**Predictors of Leaving Against Medical Advice in Erie County, NY**

**Erica Smith, RN, MS, PhD Student, Chin-Shang Li, PhD**

*University at Buffalo School of Nursing*

**Purpose**

The purpose of this study was to identify predictors of leaving against medical advice (LAMA) from inpatient hospitals in Erie County, NY in order to provide evidence to facilities interested in developing person-centered mitigation strategies and reducing health disparities.

**Theoretical Framework**

The study was inspired and guided by the Planetary Health-Related Quality of Life model, a conceptual framework developed by nursing experts to identify how ‘social determinants of health can be affected by nursing roles and actions at the individual, family, and population levels with a particular focus on the role of health policy’.1

**Methods**

We tested a null hypothesis that there is no relationship between potential predictor variables and LAMA events. Using statistical software applications R and R Studio, we acquired deidentified data on all adult hospital inpatient discharges in Erie County, New York during 2019 (n = 105115) from the Open Health NY API.2 The dataset includes 33 variables representing patient demographics, admission and discharge sources, clinical conditions, and costs. We used a LAMA flag as the binary dependent variable and performed feature selection to identify the following independent variables for use in a multivariable logistic regression model: age group, gender, race, type of admission, primary payment source, and major diagnosis group.

**Results**

The overall incidence rate of LAMA was 2.3%. Older age, female gender, and elective admission type were consistent with lower rates. African American race, emergency admission type, and government-funded insurance were observed as having increased risk; the odds for LAMA among patients with Medicaid and Self-Pay payment sources was more than 5 times that of the reference group. Musculoskeletal disorders, maternity deliveries, myeloproliferative neoplasms, mental disorders, and HIV were associated with lower odds of LAMA. Alcohol, drug use, and drug-induced mental disorders was the only major diagnostic category significantly associated with an increased risk of LAMA, with the odds 4 times that of the reference group.

**Conclusions and Implications**

While the overall incidence is low, the variability in LAMA rate based on patient characteristics suggests health disparities in this important hospital-related outcome. This analysis identified important clinical, demographic, and social factors associated with increased risk for leaving against medical advice; these can inform strategic, person-centered planning.

**References**

1. Kuehnert, P., Fawcett, J., DePriest, K., Chinn, P., Cousin, L., Ervin, N., Flanagan, J., Fry-Bowers, E., Killion, C., Maliski, S., Maughan, E. D., Meade, C., Murray, T., Schenk, B., & Waite, R. (2022). Defining the social determinants of health for nursing action to achieve health equity: A consensus paper from the American Academy of Nursing. *Nursing Outlook, 70*(1), 10-27.
2. New York State Department of Health (Office of Patient Safety and Quality). (2019). Hospital inpatient discharges (SPARCS De-Identified): 2019. Center for Applied Research and Evaluation. Retrieved November 9, 2022 from <https://health.data.ny.gov/Health/Hospital-Inpatient-Discharges-SPARCS-De-Identified/4ny4-j5zv>

**Figure 1. Result of Analyses of Logistic Regression of Patient and Discharge Demographics on LAMA**

