Example #3 – Feature

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Presentation Title: Drugs that Treat Hypertension, Heart Disease, and Hyperlipidemia: What the AT Needs to Know

Abstract Body: Cardiovascular diseases remain the leading cause of mortality worldwide, with hypertension, heart disease, and hyperlipidemia being the most prevalent and interrelated conditions. This presentation provides an overview of the pharmacological management of these disorders, emphasizing current therapeutic strategies, drug classes, and some emerging treatments. For hypertension, key classes of medications, including ACE inhibitors, angiotensin receptor blockers (ARBs), calcium channel blockers, and thiazide diuretics, will be discussed, highlighting their mechanisms of action and evidence-based use. In the management of heart disease, particularly ischemic heart conditions, beta-blockers, aldosterone antagonists, and nitrates play crucial roles. For hyperlipidemia, statins remain the cornerstone of therapy, supported by newer lipid-lowering agents including PCSK9 inhibitors, ezetimibe, and bempedoic acid. The presentation will also explore the integration of these therapies in patients with multiple comorbidities, focusing on treatment approaches, drug interactions, adverse responses, and side effects. Through this presentation, athletic training professionals will gain a concise yet thorough understanding of the pharmacotherapy landscape in cardiovascular disease prevention and management for patients, as well as for coaches, referees, parents, and bystanders.

Presentation Structure: Knowledge-based.

Level of Difficulty: Advanced

Domain(s): Domain 1: Risk Reduction Wellness and Health Literacy

Learning Objectives:

1. Identify the common drugs used in the treatment of hypertension, heart disease, and hyperlipidemia.

2. Discuss the mechanism of action of these drugs, and how they may interact with physical activity.

3. Distinguish the side effects, adverse reactions, and common interactions for these drugs.

Clinical Bottom Line: Athletic trainers should be aware that medications for hypertension, heart disease, and hyperlipidemia can impact exercise tolerance, hydration status, and recovery. Common side effects—such as dizziness from beta-blockers or diuretics, muscle cramps or weakness from statins, and fatigue from antihypertensiveimpa medications—may affect athletic performance and necessitate adjustments to activity levels. Effective management of hypertension, heart disease, and hyperlipidemia requires careful consideration of adverse drug reactions (ADRs), side effects, and potential drug-drug interactions. Understanding potential drug interactions and monitoring for adverse effects can help athletic trainers support safe and effective treatment plans for athletes with cardiovascular conditions.

Identify the professional practice gap and/or educational need the content addresses: Many Athletic Trainers have received little to no education in pharmacology. Drugs for heart conditions are common and frequently interact with other drugs and physical activity. Increased education in this area will empower athletic trainers to collaborate more effectively with healthcare providers and adapt treatment protocols to support the health and performance of athletes on cardiovascular medications.

3 Peer-Reviewed References:

1. Chou R, Dana T, Blazina I, et al. Statins for Prevention of Cardiovascular Disease in Adults: Evidence Report and Systematic Review for the US Preventive Services Task Force. JAMA 2016; 316:2008.

2. Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Hypertension 2018; 71:e13.

3. Fihn SD, Gardin JM, Abrams J, Berra K, Blankenship JC, Dallas AP, Douglas PS, Foody JM, Gerber TC, Hinderliter AL, King SB 3rd, Kligfield PD, Krumholz HM, Kwong RY, Lim MJ, Linderbaum JA, Mack MJ, Munger MA, Prager RL, Sabik JF, Shaw LJ, Sikkema JD, Smith CR Jr, Smith SC Jr, Spertus JA, Williams SV; American College of Cardiology Foundation. 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS guideline for the diagnosis and management of patients with stable ischemic heart disease: executive summary: a report of the American College of Cardiology Foundation/American Heart Association task force on practice guidelines, and the American College of Physicians, American Association for Thoracic Surgery, Preventive Cardiovascular Nurses Association, Society for Cardiovascular Angiography and Interventions, and Society of Thoracic Surgeons. Circulation. 2012 Dec 18;126(25):3097-137. doi: 10.1161/CIR.0b013e3182776f83. Erratum in: Circulation. 2014 Apr 22;129(16):e462. PMID: 23166210.

Special Requests: