The long-term fiscal impact of funding cuts for IVF in Denmark

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Since 2010, free public health services in Denmark no longer extend towards assisted reproduction treatments (ART). However, publicly funded treatment provides economic benefits to governments with ART births positively influencing long-term net tax revenue, the 27th Annual Meeting of the European Society of Human Reproduction and Embryology heard Wednesday.

In 2009, 1,547 ART children were born in public clinics in Denmark, projecting a net tax revenue of €224 million and €247 million in 25 and 50 years respectively. The authors of the study calculated that reductions of 30-50% in ART cycles following the new policy would lead to cost savings of €67 - €111 million for the Danish government in 2034. By 2059 however, when the IVF cohort are 50 years of age, the government would have lost €74 - €123 million due to less tax contributions from fewer children born.

"The most common argument governments use not to fund ART is that fertility treatments are too expensive," said Mark Connolly, lead author of the study, University of Groningen. "Infertility is perceived to be a low priority illness that focuses on unmet needs of present day society. However, when the broader consequences of fertility funding are considered, many of today's fiscal problems such as the ageing population, low birth rates and the declining number of working adults are all partly mitigated by ART conceived children, which in some countries represent 4-5% of the future work force."

An investment of €11,097 for an ART conceived singleton born to a woman younger than 40 is valued at €155,700 and €154,360 in cumulative discounted net tax revenue, when the child is 25 and 50 respectively. For a woman aged over 40, where the cost per birth is €26,147, the investment is valued at €170,470 and €139,600.

"Although investments in reproductive medicine take many years for governments to benefit, the net tax receipts are comparable with naturally conceived children," said Søren Ziebe, co-author of this study, Rigshospital at Copenhagen University. "Both ART conceived and naturally conceived children show a negative balance for the Danish government at age 25. However, at 50 years of age, after 30 years of tax contributions, the net tax benefit of both types of children is considerably high for the state."

The scientists used a modified generational accounting framework to estimate the return on investment for the Danish government based on public funding of IVF and ICSI (intracytoplasmic sperm injection). In the model, publicly funded IVF-treatment costs were added to the sum of discounted age-specific transfers between the government and the individual (tax contributions, healthcare, social benefits, education and retirement contributions) to calculate the net present value of investment in ART. This was compared to naturally conceived children, using the same calculation without ART cost depreciation. This analysis is based on annualised net tax receipts attributed to a single year of ART children and would be equally applicable in subsequent years, therefore compounding the fiscal effects of the policy change over time.

The average cost per live birth was estimated as €2,675 per cycle. The model assumed a 30-50% reduction in ART births following the implementation of the new policy. The authors believe this to be an underestimate since only IVF/ICSI births in public clinics were considered. This estimated reduction is comparable to Germany, when

the government introduced co-payments for ART of 50% in 2004. This resulted in an estimated 10,000 fewer births in one year, a small but meaningful demographic impact.

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