Cardiovascular Medications Cheat Sheet for RNs

Master the essential cardiovascular medications with proven mnemonics that make complex pharmacology manageable. This comprehensive guide covers the most critical drug classes, their mechanisms of action, and practical memory techniques that will serve you throughout your nursing career.

The "ABCs" of Cardiac Medications

This foundational mnemonic provides a systematic approach to understanding the core cardiovascular drug classes. Each class plays a distinct role in managing cardiac conditions, and understanding their mechanisms is crucial for safe, effective patient care.

A - ACE Inhibitors

Examples: Lisinopril, Enalapril, Ramipril

Mechanism: Block conversion of angiotensin I to angiotensin II, reducing vasoconstriction and aldosterone secretion

Primary Uses: Hypertension, heart failure, post-MI, diabetic nephropathy

Key Nursing Considerations: Monitor blood pressure, potassium levels, and renal function. Hold if systolic BP <100 mmHg

B - Beta-Blockers

Examples: Metoprolol, Carvedilol, Atenolol

Mechanism: Block beta-adrenergic receptors, reducing heart rate, contractility, and cardiac output

Primary Uses: Hypertension, angina, post-MI, heart failure, arrhythmias

Key Nursing Considerations: Monitor heart rate and blood pressure. Hold if HR <60 bpm or systolic BP <100 mmHg

C - Calcium Channel Blockers

Examples: Amlodipine, Diltiazem, Nifedipine

Mechanism: Block calcium entry into vascular smooth muscle and cardiac cells, causing vasodilation

Primary Uses: Hypertension, angina, certain arrhythmias

Key Nursing Considerations: Monitor for peripheral edema, constipation, and hypotension. Grapefruit juice interactions

D - Diuretics

Examples: Furosemide (loop), HCTZ (thiazide), Spironolactone (potassium-sparing)

Mechanism: Increase renal excretion of sodium and water, reducing blood volume

Primary Uses: Hypertension, heart failure, edema

Key Nursing Considerations: Monitor weight, fluid status, electrolytes (especially potassium). Watch for ototoxicity with loop diuretics

Essential "CAPTOPRIL" Mnemonic for ACE Inhibitor Side Effects

This powerful mnemonic helps you remember the most important adverse effects to monitor when patients are taking ACE inhibitors. Early recognition of these side effects can prevent serious complications and improve patient outcomes.

C - Cough

Persistent dry cough occurs in 10-20% of patients due to bradykinin accumulation. Consider switching to an ARB if intolerable.

A - Angioedema

Rare but life-threatening swelling of face, lips, tongue, or throat. Requires immediate discontinuation and emergency treatment.

P - Potassium Excess

Hyperkalemia risk increases, especially with renal impairment or concurrent potassium-sparing diuretics. Monitor K+ levels regularly.

T - Taste Changes

Dysgeusia or loss of taste can occur, affecting appetite and nutrition. Usually resolves with continued therapy.

O - Orthostatic Hypotension

First-dose hypotension is common. Educate patients to rise slowly and stay hydrated, especially when initiating therapy.

P - Pressure Drop

Significant blood pressure reduction is therapeutic but monitor for symptomatic hypotension. Adjust dosing as needed.

R - Renal Failure

Acute kidney injury can occur, especially in bilateral renal artery stenosis. Monitor creatinine and GFR closely.

I - Indomethacin Inhibition

NSAIDs reduce ACE inhibitor effectiveness by inhibiting prostaglandin synthesis. Avoid concurrent use when possible.

L - Leukopenia

Rare decrease in white blood cells. Monitor CBC in patients with autoimmune disorders or renal impairment.

The "5 As of NSTE-ACS Treatment" Protocol

For patients presenting with Non-ST Elevation Acute Coronary Syndrome (NSTE-ACS), this comprehensive mnemonic ensures you remember the critical therapeutic interventions. Each component addresses a specific pathophysiological aspect of acute coronary syndrome, working synergistically to improve outcomes and prevent complications.

1

Anti-ischemic Therapy

Primary Agent: Nitroglycerin (sublingual or IV)

Mechanism: Dilates coronary arteries and reduces preload, decreasing myocardial oxygen demand

Nursing Actions: Monitor blood pressure before and after each dose. Hold if systolic BP <90 mmHg. Assess pain relief using 0-10 scale. Avoid in right ventricular infarction or recent phosphodiesterase inhibitor use (Viagra, Cialis).

2

Anticoagulant Therapy

Primary Agents: Heparin (unfractionated or low molecular weight), Fondaparinux

Mechanism: Prevents thrombus extension by inhibiting clotting cascade

Nursing Actions: Monitor aPTT (for UFH) or anti-Xa levels (for LMWH). Assess for bleeding signs including hematuria, melena, and bruising. Keep protamine sulfate readily available as reversal agent.

3

Antiadrenergic Therapy

Primary Agents: Beta-blockers (Metoprolol, Carvedilol)

Mechanism: Reduces heart rate and myocardial contractility, decreasing oxygen demand

Nursing Actions: Obtain baseline heart rate and blood pressure. Hold if HR <60 bpm or systolic BP <100 mmHg. Monitor for signs of heart failure exacerbation. Contraindicated in acute heart failure and severe bradycardia.

4

ACE Inhibitors

Primary Agents: Lisinopril, Enalapril, Ramipril

Mechanism: Prevents ventricular remodeling and reduces afterload

Nursing Actions: Initiate within 24 hours if hemodynamically stable. Monitor renal function and potassium levels. Assess for cough and angioedema. Start with low dose and titrate upward as tolerated.

5

Antihyperlipidemic Therapy

Primary Agents: High-intensity statins (Atorvastatin 80mg, Rosuvastatin 40mg)

Mechanism: Reduces LDL cholesterol and stabilizes atherosclerotic plaques

Nursing Actions: Initiate high-intensity statin therapy regardless of baseline lipid levels. Monitor liver function tests and creatine kinase. Educate about muscle pain reporting (rhabdomyolysis risk). Continue indefinitely for secondary prevention.

⚡ Critical Clinical Pearl

Beta-Blocker Misconception Alert: While beta-blockers are first-line therapy for stable angina and post-MI patients, they are NOT always the preferred initial treatment for uncomplicated primary hypertension. Current guidelines recommend thiazide diuretics, ACE inhibitors, ARBs, or calcium channel blockers as equally appropriate first-line options for essential hypertension. Beta-blockers are particularly beneficial when hypertension coexists with coronary artery disease, heart failure, or certain arrhythmias.

Emergency Cardiac Medications: Critical Mnemonics

In cardiac emergencies, rapid recall of appropriate medications can be lifesaving. These proven mnemonics provide instant access to critical drug protocols when seconds matter most.

"LMNOP" Protocol for Acute Congestive Heart Failure

When patients present with acute decompensated heart failure, this systematic approach ensures comprehensive management of pulmonary edema and cardiogenic shock. Each intervention addresses specific pathophysiology to rapidly improve oxygenation and reduce cardiac workload.

L - Lasix (Furosemide)

Dose: 40-80mg IV push initially, double previous oral dose for acute exacerbation

Action: Rapid diuresis reduces preload and pulmonary congestion within 5-30 minutes

Monitoring: Urine output (goal >0.5 mL/kg/hr), daily weights, electrolytes (K+, Mg2+), renal function, blood pressure

Caution: Risk of ototoxicity with rapid IV administration >4mg/min. May cause severe hypokalemia and hypomagnesemia requiring replacement.

M - Morphine

Dose: 2-4mg IV, may repeat every 5-15 minutes

Action: Reduces anxiety, venous return (preload), and myocardial oxygen demand. Provides analgesia for associated chest pain.

Monitoring: Respiratory rate, oxygen saturation, blood pressure, level of consciousness, pain scale

Caution: Use cautiously in acute MI due to potential vasodilation and hypotension. Keep naloxone readily available. Avoid in respiratory depression.

N - Nitrates

Dose: Nitroglycerin 0.4mg sublingual or 10-20 mcg/min IV infusion, titrate to effect

Action: Venous dilation reduces preload; arterial dilation reduces afterload and improves coronary perfusion

Monitoring: Blood pressure every 5 minutes during titration, headache assessment, heart rate

Caution: Contraindicated if systolic BP <90 mmHg, right ventricular infarction, or recent PDE-5 inhibitor use (within 24-48 hours). May cause severe hypotension.

O - Oxygen

Dose: Titrate to maintain SpO2 >90% (>94% in acute MI). Start with 2-6L nasal cannula, escalate to high-flow or BiPAP as needed.

Action: Improves tissue oxygenation, reduces cardiac workload, relieves dyspnea

Monitoring: Continuous pulse oximetry, respiratory rate and effort, arterial blood gases in severe cases

Caution: Avoid excessive oxygen in COPD patients (target SpO2 88-92%). Consider non-invasive positive pressure ventilation for severe respiratory distress.

P - Pressors (Vasopressors)

Common Agents: Dobutamine (inotrope), Dopamine, Norepinephrine (for cardiogenic shock)

Action: Increase cardiac contractility and/or systemic vascular resistance to maintain adequate perfusion pressure

Monitoring: Continuous cardiac monitoring, invasive blood pressure monitoring, urine output, lactate levels, signs of peripheral ischemia

Caution: Requires central line access. Extravasation causes tissue necrosis. Titrate carefully to avoid excessive vasoconstriction and increased myocardial oxygen demand.

"IDEA" for Bradycardia & Hypotension Management

When patients present with symptomatic bradycardia and hemodynamic instability, knowing the appropriate pharmacological interventions is critical. This mnemonic provides a logical escalation of therapy from first-line to advanced support.

I - Isoproterenol

Mechanism: Pure beta-agonist increases heart rate and contractility

Indication: Temporary measure in refractory bradycardia, particularly in heart transplant patients (denervated hearts don't respond to atropine)

Dose: 2-10 mcg/min IV infusion, titrate to heart rate

Key Point: Increases myocardial oxygen demand significantly; use with caution in ischemic heart disease

E - Epinephrine

Mechanism: Combined alpha and beta-adrenergic agonist providing inotropic, chronotropic, and vasopressor effects

Indication: Severe symptomatic bradycardia, cardiac arrest, anaphylaxis-related bradycardia

Dose: 2-10 mcg/min IV infusion for bradycardia; 1mg IV push every 3-5 minutes in cardiac arrest

Key Point: First-line agent in cardiac arrest algorithms (ACLS). Requires careful monitoring due to potent effects.

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D - Dopamine

Mechanism: Dose-dependent effects on dopaminergic, beta, and alpha receptors

Indication: Symptomatic bradycardia with hypotension when atropine fails or transcutaneous pacing unavailable

Dose: 5-20 mcg/kg/min IV infusion (use lowest effective dose)

Key Point: 2-10 mcg/kg/min primarily increases heart rate and contractility; >10 mcg/kg/min adds vasoconstriction

A - Atropine

Mechanism: Anticholinergic agent blocks vagal effects on SA and AV nodes, increasing heart rate

Indication: First-line for symptomatic bradycardia (HR <50 with signs of poor perfusion)

Dose: 0.5-1mg IV push, may repeat every 3-5 minutes (maximum 3mg total)

Key Point: Ineffective in heart transplant patients and infranodal blocks (Mobitz II, third-degree AV block with wide QRS). May paradoxically worsen bradycardia with doses <0.5mg.

"MONATAS" - Comprehensive MI Nursing Interventions

This evidence-based mnemonic encompasses the full spectrum of acute myocardial infarction management, integrating pharmacological and supportive care measures that registered nurses must implement rapidly and precisely.

M - Morphine

Purpose: Pain relief, anxiety reduction, hemodynamic benefits through vasodilation

Nursing Implementation: Administer 2-4mg IV push for chest pain unrelieved by nitroglycerin. Reassess pain level every 5-15 minutes. Monitor respiratory rate, blood pressure, and level of consciousness continuously. Patients with acute MI may experience severe pain that increases myocardial oxygen demand.

O - Oxygen

Purpose: Optimize myocardial oxygenation and reduce ischemic injury

Nursing Implementation: Apply supplemental oxygen if SpO2 <90% or signs of respiratory distress. Current evidence suggests targeting SpO2 94-98% rather than routine high-flow oxygen. Reassess frequently and adjust delivery method as needed (nasal cannula, non-rebreather mask, BiPAP).

N - Nitrates

Purpose: Reduce myocardial oxygen demand, improve coronary blood flow, relieve chest pain

Nursing Implementation: Administer sublingual nitroglycerin 0.4mg every 5 minutes × 3 doses for ongoing chest pain. If pain persists, initiate IV nitroglycerin infusion starting at 10 mcg/min. Hold for systolic BP <90 mmHg. Assess for headache and provide analgesia as needed.

A - Aspirin

Purpose: Immediate antiplatelet effect reduces mortality by preventing thrombus extension

Nursing Implementation: Administer 162-325mg chewable aspirin IMMEDIATELY upon suspicion of MI (unless contraindicated). Ensure patient chews tablet for faster absorption. This simple intervention reduces mortality by approximately 23% and is one of the most critical early interventions.

T - Thrombolytics

Purpose: Dissolve coronary artery thrombus in STEMI when PCI unavailable within 120 minutes

Nursing Implementation: Verify eligibility (STEMI with symptom onset <12 hours, no contraindications). Common agents include alteplase, tenecteplase, reteplase. Monitor for reperfusion arrhythmias and bleeding complications. Avoid invasive procedures. Goal: door-to-needle time <30 minutes.

A - Antiarrhythmics

Purpose: Prevent and treat life-threatening arrhythmias associated with acute MI

Nursing Implementation: Maintain continuous cardiac monitoring. Common agents include amiodarone (for ventricular arrhythmias), beta-blockers (to prevent arrhythmias and reduce oxygen demand), and lidocaine (alternative for ventricular arrhythmias). Have emergency equipment and medications immediately available.

S - Stool Softeners

Purpose: Prevent straining and Valsalva maneuver that increase myocardial oxygen demand

Nursing Implementation: Administer docusate sodium 100mg BID routinely. Educate patient to avoid straining with bowel movements. Monitor bowel patterns closely, especially with opioid administration. Simple intervention prevents dangerous increases in cardiac workload and potential arrhythmias during acute phase.

Essential Monitoring Parameters for All Cardiac Medications

Regardless of the specific cardiovascular medication administered, comprehensive nursing assessment and monitoring are fundamental to patient safety and optimal outcomes. These universal monitoring principles apply across all cardiac drug classes.

🩺 Hemodynamic Monitoring

- **Blood Pressure:** Check before each dose and regularly during therapy. Know hold parameters for each medication (typically systolic <100 mmHg).
- **Heart Rate:** Assess apical pulse for one full minute, especially with beta-blockers and calcium channel blockers. Hold if <60 bpm unless otherwise specified.
- **Orthostatic Vital Signs:** Monitor patients for postural hypotension, particularly when initiating therapy or increasing doses.
- **Cardiac Rhythm:** Continuous telemetry monitoring in acute settings. Assess for new arrhythmias or conduction disturbances.

🔬 Laboratory Monitoring

- **Electrolytes:** Potassium, magnesium, sodium (especially critical with diuretics and ACE inhibitors). Hypokalemia increases digoxin toxicity risk.
- **Renal Function:** BUN, creatinine, GFR. Many cardiac medications require dose adjustment or discontinuation with renal impairment.
- **Hepatic Function:** Liver enzymes with statins and amiodarone. Monitor for hepatotoxicity.
- **Therapeutic Drug Levels:** Digoxin levels (therapeutic range 0.5-2.0 ng/mL), amiodarone levels when indicated.

🫀 Cardiac-Specific Assessment

- **Signs of Heart Failure:** Daily weights, edema assessment, lung sounds (crackles), jugular venous distension, dyspnea.
- **Chest Pain:** Character, location, radiation, severity (0-10 scale), relieving/exacerbating factors. Document response to interventions.
- **Activity Tolerance:** Monitor for fatigue, exercise intolerance, dizziness, especially with beta-blockers and rate-controlling agents.
- **Perfusion:** Skin temperature, color, capillary refill, peripheral pulses, mental status changes.

⚠️ Adverse Effect Surveillance

- **Bleeding:** With anticoagulants and antiplatelets - assess for hematuria, melena, bruising, gingival bleeding, altered mental status.
- **Hypotension:** Dizziness, lightheadedness, syncope, falls. Particularly common when combining multiple antihypertensives.
- **Bradycardia:** Fatigue, dizziness, syncope. May require pacemaker with severe symptomatic bradycardia.
- **Medication-Specific:** ACE inhibitor cough, statin myalgias, diuretic ototoxicity, amiodarone pulmonary toxicity.

🎯 Expert Clinical Tip: The "Rule of 60s"

When administering cardiac medications, remember this quick safety check: If any vital sign parameter hits a threshold of 60 (HR <60, systolic BP <60+40=100, SpO2 <60+30=90), STOP and reassess before administering rate-lowering or pressure-lowering medications. While specific hold parameters vary by institution and medication, this mental framework provides a rapid safety assessment that prevents medication errors and adverse events. Always verify your facility's specific hold parameters and consult with the provider when parameters approach critical thresholds. Patient safety is paramount - when in doubt, hold the medication and clarify the order.