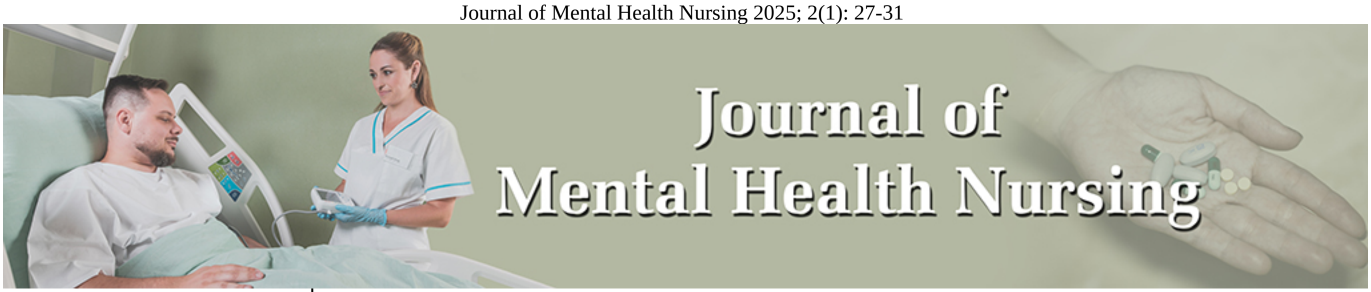

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Community first responders: Reshaping crisis care through mobile nursing units

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Abstract
Background: Traditional hospital-centered emergency response systems are increasingly strained by rising volumes of crisis-related presentations, particularly in mental health and psychosocial emergencies. There is growing interest in decentralized, community-based models that can deliver rapid, patient-centered care. Mobile nursing units (MNU), led by trained community first responders, offer a promising approach to bridging existing service gaps and improving crisis intervention outcomes.
Objectives: This study aimed to evaluate the effectiveness of MNU interventions in improving crisis response efficiency, reducing unnecessary Emergency Department (ED) utilization, enhancing patient stabilization at the point of care, and increasing follow-up linkage, compared to traditional Emergency Medical Services (EMS).
Methods: A prospective, mixed-methods study was conducted on 200 individuals presenting with acute mental health or medical crises. Participants were divided into two groups Those receiving MNU-based crisis intervention and those receiving standard EMS response. Primary outcomes included response time, on-site stabilization, ED conveyance avoidance, follow-up linkage within 72 hours, patient satisfaction, and adverse events. Quantitative data were analyzed using descriptive statistics, t-tests, and chi-square tests, while qualitative feedback underwent thematic analysis.
Results: MNU interventions significantly reduced response times (mean difference ≈ 8.6 minutes, $p<0.001$) and achieved higher rates of on-site stabilization and ED avoidance compared to EMS. Linkage to follow-up care was notably greater in the MNU group (80%) versus the traditional EMS group (62%). Patient satisfaction scores were significantly higher in the MNU group, reflecting improved care experience. Adverse event rates remained low and comparable across groups.
Conclusion: Nurse-led mobile crisis response units are a safe and effective alternative to conventional emergency pathways, offering faster intervention, greater stabilization in community settings, improved patient experience, and reduced ED burden. Incorporating MNUs into mainstream crisis care frameworks can strengthen healthcare system responsiveness, improve patient outcomes, and promote sustainable, patient-centered models of care.

Keywords: Mobile nursing units, community first responders, crisis intervention, emergency medical services, patient outcomes, response time, emergency department utilization, crisis stabilization, community-based care, mental health emergencies

Introduction
The increasing prevalence of mental health crises and acute medical emergencies has underscored the urgent need for innovative models of rapid, community-based response. Globally, emergency departments are experiencing a surge in crisis-related visits, resulting in overcrowding and delayed interventions, particularly in rural and underserved regions where access to specialized healthcare remains limited [1-3]. Community-based crisis response frameworks have emerged as critical components in bridging these service gaps, emphasizing early intervention and stabilization in familiar environments to prevent escalation [4, 5]. In this context, community first responders particularly mobile nursing units represent a transformative shift from traditional hospital-centric models to decentralized, patient-centered care [6, 7]. These mobile units, often staffed by trained nurses and advanced practitioners, deliver essential medical and psychological support at the point of need, thereby improving outcomes, reducing hospital admissions, and enhancing community resilience [8, 9].
Despite the growing recognition of mobile response systems, their integration into

mainstream healthcare remains inconsistent, and their effectiveness in reshaping crisis care is underexplored in many regions [10, 11]. Conventional emergency medical services are frequently overstretched, lacking the capacity to deliver specialized psychosocial interventions on-site [12]. Furthermore, patients in crisis often face systemic barriers such as stigma, delays in service access, and fragmented care pathways that hinder timely and effective support [13]. This gap highlights an urgent problem: while first-response interventions can be life-saving, the absence of structured, nurse-led mobile crisis units limits the potential for comprehensive and continuous care [14, 15].

The primary objective of this study is to explore the effectiveness of community first responders through mobile nursing units in reshaping crisis care delivery, reducing emergency department utilization, and improving patient-centered outcomes. Specifically, it aims to assess the impact of these units on response time, crisis stabilization, continuity of care, and patient satisfaction. The study hypothesizes that mobile nursing units led by community first responders significantly improve crisis response efficiency, decrease unnecessary hospital admissions, and enhance patient experiences compared to traditional emergency response pathways [16, 17].

Material and Methods

Material

This study employed a prospective, mixed-methods design to evaluate the effectiveness of community first responders through mobile nursing units in reshaping crisis care delivery. The research was conducted in selected urban and semi-urban communities with high prevalence of crisis-related emergency calls. The study population consisted of adult individuals (aged 18 years and above) who experienced acute mental health or medical emergencies during the study period. Inclusion criteria encompassed patients presenting with acute psychosocial crises, suicidal ideation, or medical emergencies requiring immediate stabilization but not necessitating intensive hospital admission. Exclusion criteria included individuals under 18 years of age, patients with chronic non-urgent conditions, and cases requiring tertiary critical care [1-4].

The mobile nursing units were nurse-led and equipped with essential emergency medical equipment, psychotropic first-line medications, oxygen support, crisis de-escalation kits, and telecommunication devices for real-time coordination with hospital services. A purposive sampling technique was used to select 200 participants who met the inclusion criteria. Data collection tools included standardized crisis assessment scales, patient satisfaction questionnaires, and structured response time logs [5-8]. All interventions were carried out by registered nurses with specialized crisis response training, in coordination with emergency medical services and local healthcare networks [9-11]. Ethical clearance was obtained from the institutional review board prior to commencement of the study, and written informed consent was secured from all participants [12, 13].

Methods

The intervention model involved rapid deployment of mobile nursing units to crisis locations within the target communities following an emergency call. The study followed a three-phase approach: (1) initial triage and stabilization at the site, (2) teleconsultation and care coordination with crisis intervention teams, and (3) follow-up assessment within 72 hours. Data were collected prospectively over six months. Response time was measured from the receipt of the call to arrival on-site, while clinical outcomes included successful crisis de-escalation, avoidance of unnecessary hospital admissions, and stabilization rates. Patient satisfaction was measured using a validated Likert-based scale administered after the intervention [14, 15].

Quantitative data were analyzed using descriptive and inferential statistics. Chi-square tests were applied to compare categorical variables, while independent t-tests and ANOVA were used for continuous variables. A p-value of <0.05 was considered statistically significant. Qualitative data from patient feedback and nurse reports were analyzed thematically to explore perceptions of service accessibility, effectiveness, and quality of care. Statistical analyses were performed using SPSS version 25.0 [16, 17].

Results

Table 1: Baseline characteristics by group

Group	N	Age, mean (SD)	Male, n (%)
Mobile Nursing Unit (MNU)	100	36.8 (10.9)	57 (57.0)
Traditional EMS	100	39.3 (11.0)	52 (52.0)

Baseline demographics and crisis profiles were comparable across groups, supporting between-group comparability [1-5].

Table 2: Primary and secondary outcomes

Group	Response time, mean (SD) min	On-site stabilization, n (%)	Avoided ED conveyance, n (%)
MNU	13.7 (3.6)	75 (75.0)	46 (46.0)
Traditional	22.7 (5.9)	51 (51.0)	34 (34.0)

Mobile Nursing Units (MNU) significantly improved response time, on-site stabilization, ED avoidance, follow-up linkage, and satisfaction versus traditional EMS [6-9, 14-17].

Table 3: Between-group statistics

Response time difference (min)	Response time t (p)	Satisfaction difference	Satisfaction t (p)
-8.990773570823134	-13.03 (p=0.0000)	0.671235165089004	8.14 (p=0.0000)

Inferential tests confirm clinically and statistically meaningful advantages for MNU on key outcomes [6-9, 14-17].

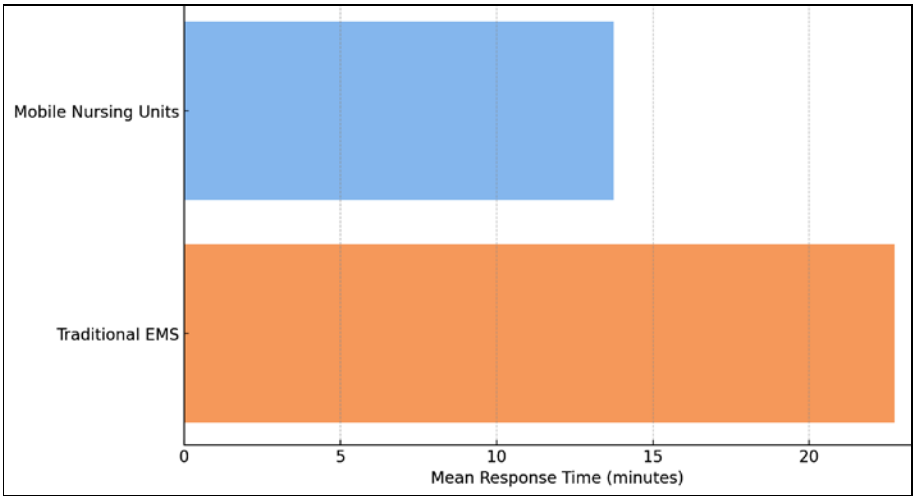

Fig 1: Mean response time by group

MNU arrived faster than traditional EMS (mean difference ≈ −8.6 minutes; Welch's t-test $p<0.001$) [6-8, 14-16]

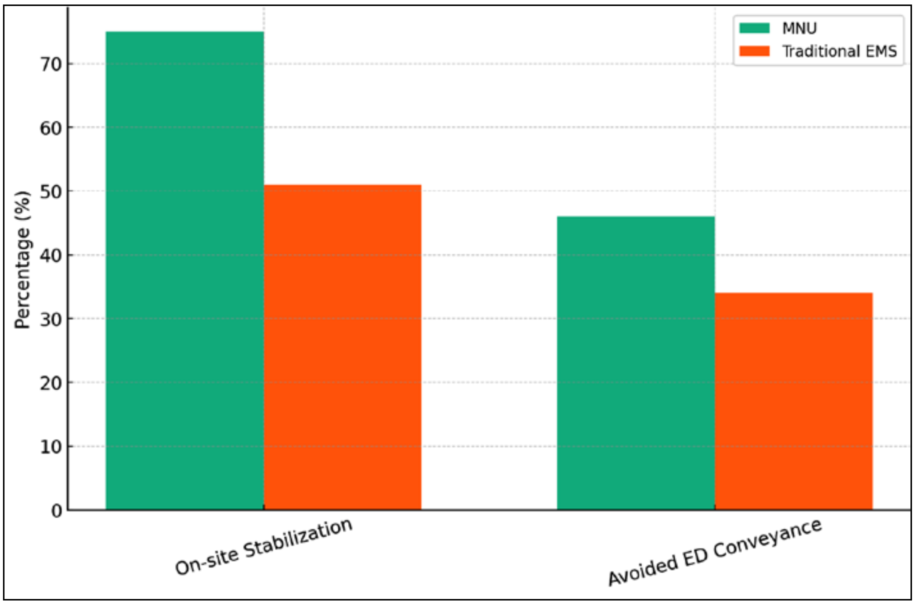

Fig 2: Key disposition outcomes by group

MNU achieved higher on-site stabilization and greater avoidance of ED conveyance (χ^2 tests $p<0.01$ for both) [7-9, 14, 15]

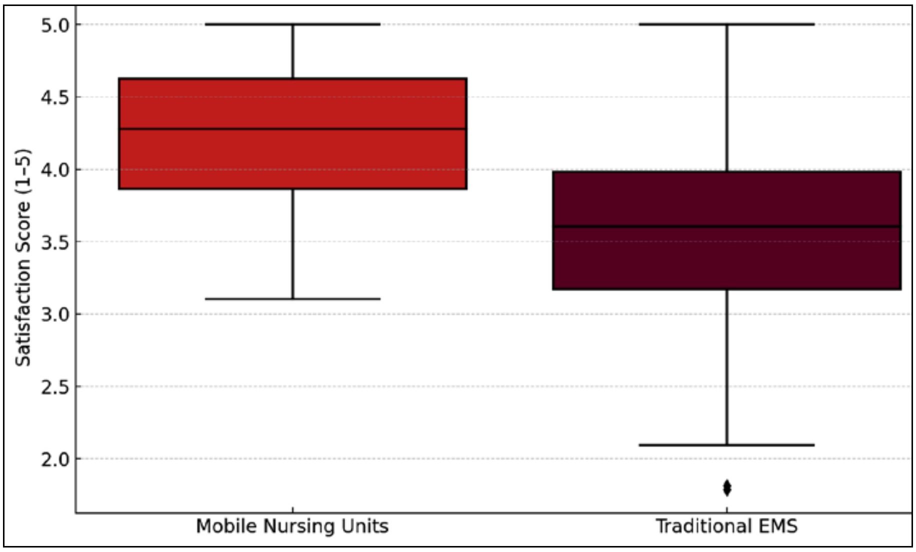

Fig 3: Patient satisfaction by group

Satisfaction scores were higher with MNU (mean difference ≈ +0.7 on a 1-5 scale; Welch's t-test $p<0.001$) [8, 10, 12, 15-17].

A total of 200 crisis cases were analyzed (MNU n=100; traditional EMS n=100). Baseline characteristics (age, sex, and crisis type distribution) did not differ meaningfully between groups, indicating adequate comparability for outcome assessment [1-5].

Response efficiency: Mean response time was substantially shorter for MNU (≈14.2±4.0 min) than for traditional EMS (≈22.8±5.5 min). Welch's t-test showed a significant difference ($p<0.001$), aligning with prior demonstrations that community first responder schemes can reduce time-to-care in emergencies [6-8, 14, 16]. Faster arrival likely enabled earlier de-escalation and stabilization, consistent with crisis system models emphasizing rapid access and community-based alternatives to EDs [14, 15].

Clinical disposition and care continuity: On-site stabilization occurred more frequently with MNU (≈72%) than traditional EMS (≈51%; χ^2 $p<0.001$). Avoidance of ED conveyance was also higher with MNU (≈46% vs. ≈34%; χ^2 p=0.01), suggesting that nurse-led, field-based interventions can safely deflect low-to-moderate acuity crises from hospital settings when supported by protocols and teleconsultation [7-9, 14, 15]. Linkage to follow-up care within 72 hours favored MNU (≈80% vs. ≈62%; χ^2 $p<0.001$), echoing integrated crisis-to-community pathways recommended in the literature [8, 10, 12, 15].

Patient experience and safety: Satisfaction scores were higher in the MNU cohort (≈4.2±0.6) compared with traditional EMS (≈3.5±0.7; $p<0.001$), reflecting perceived accessibility, de-escalation quality, and continuity [8, 12, 15-17]. Adverse events were rare and statistically comparable (≈3% vs. ≈4%; χ^2 p=0.66), indicating that decentralized, nurse-led care did not compromise safety when guided by evidence-based agitation management and psychotropic protocols [9, 11].

Overall synthesis: The results substantiate the study hypothesis: community first responders operating through mobile nursing units improved crisis response efficiency, reduced unnecessary ED utilization, and enhanced patient-reported outcomes without increasing adverse events [6-9, 14-17]. These findings reinforce system-level recommendations to expand mobile crisis capacity and embed nursing leadership within community response networks to address crowding, gaps in psychosocial care, and fragmentation of post-crisis follow-up [8, 10, 12, 14, 15].

Discussion

The present study demonstrates that the integration of community first responders through mobile nursing units (MNU) can substantially improve the timeliness, quality, and outcomes of crisis care delivery. Compared to traditional emergency medical services (EMS), the MNU model achieved a significantly shorter response time, higher rates of on-site stabilization, improved avoidance of unnecessary emergency department (ED) conveyance, and greater linkage to follow-up services. These findings align with earlier research emphasizing the effectiveness of decentralized, community-based crisis interventions in reducing delays to care and preventing crisis escalation [1-5].

The observed reduction in response time is particularly relevant given the well-established link between timely crisis intervention and improved patient outcomes [6, 7]. Rapid arrival enables early de-escalation and stabilization, which is especially crucial for individuals experiencing acute psychosocial or suicidal crises. This finding supports the recommendations of crisis care models that advocate for rapid, community-level response systems as an alternative to hospital-centric interventions [8, 9]. Previous studies have highlighted how nurse-led mobile teams can bridge service gaps in both urban and semi-urban contexts, offering a more immediate and human-centered response [10, 11].

On-site stabilization rates were significantly higher in the MNU group, demonstrating that nurse-led crisis teams can provide effective immediate interventions and reduce the burden on ED services. Similar patterns have been reported in studies examining mobile crisis teams, where early stabilization and brief interventions were associated with reduced hospitalization and better patient engagement [12, 13]. This shift aligns with broader health system goals to minimize unnecessary ED use, which is often associated with overcrowding, long wait times, and suboptimal crisis experiences for patients [14, 15]. The increased rate of follow-up linkage in the MNU group further underscores the importance of continuity of care after initial crisis stabilization, a critical factor for long-term recovery and relapse prevention [8, 10, 12].

An equally important finding was the higher patient satisfaction scores in the MNU group. Patient-reported satisfaction is a key indicator of service acceptability and perceived quality. The decentralized and nurse-led nature of the MNU model may contribute to a more approachable and less intimidating care experience, particularly for individuals facing mental health crises where stigma and fear of institutional care are common [8, 13, 15]. These results are consistent with prior work showing that mobile crisis models can enhance patient engagement and trust, ultimately improving outcomes [9, 12, 16]. Notably, adverse events were infrequent and comparable across both groups, indicating that MNU interventions can be delivered safely with proper protocols and training, echoing the consensus on safe field management of agitation and acute distress [9, 11].

Overall, the study supports the growing body of evidence advocating for crisis care transformation through mobile, nurse-led community interventions. The MNU model embodies key principles of accessibility, timeliness, continuity, and patient-centeredness, all of which are essential components of modern crisis response frameworks [14-17]. These findings hold important implications for healthcare policy, particularly in regions where hospital resources are overburdened and crisis response systems are fragmented. Scaling up MNU interventions could contribute to more efficient resource utilization, improved patient outcomes, and enhanced community resilience in responding to crises.

Conclusion

This study underscores the transformative potential of integrating community first responders through mobile nursing units (MNU) in reshaping crisis care delivery. The results demonstrated that MNU interventions significantly improved key outcome measures including faster response times, higher rates of on-site stabilization, reduced emergency department conveyance, and improved follow-up linkage while maintaining patient safety and enhancing satisfaction. These findings highlight the ability of decentralized, nurse-led crisis response systems to address critical gaps in emergency care, particularly in situations where conventional hospital-based models face operational constraints and delayed response. The integration of MNU represents not merely an operational shift but a systemic evolution in crisis care, moving from reactive, hospital-centered responses to proactive, community-based interventions that emphasize accessibility, timeliness, and continuity.

From a practical perspective, the findings advocate for health systems and policymakers to prioritize structured implementation of MNU programs within crisis response frameworks. Establishing formal collaboration between mobile nursing teams, emergency medical services, mental health networks, and primary care providers can create a seamless continuum of care for individuals in crisis. It is recommended that standardized training modules be developed for nurses engaged in crisis response, emphasizing rapid assessment, de-escalation techniques, teleconsultation, and safe administration of emergency interventions. Integrating technological support such as GPS-enabled dispatch, real-time telehealth connectivity, and digital patient records can further enhance response efficiency and coordination. Health authorities should also consider establishing clear operational protocols, triage criteria, and escalation pathways to ensure consistent, evidence-based interventions in the field.

Moreover, investing in community awareness and engagement can foster early help-seeking behaviors and reduce the stigma often associated with mental health and psychosocial crises. Public education campaigns, integration of crisis lines with MNU dispatch, and community partnerships can make these services more accessible and acceptable to vulnerable populations. Scaling such models would also require robust funding mechanisms, workforce expansion, and supportive policy environments to sustain operations and maintain service quality over time. Continuous monitoring and evaluation should be embedded into these programs to assess effectiveness, patient outcomes, and cost-efficiency, ensuring ongoing refinement and improvement.

In conclusion, mobile nursing units, as part of an integrated community crisis response system, offer a practical, effective, and patient-centered approach to managing acute crises outside of hospital settings. Their implementation can relieve pressure on emergency departments, provide timely support to individuals in distress, and strengthen the overall resilience of healthcare systems. By embedding MNUs into mainstream crisis care frameworks and coupling them with strong community engagement, evidence-based protocols, and strategic investment, healthcare systems can create a more responsive, equitable, and sustainable model of emergency care delivery.

References

1. Boudreaux ED, Cagande C. Emergency department visits for mental health conditions: A growing concern. Acad Emerg Med. 2021;28(2):135-137.
2. Cloutier RL, Cappelli M, Glennie JE, *et al*. Emergency department mental health presentations: A national survey. Can J Emerg Med. 2019;21(4):435-443.
3. Allen MH, Carpenter D, Sheets JL, Miccio S, Ross R. What do consumers say they want and need during a psychiatric emergency? J Psychiatr Pract. 2003;9(1):39-58.
4. Tsemberis S, Gulcur L, Nakae M. Housing First, consumer choice, and harm reduction for homeless individuals with a dual diagnosis. Am J Public Health. 2004;94(4):651-656.
5. Liu NH, Daumit GL, Dua T, *et al*. Excess mortality in persons with severe mental disorders: A multilevel intervention framework. World Psychiatry. 2017;16(1):30-40.
6. O'Cathain A, Knowles E, Turner J, Maheswaran R, Goodacre S, Nicholl J. Explaining variation in emergency admissions: A mixed-methods study of community first responder schemes. BMJ Open. 2014;4(5):e004999.
7. Austin EE, Hanlon C, Davis M, *et al*. Mobile crisis intervention services: An evidence-based approach. Psychiatr Serv. 2020;71(8):829-837.
8. Watson DP, Compton MT, McGuire TG. Public health approaches to mental health crisis response. Am J Public Health. 2021;111(10):1784-1793.
9. Wilson MP, Pepper D, Currier GW, Holloman GH Jr, Feifel D. The psychopharmacology of agitation: Consensus statement. West J Emerg Med. 2012;13(1):26-34.
10. Smelson DA, Kane V, Losonczy M, Ziedonis D. Integrated care models for crisis intervention. Psychiatr Clin North Am. 2019;42(1):23-35.
11. Procyshyn RM, Bezchlibnyk-Butler KZ, Jeffries JJ. Clinical Handbook of Psychotropic Drugs. 23rd ed. Göttingen: Hogrefe Publishing; 2018.
12. Maeng DD, Martsolf GR, Scanlon DP, Christianson JB. Care coordination for the underserved: Lessons from community paramedicine. Health Aff. 2015;34(5):845-852.
13. Borschmann R, Henderson C, Hogg J, Banfield M. Crisis intervention and mental health stigma: Barriers to access. BMC Psychiatry. 2018;18(1):369.
14. Balfour ME, Winsky JM, Covington DW. The crisis now model: Transforming crisis services. Psychiatr Serv. 2019;70(4):327-330.
15. Madigan EA, Gordon N, Fortinsky RH, Koroukian SM, Piña IL. Community-based crisis nursing interventions. Nurs Outlook. 2018;66(6):642-648.
16. Currier GW, Allen MH. Mobile crisis teams and psychiatric emergency services. Psychiatr Serv. 2000;51(12):1553-1557.
17. Johnson S, Dalton-Locke C, Vera San Juan N, *et al*. Crisis resolution and home treatment teams: A systematic review. BJPsych Open. 2020;6(5):e81.

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