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NHSEED - - Economic Study or Review

## **PGD for all cystic fibrosis carrier couples: novel strategy for preventive medicine and cost analysis**

**Code:**

NHSEED-22011000093

**Year:** 2010

**Date:** 2010

**Author:** Tur-Kaspa I

### **Study design (if review, criteria of inclusion for studies)**

Cost-benefit analysis

### **Participants**

CF carrier-couples

### **Interventions**

IVF with preimplantation genetic diagnosis (PGD)

### **Outcome measures**

The amount spent to deliver healthy children for all CF carrier-couples by IVF-PGD was compared with the average annual and lifetime direct medical costs per CF patient avoided.

### **Main results**

Treating annually about 4000 CF carrier-couples with IVF-PGD would result in 3715 deliveries of non-affected children at a cost of \$57,467 per baby. Because the average annual direct medical cost per CF patient was \$63,127 and life expectancy is 37 years, savings would be \$2.3 million per patient and \$2.2 billion for all new CF patients annually in lifetime treatment costs. Cumulated net saving of an IVF-PGD program for all carrier-couples for 37 years would be \$33.3 billion. A total of 618,714 cumulative years of patients suffering because of CF and thousands of abortions could be prevented.

### **Authors' conclusions**

A national IVF-PGD program is a highly cost-effective novel modality of preventive medicine and would avoid most births of individuals affected with debilitating genetic disease.

<http://dx.doi.org/10.1016/j.rbmo.2010.04.031>

### **See also**

Reproductive BioMedicine Online YR: 2010 VL: 21 NO: 2 PG: 186-195

### **Keywords**

Preimplantation Genetic Diagnosis\_PGD; Prenatal Diagnosis; diagnostic procedures; non pharmacological intervention - diagn; Carrier Status; Heterozygote;