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Nursing on the Frontline of Mass Gatherings: A Systematic Review of Roles, Challenges, and Empowerment Strategies

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Backgrounds

Mass gathering events, place immense strain on healthcare systems. Nurses, as the largest group of healthcare providers, play a critical role in managing such events. This systematic review aimed to identify the roles, challenges, and empowerment strategies for nurses in mass gatherings.

Methods

A systematic search was conducted in PubMed, CINAHL, SID, and Magiran databases for studies published from 2015 to 2025. Search terms included MeSH terms: “Nurses,” “Mass Gatherings,” “Emergency Medical Services,” “Triage,” and “Empowerment.” Inclusion criteria were: (1) studies addressing nursing roles in mass gatherings; (2) studies reporting challenges or empowerment strategies; (3) peer-reviewed articles in English or Persian. Exclusion criteria were: non-peer-reviewed articles, studies without nurse-specific outcomes, and conference abstracts. Among 67 retrieved articles, 18 studies met the criteria and were included in the final analysis.

Findings

Nurses in mass gatherings assume various roles, including patient triage and prioritization, management of emergency cases (heatstroke, hypoglycemia, cardiac problems), health education for pilgrims, and coordination with other relief teams. Ambulance and prehospital emergency personnel bear the highest response burden and require advanced personal protective equipment. Patient presentation rates ranged from 1 to 24 per 10,000 spectators at sporting events, with nurses playing a key role in on-site event management. A structured nurse-led prehospital response system reduced hospital transfer rates to less than 7%.

Conclusion

Nurses are the core asset of the health response system in mass gatherings. To empower them, specialized pre-deployment training, provision of appropriate equipment, and design of decision support systems are essential. Standardization of minimum data sets for nursing reports in mass gatherings is recommended.

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