SUPPLEMENTARY MATERIAL

Supplementary Table 1S. Principles of the '*Reference Case for Estimating the Costs of Global Health Services and Interventions*' proposed by the Global Health Cost Consortium.

Topic	Principles	Description
Study design	The purpose of the study, population, and intervention and/or service should be clearly defined	To estimate the cost of three critical healthcare-associated infections (HAIs) in adults, paediatric, and neonatal ICU participating of a nationwide prevention project in Brazil using an improvement science model.
	The perspective of the cost estimation should be stated and justified relevant to purpose.	Public Brazilian Healthcare system perspective. All participants intensive care units (ICUs) were part of the Unified Health System (*sistema único de saúde* or *SUS*), using financial indicators based on SUS information.
	The type of cost estimated should be defined and justified relevant to purpose	We estimated the micro-cost following the local guidelines recommended by the Brazilian Ministry of Health.

	The 'units' in the unit costs should be defined, relevant for the costing purpose, and generalizable.	Cost per each analyses HAI: central line-associated bloodstream infections, ventilator-associated pneumonia, and catheter-associated urinary tract infections.
	The time horizon should be of sufficient length to capture all costs relevant for purpose	The time-horizon was established by the project duration (September 2021 to December 2023).
Resource use measurement	The scope of the inputs to include in the cost estimation should be defined and justified	We considered the direct costs, including both fixed and variable costs, involved in providing care and assistance during the hospitalisation of patients with the analyzed HAI.
	The methods for estimating inputs should be stated, including data sources and criteria used for the allocation of shared costs	We used the absorption model ('top-down') as appropriated.
	The sampling strategy should be determined by the precision demanded by the costing purpose	The participating ICU were selected by non-randomized sample based on the Ministry of Health priorities, including

	and designed to minimize bias	institutions representing the five Brazilian macroregions.
	The selection of the data source for estimating service use should be described, with potential biases reported in the study limitations	The analysed HAI were diagnosis using the national (Anvisa) and international recommendations (CDC). Data was extracted from the electronic system databases from each participating institution. Limitations are reported.
	Consideration should be given to the timing of data collection	The temporal framework for this evaluation was anchored to the quality improvement initiative duration, spanning from September 2021 to December 2023.
Pricing and valuation	The sources for price data should be listed by input, and clear delineation should be made between local and international price data sources, and tradable and non-tradable goods	Expenditure records and purchase orders using the local price data resources based on the SUS information (Brazilian Ministry of Health)
	Capital costs should be appropriately amortized or depreciated to reflect the expected life of capital inputs	Not applicable (time horizon less than five years)

	Where relevant an appropriate discount rate, inflation and currency conversion rates should be used, and clearly stated	Costs are presented in Brazilian currency (Real – BRL$) but also presented in international dollars (Intl$) using the last corresponding year: 2023.
	The use and source of shadow prices, for goods and for the opportunity cost of time, should be reported.	No adjustments
Analyzing and presenting results	Cost estimates should be communicated clearly and transparently to enable decision-maker(s) to interpret and use the results	No conflict of interest.
	The cost of the intervention for sub-populations and other areas of heterogeneity should be explored	The following subgroups analyzed costs: (1) macroregions (2) type of ICU (adult, paediatric, and neonatal).
	The uncertainty associated with cost estimates should be appropriately characterized.	95% confidence interval were reported. Univariate sensitivity analysis was also performed for main cost

	parameters involved.
Transparency	All used methods are communicated clearly and transparently following an open and free national guideline.