Metallic taste</li> <li>• Ringing in the ears</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor infusion related symptoms frequently</li> <li>• Consider slowing infusion rate</li> </ul>
<b>Moderate</b>	<ul style="list-style-type: none"> <li>• Nausea and vomiting</li> <li>• Severe dizziness</li> <li>• Decreased hearing</li> <li>• Tremors</li> <li>• Changes in blood pressure and pulse</li> <li>• Confusion</li> </ul>	<ul style="list-style-type: none"> <li>• Notify provider</li> <li>• Stop infusion and consider holding for 30 minutes or until resolution of adverse effects</li> </ul>
<b>Severe</b>	<ul style="list-style-type: none"> <li>• Drowsiness, disorientation, loss of consciousness</li> <li>• Muscle twitching</li> <li>• Convulsions</li> </ul>	<ul style="list-style-type: none"> <li>• Stop infusion</li> <li>• Notify provider</li> <li>• Supportive care</li> <li>• Consider lipid infusion</li> </ul>

	<ul style="list-style-type: none"><li>• Coma</li><li>• Cardiac arrhythmias</li><li>• Cardiac arrest</li></ul>	
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5. Treatment for lidocaine toxicity relies primarily on lipid emulsion.

INITIAL EFFECTIVE DATE: 04/2018  
DATES REVISIONS EFFECTIVE: 08/2021  
DATES REVIEWED (no changes):