

## Economic perspective of evaluating fertility treatment in obese and overweight infertile women

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**Background:** Excess body weight is associated with adverse effects on longevity, disability-free life-years, quality-of-life, and productivity. The higher the proportion of the population that is overweight and obese, the commanding is the use of health services, which is followed by a higher treatment costs for the obesity-related diseases than in normal weight population. Moreover, rapidly expanding evidence suggests that excess body weight is linked to many additional disorders, including infertility, contributing to the cost burden. Therefore, we are working towards vision 2030 to decrease the cost of the infertility services provided to the patient and increase the effectiveness of the ART procedures in Saudi Arabia.

**Objectives:** Since infertility is associated with obesity and leads to economic burden in the form of failed ART, we aimed to evaluate the economic consequences of overweight and obese infertile women regarding successful fertility treatment and associated higher costs. We will assess the impact of overweight and obesity on the ART outcomes that may increase the cumulative cost.

**Methodology:** Retrospective cohort study for analysis of infertility patients receiving IVF. Utilities were taken from collected data. Cost were estimated from the type and number of intervention used. The analysis was performed from research department. For IVF, the costs and clinical outcomes associated were compared with different weight groups (obese, overweight and normal weight). The incremental cost for each cohort of clinical outcome were

calculated as Incremental Cost-Effectiveness Ratios (ICER). The incremental cost-effectiveness ratios for various cohorts were ranked to assess funding priorities. All parameters and observable variables were taken into account and then probabilistic sensitivity analysis by means of Bayesian method was used for health economic assessment. Multivariate analyses by putting all of the inputs at the same time across their plausibility ranges was done. The extent of uncertainty in sensitivity analyses was minimized by deriving cost from actual clinical data, and it was representing the 95% CIs around various point estimates.

**Conclusion:** The statistically significant relationship of obesity to the IVF outcomes, direct us to have introduced lifestyle measures before starting affluent IVF treatment. It will help us to develop a framework within which the consequences of fertility treatment and outcomes of resultant pregnancy can be evaluated simultaneously for infertile women in different body weight categories.

### Speaker Biography

Munazzah Rafique is currently working as clinical research specialist in health information standardization department at King Fahad Medical City. She has worked as physician managing highly complex cases in King Fahad Medical City Riyadh with big patient population and diverse problems in Obstetrics and Gynecology. She has worked as dedicated Ob/Gyn Resident with accomplished background with sound knowledge in the field of Obstetrics and gynecology and worked with the team of professional which enhanced her teaching skills. She is an active participant of research work currently engaged in research processes having visionary leadership style with the ability to inspire confidence and creatively solve problems, remove obstacle and achieve breakthrough results.

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