

Provider & Patient Uptake of Prenatal cfDNA Screening at an Earlier Gestational Age



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Background

- In November of 2024, prenatal cell free DNA (pcfDNA) aneuploidy screening via a whole genome sequencing assay that utilizes fetal fraction amplification became clinically available at 8 weeks gestation.
- While several factors may influence uptake of pcfDNA at an early gestational age (EGA=8w0d – 9w6d gestation), it was anticipated that providers and patients, particularly in states with restrictive abortion policies, would desire pcfDNA screening at an EGA.
- As a first step to understand EGA ordering patterns, we describe the geographical distribution of ordering providers and patient demographics.

Methods

- A retrospective analysis was performed on pcfDNA screening samples received between November 2024 and March 2025 in patients ≥18 years.¹
- The percentage of samples ordered at an EGA was calculated nationally, for each state (DC included, HI and AK excluded with <50 samples total), and for 12 major cities. A state or a city may be included because it has ≥50 tests but may have a small number of providers ordering those tests.
- The Guttmacher Institute categories describing access to abortion by state (“Most restrictive,” “Very restrictive,” “Restrictive,” “Some restrictions,” “Most protective,” “Very protective,” and “Protective”) were used to compare state differences in EGA proportion (ANOVA and Kruskal-Wallace analyses).²
- The proportion of EGA and non-EGA patient samples were calculated for each ethnicity and compared to all patients using chi-square analyses with p-value adjustment using the Benjamini-Hochberg FDR method.

Results

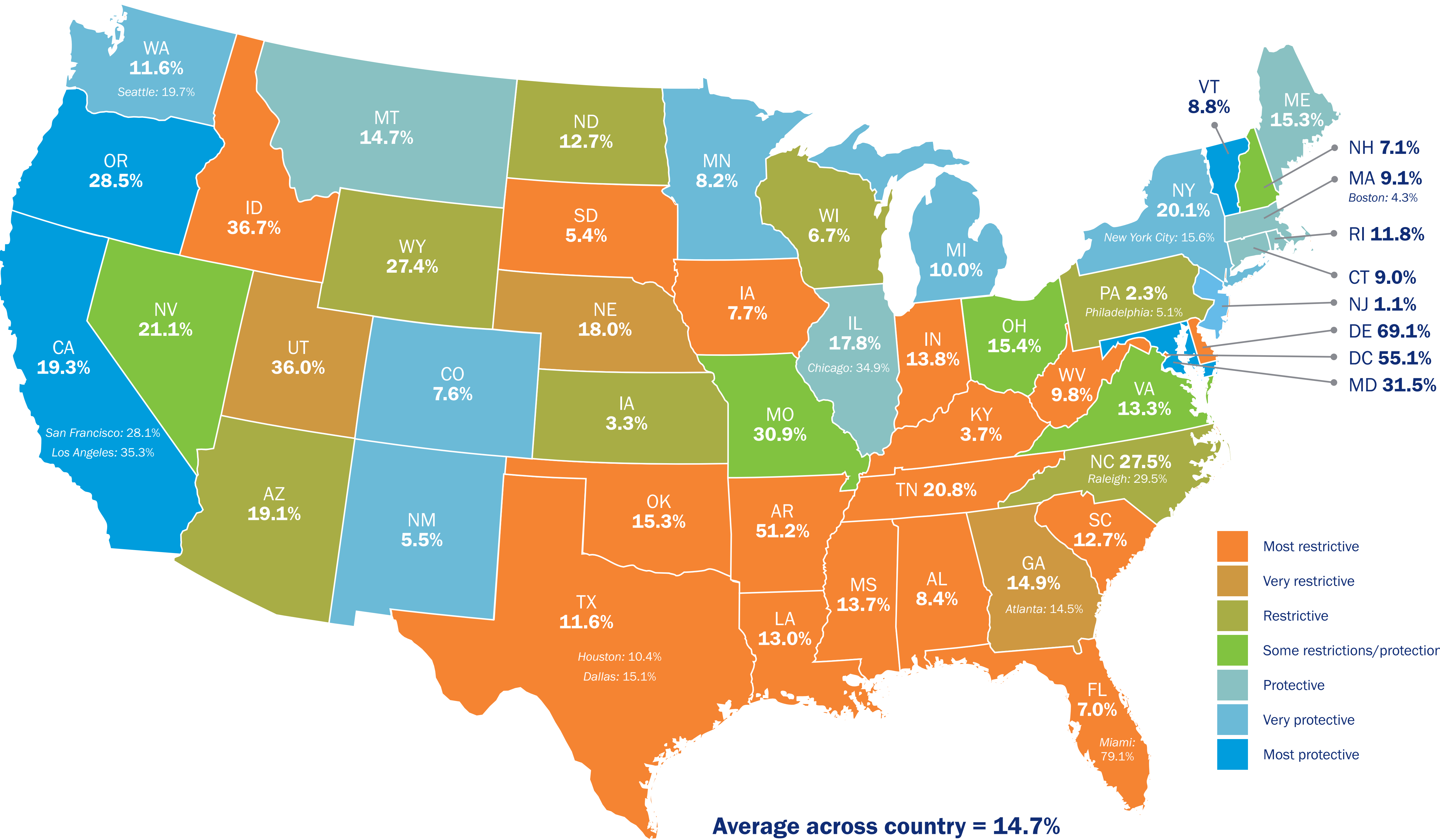
- 13,328 EGA pcfDNA orders were analyzed.
- Median maternal age was 30 years (range: 18-49 years) in the EGA group and 29 years (range: 18-58 years) in the non-EGA group.
- Those reporting ethnicities of unknown/not given and “other white” were significantly more likely to have ordered at EGA (both p<0.001), and those reporting Hispanic or African/African American ethnicity were significantly less likely to have ordered at EGA (both p<0.001), compared to other ethnicities.
- Across states, the percentage of EGA samples ranged from 1.1% (NJ) to 69.0% (DE), with an average of 14.7% (**Table 1** and **Figure 1**).

Table 1. State EGA Proportions in Comparison with the National Average of 14.7%

Above National Average	Below National Average
AZ, AR, CA, DE, DC, GA, ID, IL, MD, ME, MO, NE, NV, NC, NY, OH, OK, OR, TN, UT, WY	AL, CO, CT, FL, IA, IN, KS, KY, LA, MA, MI, MN, MS, MT, NH, NJ, NM, ND, PA, RI, SC, SD, TX, VT, VA, WA, WV, WI

- The percentage of EGA samples from major cities were Miami 71.9%, Los Angeles 35.3%, Chicago 34.9%, Raleigh/Durham 29.5%, San Francisco 28.1%, Seattle 19.7%, New York City 15.6%, Dallas 15.1%, Atlanta 14.5%, Houston 10.4%, Philadelphia 5.1%, and Boston 4.3% (**Figure 1**).
- No difference in the percentage of EGA samples across abortion access categories was seen (p>0.1).

Figure 1. Percentage of EGA Samples Across States Compared to Guttmacher Institute Categories



Conclusions

- This analysis provides a preliminary insight into ordering patterns of pcfDNA at an EGA.
- Despite the hypothesis that patients from states with more restrictive abortion policies might opt for pcfDNA at an EGA, no association was seen.
- This suggests that additional factors, including provider knowledge of availability of pcfDNA at EGA, availability of diagnostic options (CVS), and population demographics, may play a role in the decisional strategy for use of pcfDNA at EGA. We will revisit the analysis when each territory has more ordered tests and more ordering providers.

References: 1. Myriad Internal Data: November 2024 - March 2025. 2. Interactive Map: US Abortion Policies and Access After Roe. (2025, August 19). Guttmacher. <https://states.guttmacher.org/policies>. Disclosures: All authors were employees of Myriad Genetics, Inc. at the time of this study and received salaries and stock as compensation.