

DISTANCE TO CARE AS A PREDICTOR OF LOSS TO FOLLOW-UP IN ADOLESCENT EATING DISORDER TREATMENT

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Background: This study examines whether distance to care predicts loss to follow-up in adolescents and young adults (AYA) receiving treatment for eating disorders.

Materials/Methods: Retrospective data on 10-25-year-old AYA meeting DSM-IV criteria for anorexia nervosa (AN), bulimia nervosa (BN), or EDNOS were reviewed in a secondary data analysis. AYA were evaluated at a large children's hospital between 2004-2008 and had at least one documented follow-up visit. Zip code centroids were generated with ArcGIS, a geographic information system, to estimate Euclidean distance, network travel distance, and travel time between primary residence zip codes and the hospital. Data from 235 patients were reviewed with 202 included in the final analysis. Data were analyzed using STATA/IC 15.1. Predictors, outcomes, and interaction variables were defined a priori. Descriptive and inferential statistics were used to compare outcome and predictor variables with parametric and non-parametric tests. Time-to-event analyses were performed to assess the impact of distance to care on loss to follow-up. The Cox proportional hazards regression model was used to estimate hazard ratios with Kaplan-Meier curves used for visual representation.

Results: The sample population was 90% female with a mean age of 15.6 years and mean initial percent ideal body weight (IBW) of 86.4%. 39% met DSM-IV criteria for AN, 14% for BN, and 47% for EDNOS. 23% had prior overweight or obesity; 38% had prior admissions; and 61% had co-morbid psychiatric diagnoses. Median Euclidean distance to the institution was 17.5 miles (IQR 7.86-25.44). Median network travel distance was 20 miles (IQR 11.66 – 32.58). Subjects who traveled a network distance > 17.5 miles were 74% more likely to be lost to follow-up (HR 1.74; p 0.005; 95% CI [1.18-2.57]), and older subjects were 10% more likely for each one-year increase in age (HR 1.096; p 0.016; 95% CI [1.01-1.18]). In contrast, subjects with co-morbid psychiatric diagnoses and prior admissions were 49% (HR 0.51; p <0.001; 95% CI [0.36-0.73]) and 38% (HR 0.62; p 0.014; 95% CI [0.43-0.91]) less likely to be lost to follow-up, respectively.

Conclusions: To our knowledge, this is the first study to demonstrate that greater network travel distance is associated with loss to follow-up in AYA with eating disorders evaluated at a large children's hospital. Given the known correlation between distance to care and worsened eating disorder severity at presentation, future studies should evaluate the impact on long-term outcomes.