

CENTENE PHARMACY AND THERAPEUTICS
THERAPEUTIC CLASS MATRIX
GPI Code 31: Cardiotonics
1Q18 January - February

Review Time Frame: November 2016 – October 2017

Background:

Cardiotonics in GPI class 31 include parenteral agents (e.g., milrinone in dextrose, milrinone lactate) and cardiac glycosides (e.g., digoxin, digitoxin). Since parenteral cardiotonics are generally not covered under pharmacy benefits, only cardiac glycosides will be reviewed here.

Digoxin is a cardiac glycoside indicated for the treatment of heart failure and to control resting ventricular rate in patients with chronic atrial fibrillation. Digoxin inhibits the sodium/potassium ATPase membrane pump, which regulates intracellular sodium and potassium. The cardiologic consequences of these direct and indirect effects are an increase in the force and velocity of myocardial systolic contraction (positive inotropic action), a slowing of the heart rate (negative chronotropic effect), decreased conduction velocity through the AV node, and a decrease in the degree of activation of the sympathetic nervous system and renin-angiotensin system (neurohormonal deactivating effect).

New Drugs:

None identified.

Discontinued Drugs:

None identified.

FDA Safety Warnings:

None identified.

REVIEW RECOMMENDATION

There is no existing clinical guidance for this drug class.

References:

1. US Food and Drug Administration. Available at: www.fda.gov. Accessed November 16, 2017.
2. Page RL, Joglar JA, Caldwell MA, Calkins H, Conti JB, Deal BJ, Estes NAM 3rd, Field ME, Goldberger ZD, Hammill SC, Indik JH, Lindsay BD, Olshansky B, Russo AM, Shen W-K, Tracy CM, Al-Khatib SM. 2015 ACC/AHA/HRS guideline for the management of adult patients with supraventricular tachycardia: executive summary: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2016;133:e471–e505.DOI: 10.1161/CIR.0000000000000310.
3. January CT, Wann LS, Alpert JS, et al. 2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation. *Circulation*. 2014; 130: e199-267.