Background

• The non-invasive prenatal screening (NIPT) test, available as of October 2011, allows couples to learn whether their fetus has Down syndrome (DS) as early as 9 weeks into gestation.

• Given the availability of this test, more couples are expected to receive a prenatal test for DS.

• Some may be concerned about the financial impact of having a child with DS.

• Previous research has examined the impact of having a child on parents’ earnings.

• To our knowledge, no research has examined the effect of noninvasive prenatal testing on the income growth trajectory of parents of children with DS as compared to parents of children without a chromosomal condition.

Study Objective

To determine whether the rate of income growth among parents of children with DS differs from that among parents of children without chromosomal conditions.

Methods

Data

• Data from the OptumHealth Reporting and Insights-employee-based claims database were used in this retrospective cohort study.

• The database contains administrative claims (medical and pharmacy claims) and eligibility information for over 18 million members. It included insured members, regardless of their employer, including primary subscribers and their covered dependents.

• A panel of pairs of consecutive years of parents’ income information was created.

• Observations time for each child were defined as the number of consecutive years with income data available for the parent.

• Observation time within the panel for each child ranged from one to six years (N=17,063 if panel members had discernable demographic and enrollment characteristics to use in the matching algorithm).

• After matching, parents of children with DS were similar to their matched controls on baseline characteristics.

• P-values before matching were calculated using Wilcoxon rank-sum tests for continuous variables and chi-square tests for categorical variables.

• P-values after matching were calculated using McNemar tests and Wilcoxon signed-rank tests.

• Percentages calculated from log differences using the following equation: average change=emean log difference – 1.

• Propensity scores were not calculated separately for mothers and fathers, and thus residual confounding may remain.

Study Results

• Parents of children with DS had lower mean annual income growth rate than their matched controls (4.6% vs. 4.1%, p=0.037).

• The potential impact on income growth is a part of the financial consideration for parents receiving a prenatal test.

• The findings cannot be generalized to secondary earners, among whom the impact may be different.

References


