DRAFT : Evaluation of an Enhanced Psychiatric Emergency Unit: Impact on Mental Health–Related Activity in a General Emergency Department”

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Abstract

Background: Emergency departments (EDs) are often poorly adapted to the needs of individuals experiencing acute psychiatric crises, leading to prolonged waits and boarding time, higher rates of coercive practices, and increased risk of hospitalization. To address these challenges, a reinforced psychiatric emergency unit (*Centre Renforcé d'Urgences Psychiatriques*, CRUP) was implemented in Saint-Denis (France) to provide specialized assessment and short-term stabilization adjacent to the general ED. This study evaluates its impact on general ED activity and patient flow.

Methods: We conducted a retrospective quasi-experimental study using weekly aggregated data from ED visit summaries over a three-year period (January 2022–December 2024). An interrupted time series analysis (ITSA) estimated immediate and sustained changes in: (i) ED length of stay (LOS), (ii) proportion of visits with LOS <24h and <4h, (iii) incomplete visits (leaving without being seen or against medical advice), and (iv) admissions to short-stay units or inpatient wards. To strengthen causal inference, we performed controlled ITSAs using (a) digestive-related attendances within the same ED and (b) a comparable external ED without a CRUP. A synthetic control analysis was also conducted.

Results: Among 9,506 psychiatric-related ED visits (5% of all attendances), implementation of the CRUP was associated with an immediate reduction of more than 10% in mean ED LOS, followed by continued weekly improvement, resulting in an estimated total reduction of 1.8 to 2.7 hours by the end of the study period (20% to 31%). The proportion of visits with LOS <24h and <4h increased significantly at implementation and continued to rise thereafter. The impact on the rate of incomplete visits was uncertain. Short-stay unit admissions increased while inpatient admissions stabilized over time. Controlled and synthetic control analyses yielded consistent effect directions, supporting robustness.

Conclusions: The introduction of the CRUP was associated with meaningful and sustained improvements in patient flow during psychiatric emergencies, including shorter ED stays and increased use of short-stay alternatives to hospitalization. These findings suggest that specialized psychiatric emergency units may enhance continuity and efficiency of care at the ED–mental health interface, particularly in high-demand urban settings. Further research should assess broader impact on patient's pathway after ED visits, cost-effectiveness, scalability, and impacts on patient experience and clinical outcomes.

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