Who Comes Back? Analyzing Patient Demographics and Characteristics Among Return Visits to the University of Kentucky Emergency Department

University of Kentucky
College of Health Sciences

Diana Hernandez PA-S; Taylor Hord PA-S; Khayla Patel PA-S; Makena Shelton PA-S; Makayla Slone PA-S;
Lance Butler, BA; Aidan Elias, BS; Stacey Slone, MS; Ryan Hunton, DHSc, PA-C

College of Health Sciences
Department of Physician Assistant Studies

PURPOSE OF STUDY

This project investigated the differences in social factors between patients who bounced back to the ED and patients who did not bounce back to the ED within the urban communities of the Greater Lexington area.

INTRODUCTION

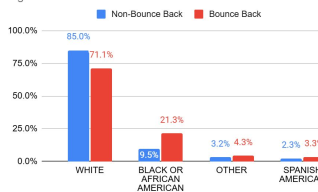
Emergency department (ED) bounce backs are typically defined as a patient's unscheduled return to the ED within 72 hours after their initial visit. ED bounce backs suggest ED overcrowding and put patients at risk for health complications. Identifying variables correlated to ED bounce backs can help address barriers to healthcare access within a community, with the goal of decreasing the frequency of bounce backs and more accessible healthcare. This study aimed to discover social factors contributing to ED bounce backs within the urban region of the 405 zip code by comparing variables between patients who did bounce back to the ED versus those who did not.

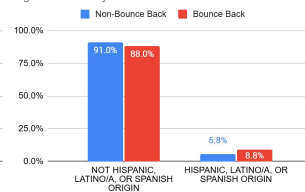
METHODS

- This study aimed to analyze variables associated with emergency department (ED) return visits ("bounce backs") in urban Lexington's 405 zip code. Using a retrospective cohort design, we compared patients who returned to the ED within 72 hours post-discharge to those who did not.
- Variables included ethnicity, race, health insurance status, and socioeconomic factors. Data from patients aged 18 and over, treated between November 1, 2023, and October 31, 2024, were extracted from the University of Kentucky's Center for Clinical and Translational Science database (CCTS, UL1TR001998)
- Descriptive analysis with Pearson's chi-square tests and Fisher's Exact test identified significant differences between groups. The study, approved by the University of Kentucky Institutional Review Board (IRB protocol #45667), utilized de identified date to maintain patient confidentiality.

RESULTS

- The median age in the bounce back group was 41. The median age in the non-bounce back group was 55.
- Patients of Hispanic, Latino/a, or Spanish ethnicity had a higher bounce back than non-bounce back percentage, while patients not of Hispanic, Latino/a, or Spanish ethnicity had a higher non-bounce back than bounce back percentage (Figure 2.).





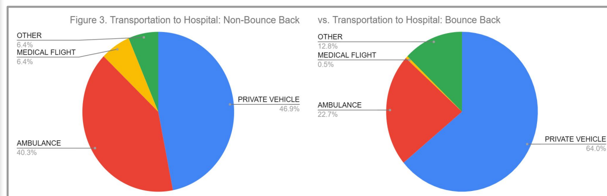
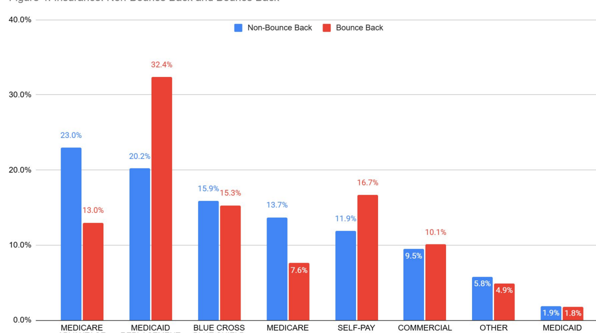


Table 1: Discharge Status Non-Bounce Back vs Bounceback

Discharge Status	Non-Bounce Back	Bounce Back
HOME OR SELF CARE	73.9%	88.2%
SKILLED NURSING FACILITY	6.1%	1.1%
REHAB FACILITY	4.3%	0.7%
EXPIRED	2.3%	0.3%
LEFT AGAINST MEDICAL ADVICE	1.4%	2.2%
ELOPEMENT	0.3%	1.1%
LEFT WITHOUT BEING SEEN	0.0%	1.0%



- Regarding insurance, self-pay, Medicaid Replacement, and commercial insurance showed higher bounce-back than non-bounce back percentages. In contrast, Medicare Advantage, Medicare, Medicaid, and Blue Cross Blue Shield had higher percentages for non-bounce back patients (Figure 4.).
- Discharge status categories such as home/self-care, elopement, and left against medical advice had higher bounce-back percentages, while skilled nursing, rehab facilities, and expired had higher non-bounce back percentages (Table 1.).

DISCUSSION

In finding the common factors among those who bounce back to the ED, providers can determine which populations need further attention.They can also collaborate with other professionals to address the non-medical needs observed in specific racial and ethnic groups.

- Patients of Black/African American, Spanish American, and “Other” races had higher likelihood of bounce-back to the ED compared to the non-bounce-back category, whereas White patients had lower likelihood (Figure 1).
- Those of Hispanic origin were more likely to bounce back despite that demographic being a minority in the population (Figure 2). This may indicate cultural barriers or difficulties in health literacy.
- The large percentage of those who bounced back returned to the ED by way of personal transportation, meaning they had the personal volition to return for additional medical assistance, but did not deem it drastic enough to return by EMS (Figure 3).
- Most individuals who bounced back were discharged back home which indicated their predisposition was not emergent and possibly did not warrant a need to return to the ED (Table 1).

CONCLUSION

Current limitations include the inability to make this project more geographically specific to zip codes past 405 and using the Rural Urban Continuum code. Also, this research was focused on the ED bounce backs to a hospital system in a city with a population of about 320,000 individuals. The findings in this research may not be applicable to hospital systems in rural areas due to differing demographics.
Future research could examine ED bouncebacks from zip codes prone to them and compare them to those from zip codes that are not. In further isolating areas geographically, one could determine how to best assist local neighborhoods.

REFERENCES