

## The Correlation Between Ward Occupancy Pressure and Psychiatric Admission Rates in an Acute Mental Health Service

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### Abstract

**Background and Objectives:** Acute psychiatric services frequently operate under sustained pressure due to rising emergency demand and limited inpatient capacity. This study examines the association between ward occupancy pressure, measured using inpatient bed availability, and psychiatric admission activity within an acute mental health service.

**Methods:** A retrospective observational study was conducted using routinely collected service data from St Luke's Hospital, Kilkenny, covering January–June 2024. Daily counts of emergency psychiatric presentations, psychiatric admissions, and available inpatient beds were obtained from the emergency department register of psychiatric presentations and ward bed-management logs. Correlation and regression analyses were used to examine associations between bed availability and admissions, taking account of emergency presentation volume and temporal variation. Patient-level clinical information was reviewed to contextualise admission decisions rather than for formal hypothesis testing.

**Results:** Across 181 days, 612 emergency psychiatric presentations and 97 psychiatric admissions were recorded, corresponding to an overall admission rate of 15.8%. Median daily bed availability was two beds, with approximately one-fifth of days operating at zero or negative capacity. A weak but statistically significant positive association was observed between bed availability and psychiatric admissions ( $r = 0.151$ ,  $p = 0.03$ ). Emergency presentation volume was the strongest predictor of admission activity, while bed availability accounted for a small proportion of overall variance.

**Conclusion:** Ward occupancy pressure, reflected by inpatient bed availability, is associated with psychiatric admission activity, although its influence is modest compared with demand and clinical factors.

### Keywords

Ward occupancy pressure, psychiatric admissions, inpatient bed availability, emergency psychiatry, acute mental health service.