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The Effect of Weekend Versus Weekday Admissions on Mortality and Outcomes in Patients With Multiple Myeloma: A Nationwide Analysis

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INTRODUCTION

A phenomenon known as the weekend effect, where patients admitted over the weekend have higher mortality rates compared with those admitted on weekdays. Patients with multiple myeloma may experience varying outcomes based on the timing of their hospital admission

AIM

To assess the differences in health care outcomes between multiple myeloma patients admitted on weekends and those admitted on weekdays

METHOD

We performed a retrospective analysis using the National Inpatient Sample [NIS]. ICD-10 codes were used to detect patients with a diagnosis of multiple myeloma. The admissions were divided into weekends and weekdays for comparison. The primary outcomes examined included mortality and hospital resource utilization.

RESULTS

- A total of 690,780 admissions of multiple myeloma were included in the study, out of which 20% occurred over the weekend, while the remaining 80% occurred on the weekdays
- For the patients admitted over the weekend, the mean age was 70 years.
- More men (55%) were admitted than women (45%) (*P*=0.1). Most of the patients were White (61%), followed by Black (23%) and Hispanic (9%) (*P*=0.00). Most of the patients (54%) were admitted to tertiary center hospitals, while 19% were admitted to rural hospitals (*P*=0.00).
- Patients admitted over the weekend had higher mortality than those admitted over weekdays (6.5% vs 5.4%; adjusted OR 1.1; *P*=0.00). The weekend admissions were, however, associated with a shorter mean length of stay than weekday admissions (7 vs 8 days; adjusted OR 1.2; *P*=0.01) and lesser cost of hospitalization ($90,485 vs $96,454).
- Weekend admissions were also associated with higher complications compared with weekday admissions, including sepsis (10% vs 7.6%; adjusted OR 1.3; *P*=0.00), septic shock (6% vs 4.4% ; adjusted OR 1.4; *P*=0.00), and acute kidney injury (37% vs 36%; adjusted OR 1.2; *P*=0.6).



CONCLUSIONS

The study highlights worse outcomes for patients with multiple myeloma admitted over weekends. Despite the shorter length of stay and lower hospitalization costs for weekend admissions, the increased complications indicate a disparity in care.

REFERENCES

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