Policy Brief

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Cost-Effectiveness of SGLT2 inhibitors as addon treatment prior to hospital discharge among patients with Heart Failure in India

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Recommendations:

- The administration of add-on SGLT2i therapy to heart failure patients with reduced ejection fraction in India is not a cost-effective option at current market prices.
- At the cost effectiveness cut off of 1 GDP (INR 2,31,784) for procurement in public health programmes, the proposed intervention will be cost effective after reduction of price by 71%.
- To explore strategies to reduce the market price of SGLT2 inhibitors, including price negotiation with the manufacturers for its inclusion in the treatment packages.
- The administration of add-on SGLT2i therapy to heart failure patients with reduced ejection fraction in India is a cost-effective option when procured at Jan Aushadhi prices.

Key Findings:

- Addon SGLT2 inhibitors are not cost-effective compared to standard care for HFrEF patients at the current market prices of drugs and one GDP per capita willingness-to-pay (WTP) threshold in India.
- Considering the current market price, only after a 71% reduction in the average annual market price of SGLT2i drugs (from ₹12,124 to ₹3,516) the add-on SGLT2i therapy could become cost-effective for HFrEF patients.
- Addon SGLT2 inhibitors is cost-effective compared to standard care for HFrEF patients if procured at Jan Aushadi drug prices and at one GDP per capita WTP threshold.
- SGLT2 inhibitors provide significant gains in life years for HFrEF populations. The clinical benefits observed support their consideration in treatment protocols.

Background

- Heart Failure affects 1.3 to 23 million in India, with an annual incidence of 0.5–1.8 million.
- SGLT2i improves cardiorenal outcomes, decreases mortality, reduces heart failure-related hospitalizations, and enhances quality of life indicators in patients with chronic heart failure.
- A cost-utility analysis evaluated the addition of SGLT2 inhibitors to standard care for heart failure patients with reduced ejection fraction (HFrEF) in India, compared to standard care alone.

PICO	Description of the components of PICO
Population	Patients with all-cause hospitalization heart failure above the age of 18 years with reduced ejection fraction
Intervention	SGLT2i: Empagliflozin, Dapagliflozin, Canagliflozin (as per their standard dosages) as an add-on therapy to standard of care (SC)
Comparator	Standard of care (beta-blockers (BB), angiotensin-receptor neprilysin inhibitors (ARNi), angiotensin receptor blockers (ARB), and mineralocorticoid receptor antagonists (MRA).
Outcome	Incremental Cost-utility Ratio (ICUR) per QALY gained or Incremental Net Benefit (INB)

Price Reductions Required for SGLT2 Inhibitors to Achieve Cost-Effectiveness as Add-On Therapy for HFrEF Patients

Drug name	cost-effective price per tablet (₹)
Empagliflozin	9.48 ↓ (67%)
Dapagliflozin	9.44 ↓ (19%)
Canagliflozin	9.63 ↓ (84%)

Conclusion

- At current market prices, Addon SGLT2 inhibitors is not cost-effective treatment option for HFrEF patients in India.
- Addon SGLT2 inhibitors offer longer life years than standard of care alone for HFrEF patients.
- Threshold analysis considering current market price, addon SGLT2i would be cost-effective only after price reduction of median market price of SGLT2i (average 71% reduction); 67% price reduction per tablet of Empagliflozin from ₹28.75 to ₹9.48, a 19% price reduction per tablet of Dapagliflozin, from ₹12 to ₹9.44, a 84% price reduction per tablet of Canagliflozin, from ₹59 to ₹9.63.
- At Jan Aushadhi prices, Addon SGLT2 inhibitors is a cost-effective treatment option for HFrEF patients in India.