

CENTENE PHARMACY AND THERAPEUTICS
THERAPEUTIC CLASS MATRIX
GPI Code 38: Vasopressors
1Q18 January - February

Review Time Frame: November 2016 – October 2017

Background:

Vasopressors increase mean arterial pressure by inducing vasoconstriction. They are used to manage shock, including cardiogenic shock, septic shock, and anaphylactic shock, with the selection of a specific agent depending on the etiology of the shock. They produce their effect through interaction with the following adrenergic receptors:

- Alpha-1 adrenergic receptors: located in vascular walls, stimulation of these receptors results in significant vasoconstriction. Alpha-1 receptors are also found in the heart and can increase contraction duration without increasing chronotropy.
- Beta adrenergic receptors: beta-1 receptors are most commonly found in the heart; their stimulation increases inotropy and chronotropy with minimal vasoconstriction. Beta-2 receptors are found in blood vessels; stimulation of these receptors induces vasodilation.
- Dopamine receptors: stimulation of these receptors, which are present in the renal, splanchnic (mesenteric), coronary, and cerebral vascular beds, produces vasodilation. However, there is a subtype of dopamine receptors that produce vasoconstriction via induction of norepinephrine release.

New Drugs:

Date of Approval	Drug Name	FDA-Approved Indication(s)	Approval Type	Commercial Availability
01/27/17	Ephedrine sulfate (Corphedra)	Treatment of clinically important hypotension occurring in the setting of anesthesia	<input type="checkbox"/> New entity <input type="checkbox"/> New formulation <input type="checkbox"/> New combination <input type="checkbox"/> New indication <input type="checkbox"/> First time generic <input checked="" type="checkbox"/> New brand (existing agent)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
06/15/17	Epinephrine 0.3 mg/0.3 mL (Symjepi)	Emergency treatment of allergic reactions (type I) including anaphylaxis	<input type="checkbox"/> New entity <input checked="" type="checkbox"/> New formulation (<i>single dose prefilled syringe for manual SC/IM injection</i>) <input type="checkbox"/> New combination <input type="checkbox"/> New indication <input type="checkbox"/> First time generic <input type="checkbox"/> New brand (existing agent)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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Discontinued Drugs:

None identified.

FDA Safety Warnings:

None identified.

REVIEW RECOMMENDATION

There is no existing clinical guidance for this drug class.

References:

1. Manaker S. Use of vasopressors and inotropes. Parsons PE (Ed.), UpToDate. Waltham, MA. Accessed November 7, 2017.
2. US Food and Drug Administration. Available at: www.fda.gov. Accessed November 7, 2017.
3. Rhodes A, Evans LE, Alhazzani W, et al. Surviving sepsis campaign: international guidelines for management of sepsis and septic shock: 2016. Crit Care Med. 2017; 45(3): 486-552.