THE STUDY VAULT

Clinical Chaos

Nebulizer

SKILL SNAPSHOT

Purpose
- Converts liquid medication into an inhaled aerosol for deposition in the airways.

When to use
- Ordered bronchodilator, anticholinergic, corticosteroid, saline, or other nebulized therapy when the patient can breathe spontaneously.

Supplies needed
- Ordered unit-dose medication; small-volume nebulizer; mouthpiece or mask; oxygen/air compressor; tubing; PPE; pulse oximeter; stethoscope.

PREP + PATIENT SETUP
- Verify medication rights, allergies, dose, diluent, driving gas/flow, and treatment frequency.
- Assess breath sounds, RR/effort, SpO2, HR, cough, and peak flow if ordered.
- Explain slow deep breathing and possible

VAULT TIP
- Visible mist alone is not enough—the patient's slow, deep inhalation determines how much medication reaches the lungs.

STEP-BY-STEP
1. Hand hygiene; identify patient; position upright.
2. Open medication aseptically and place exact dose in nebulizer cup; add only ordered diluent.
3. Assemble cup, baffle, mouthpiece/mask, and tubing according to device instructions. Keep cup upright.
4. Connect to compressor, air, or oxygen source. Use prescribed driving flow, commonly enough to produce a visible mist.
5. For a mouthpiece, seal lips around it. For a mask, fit over nose and mouth without directing aerosol into eyes.
6. Turn on gas and verify continuous aerosol.
7. Instruct patient to breathe slowly and deeply through mouth, with occasional brief breath hold if able; avoid rapid shallow breathing.
8. Coach coughing and secretion clearance as needed. Monitor continuously for distress, dizziness, bronchospasm, tachycardia, or tremor.
9. Gently tap cup during treatment to move droplets toward baffle. Keep device vertical.
10. Continue until sputtering and aerosol output stop, usually about 5-10 minutes depending on device.
11. Turn off gas, disconnect, and assist with mouth rinsing after inhaled corticosteroids.
12. Reassess breath sounds, SpO2, RR/effort, HR, symptoms, and peak flow if used. Clean/disinfect equipment per manufacturer and infection-control policy.

SAFETY REMINDERS
- Stop and assess paradoxical bronchospasm, chest pain, severe tachycardia, or worsening distress.
- Use correct patient-specific equipment; do not share untreated devices.
- Protect eyes from aerosolized anticholinergics.
- Nebulization can disperse respiratory particles; use required precautions.

COMMON MISTAKES
- Wrong driving flow or tilted cup.
- Talking throughout treatment.
- Stopping before sputtering.
- Skipping post-treatment assessment/cleaning.

DOCUMENTATION
- Medication, dose, route, time.
- Device and driving gas/flow.
- Pre/post respiratory findings and peak flow.
- Tolerance/adverse effects.
- Teaching and equipment care.