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Economic viability outcome of assisted reproduction technology setup: Mathematical model

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ABSTRACT

Objective: To develop an evaluation method measuring the economic viability outcome of assisted reproductive technology (ART) setup in a concerted fashion. **Methods:** A mathematical model namely; economic viability outcome (EVO) value has been purposely constructed. The model consists of three important domains: 1) Economic performance outcome of the setup; 2) Sustainability outcome; and 3) Control outcome. The model was put to the test at Banoon ART centre, the military hospital in Bahrain during the period Sep 2004 to Sep 2006. **Results:** When this model was stringently applied at the said centre, the EVO value was increased by 40% from 0.84 to 1.40 within 12 months of rectifications which started Sep 2005. Even though the economic performance has dropped by approximately 22%, due to an extra spending towards assets and lower utilization of treatment cycles, the centre showed improvements at various levels as evident from the resulting higher EVO value. **Conclusions:** EVO value as a model provides a mechanism by which ART setup can be economically evaluated and self-assessed. It can also generate a method for measuring the safety and efficacy of the treating centre.

KEYWORDS

Economic Viability Outcome Value; ART Setup; Economic Performance; Success Rate Variance; Compliance Factor

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