# What motivates adopted individuals to pursue elective genetic testing?

## Findings from the Sanford Chip Program

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## Background

- **Elective genetic testing (EGT) may help individuals who are adopted (adoptees) with limited access to family history information understand their inherited risks.**
- **In 2018, Sanford Health launched the Sanford Chip, an EGT program available to primary care patients that included panel pharmacogenomic testing and optional screening for Mendelian disease risks.**

## Methods

- **A survey was administered upon program enrollment from August 2020 to April 2022.**
- **Survey items assessed participants' motivations, expectations, and concerns about pursuing testing, as well as demographic characteristics, including adoption status.**
- **Additional demographic data was collected from the electronic medical record (EMR).**
- **To be included in analyses, patients must have received EGT results, have answered the adoption status question, and have demographic data available from the EMR.**
- **Data were analyzed using bivariate analyses.**

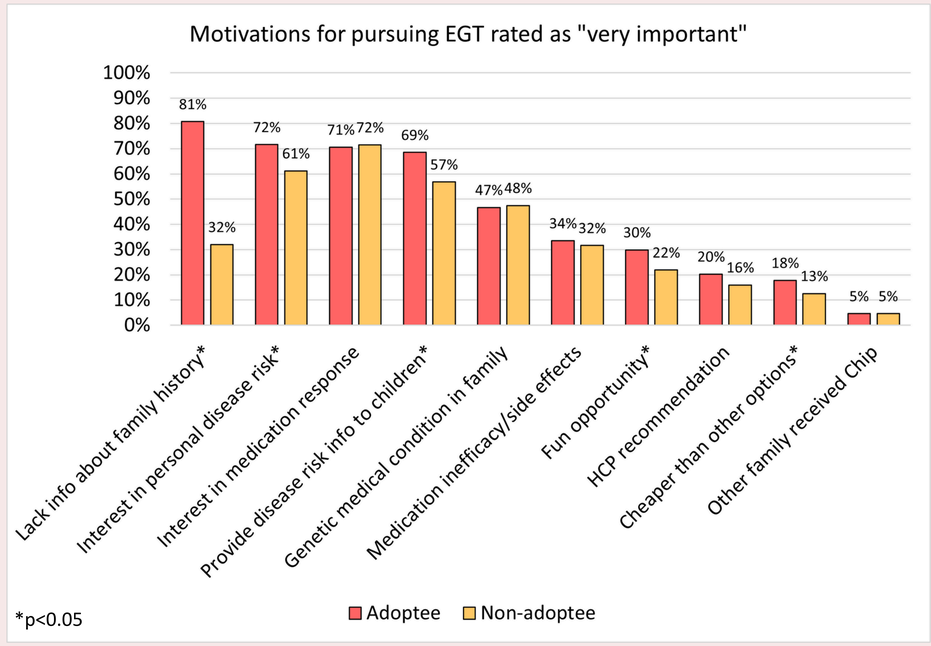
**Demographic characteristics**

| | Adoptee (n=197) | Non-adoptee (n=5,602) | p-value |
|---|---|---|---|
| Age (median, IQR) | 48.7 (17.7) years | 52.0 (25.9) years | 0.044* |
| Male<br>Female | 119 (60.4%)<br>78 (39.6%) | 3,530 (63.0%)<br>2,072 (37.0%) | 0.457 |
| BMI, mean (sd) | 33.6 (9.1) | 31.6 (8.4) | 0.001* |
| Current smoker | 31 (15.7%) | 418 (7.5%) | <0.001* |
| Currently married | 126 (64.0%) | 3,847 (68.7%) | 0.170 |
| Number of children, mean (sd) | 1.9 (1.4) | 1.8 (1.4) | 0.477 |
| Self-reported race<br>American Indian or Alaska Native<br>Asian<br>Black or African American<br>Native Hawaiian or Pacific Islander<br>White<br>Other race<br>Two or more races | <br>8 (4.1%)<br><5 (<3%)<br><5 (<3%)<br><5 (<3%)<br>170 (86.3%)<br><5 (<3%)<br>10 (5.1%) | <br>25 (<1%)<br>28 (<1%)<br>27 (<1%)<br><5 (<1%)<br>5,344 (95.4%)<br>34 (<1%)<br>119 (2.1%) | <0.001* |
| Self-reported ethnicity<br>Hispanic or Latino<br>Non-Hispanic or Latino | <br>9 (4.6%)<br>186 (94.4%) | <br>107 (1.9%)<br>5,476 (97.8%) | 0.008* |

*p<0.05

## Results

**Figure 1**




- **Adoptees were more likely than non-adoptees to report lack of information about their family history as a very important motivation for pursuing the Sanford Chip (81% vs 32%; p<0.001; Figure 1); moreover, they were more likely to rate it as their most important motivation (45% vs 5%; p<0.001).**
- **Adoptees were more likely than non-adoptees to expect that the Sanford Chip would explain a family history of disease (52% vs 43%; p=0.004).**
- **There were no differences in concerns between adoptees and non-adoptees.**

## Conclusions

- **A lack of family history information is an important reason why EGT is pursued by adoptees, who may hope it will identify inherited risks for disease.**
- **Findings may provide insight into the motivations for pursuing EGT among other populations who may similarly lack family history information, such as donor-conceived individuals.**

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