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**JOURNEY LEVEL ANALYSIS OF PROGRESSION TO TREATMENT VERSUS DROP OUT IN A
LARGE COHORT OF PATIENTS WITH ACCESS TO A DEFINED FERTILITY BENEFIT**

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OBJECTIVE:

To evaluate variables associated with progression to ART treatment versus with patient drop-out.

DESIGN:

Retrospective Multi-Center Study

MATERIALS AND METHODS:

Between January 2018 and July 2019, a total of 8,441 patient journeys were analyzed based on intention to initiate IVF treatment. Data points included factors relating to patient drop-out versus accessing Assisted Reproductive Technologies. Relevant factors in this study include the number of provider locations the patient had access to within their CBSA (Core Based Statistical Area), age at time of appointment, number of calls/emails made before an initial consultation. Further classifications were assumed based on the patient's geographic location, region, and etiology of infertility. Missing CBSA clinic options were substituted with average clinic option counts. Hypothesis tests were performed using Chi Square tests for independence of categorical variables as well as t-tests for continuous variables. A multivariable logistic regression was performed in order to model the likelihood of a patient initiating treatment.



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RESULTS:

Hypothesis testing determined a significant difference between CBSA provider counts ($P < .0001$), Patient inquiries ($P < .0001$), male diagnosis ($P < .0020$), age quartiles ($P < .0001$) with treatment progression. No univariate significant association was determined when comparing coastal status of patients and treatment status. A multivariable analysis was also examined to adjust for confounding factors. The odds of progressing to treatment was significantly associated with an increase in CBSA clinic options (OR 1, [95% CI 1.001-1.008], $p = 0.0047$) as well as the number of patient inquiries (OR 1.032, [95% CI 1.020-.1.046], $p < .001$). Using a third quartile range age group as reference, the odds of treatment progression was significantly different amongst the first age quartiles and the third age quartile ranges (OR .605, [95% CI .526 - .696], $p < .0001$). For patients with a male infertility diagnosis the odds of treatment progression was determined to be 39.96% lower than other diagnosis (OR .604, [95% CI .425 - .858], $p < .0049$). Patients living in Coastal states were determined to have an approximately 14% lower likelihood of progressing to treatment (OR .863, [95% CI .763 - .976], $p < .0186$).

CONCLUSIONS:

In the largest multi-center study to date analyzing patient drop out, we identified that patients with multiple contacts with patient care advocates were more likely to access treatment, and that patients with male factor were less likely to progress. We plan to use this data to improve support systems of the patient and the partner and increase contact points with couples presenting for fertility treatment.