

Emergency Preparedness & Community Resilience: How Prepared Are Community Nursing Teams for Mass-Casualty or Epidemic Events?

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Keywords

Mass-casualty incidents, vaccines accines, Public health organizations.

Introduction

Mass-casualty incidents (MCIs) and epidemic events cause an incredible burden on the health system, especially on the community level, where most of the public health interventions are implemented. The community nursing team can be the first responder, which offers instant assessment, triage, continued patient care, patient education, and psychosocial assistance. Preparedness is not just a state of being ready with the supplies and procedures in place but also the competency of the staffs, inter-agencies, and close connection with communities to develop resilience. COVID-19 and Ebola outbreaks, as well as regular occurrences of natural disasters, have demonstrated the preparedness of communities worldwide in terms of both strengths and gaps in community nursing [1]. This report looks at the readiness of community nursing teams to deal with such crisis, but puts an emphasis on structural, professional and social aspects of resiliency.

Main Topic: Community Nursing Preparedness

Community nursing preparedness can be evaluated across four dimensions: (1) **Training and Competency**, (2) **Resources and Infrastructure**, (3) **Coordination and Communication**, and (4) **Community Engagement and Resilience**.

Training and Competency

Nurses should have advanced training on triage, infection prevention and control (IPC), psychological first aid and crisis leadership.

Research indicates that although disaster response modules are delivered to many nurses during undergraduate training, frequent simulation-based learning and exercises are frequently limited. Indicatively, post-COVID-19 after-action reviews reported that community health nurses did not feel at ease with the idea of constantly wearing personal protective equipment (PPE) or implementing emergency measures when faced with stress [2]. Hence the importance of continuing the development of disaster nursing profession.

Resources and Infrastructure

Access to PPE, medicines, diagnostic tools, transport, and surge capacity is essential to preparedness. Low resource in Community settings and community teams have chronic shortages. Telehealth systems, mobile clinic, and emergency kit caches can boost quick response, yet they are not evenly distributed throughout the regions [3]. Infrastructure resilience, like backup power to store vaccines or secure oxygen supply chains can be the difference during crisis circumstances.

Coordination and Communication

Community nursing is not likely to operate alone, cooperation with hospitals, public health organizations, emergency services, and non-governmental organizations is essential.

Effective messaging and referral channels are maintained through effective communication channels. But fragmented health systems can lead to a duplication of effort or slowness in response. There are digital solutions, including real-time surveillance dashboards and WhatsApp-based alerts, that have enhanced responsiveness but still have cybersecurity and data reliability concerns.

Community Engagement and Resilience

Communities that have confidence in local nurses and engage in preparedness planning fortify resilience. Nurses have a central role in health education, myth-busting in times of epidemic, and volunteer mobilization.

Community health nurses in the West African countries are examples of how during outbreaks of Ebola, they engaged religious and cultural leaders to change their burial practices and to curb the spread of the disease [4]. A prepared community is a community with awareness, resources and partnerships that lessen reliance solely on emergency actors.

Discussion

The degree of preparedness among community nursing teams varies widely across contexts:

High-Income Countries (HICs)

HICs tend to have more well-resourced community nursing teams, which are assisted by well-developed emergency systems (like the UK Civil Contingencies Act or the US National Disaster Medical System). Simulation training may be regularly offered to nurses, and they can also access sophisticated communication technologies. Nevertheless, there are still issues regarding burnout, shortage of workforce, and reluctance of the population to act according to health instructions in times of crisis [5].

Low- and Middle-Income Countries (LMICs)

The health system of LMICs frequently relies on community nurses especially in the rural communities. They are experts at improvisation and use of limited resources but have significant shortfalls in funding, training, and infrastructures. International emergencies like cholera or COVID-19 have demonstrated the necessity to depend on international aid of PPE, vaccines, and medicines. Weak health surveillance systems also weaken preparedness [6].

Psychological Preparedness

It is also important in regard to emotional resilience. Disaster exposes nurses to moral injury, compassion fatigue, and exposure to trauma. However, the mental health assistance to frontline workers is poorly developed [7]. Peer-support programmes, access to counseling, and leadership training are all structured in the construction of resilience.

Lessons from COVID-19

The pandemic revealed weak areas of the system, but it also stimulated innovations:

Rapid scaling of telehealth consultations in community care. Cross-sector collaboration for vaccination campaigns. Global sharing of protocols and research in real time. Nevertheless, the lack of harmonized preparedness plans in different regions resulted in different results, and the development of uniform but flexible structures is necessary.

Role in Community Resilience

Community nurses are respected persons who connect the clinical care and the health of the population. Their involvement in preparedness planning enhances community self-reliance. As an example, nurse-led community resiliency programs in the earthquake prone areas of Japan involve households having disaster kits, evacuation exercises, chronic disease management in case of displacement [8].

Table 1: Key Strengths and Weaknesses in Community Nursing Preparedness.

Dimension	Strengths	Weaknesses/Challenges
Training & Competency	Basic disaster modules, strong clinical skills	Limited simulation, uneven CPD access
Resources & Infrastructure	Adaptability, local networks	Chronic shortages, unequal distribution
Coordination & Communication	Increasing use of digital tools, inter-agency networks	Fragmentation, inconsistent leadership
Community Engagement	Trust, health education, cultural mediation	Misinformation, limited community ownership

Conclusion

Community nursing teams are essential in response to mass-casualty and epidemic events. Despite their flexibility, understanding and good communal associations, their level of preparedness is disproportionate to the regions. The rich nations have the organized patterns and facilities but they have the workforce and mental problems. The low and middle-income settings require resourcefulness at the border of the resourcefulness of nurses but have an organizational shortage and ineffective infrastructures. Increased preparedness and resilience must be achieved by investing in continuous education, resource allocation, integrated communication channels and mental health [9]. Most importantly, nurses need to be one of the primary partners in the emergency planning, response, instead of being top-down, they will produce it with the communities. Strong and healthy nursing teams are associated with strong and healthy communities.

References

1. White EN. Nursing Care During Natural Disasters War Zones and Mass Casualty Incidents: Implications for an Educational and Professional Overhaul. 2024.
2. Merson JR, Migeon M, Marn J, et al. Mass Casualty Incidents. Physician Assistant Clinics. 2025; 10: 771-791.
3. Biswas S, Bahouth H, Solomonov E, et al. Preparedness for mass casualty incidents the effectiveness of current training model. Disaster Med Public Health Prep. 2022; 16: 2120-2128.
4. Humann M, Collie C, Bright K, et al. Public engagement during full-scale exercises Dimensions of trust and community resilience. Journal of Contingencies and Crisis Management. 2022; 30: 317-326.
5. Stenroth J. Nursing role in a mass casualty incident. 2024.
6. Shimber ET. How to Establish a Trauma and Disaster Response Service in Low-and Middle-Income Countries,

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- Including Staff, Transportation, Testing, Triage, Resuscitation Training and Facilities. In *Global Surgery: How to Work and Teach in Low-and MiddleIncome Countries*. Cham: Springer International Publishing. 2023; 137-147.
7. Shubayr N. Evaluating nurses' psychological and operational preparedness for masscasualty events in Saudi Arabia. *Int Nurs Rev*. 2025; 72: e70002.
 8. Loera J, Prakash PS. Mass Casualty Events: Preparedness and Response for Trauma Centers and Institutions. In *Creating a Modern Trauma Center*. Cham: Springer Nature Switzerland. 2024; 233-240.
 9. Radford H. Dealing with disaster a qualitative exploration of the experiences of healthcare and emergency services staff following a mass casualty incident Doctoral dissertation University of Sheffield. 2021.