

# Rehabilitation of pre-existing neurologically disabled children in emergency situations

Hitav Someshwar<sup>1,\*</sup>, Nirmal Surya<sup>2</sup>

<sup>1</sup>Assistant Professor, Physiotherapy School & Center, TNMC & BYL Nair Ch. Hospital, Mumbai, India

<sup>2</sup>Consultant Neurologist, Bombay Hospital and Medical Research Center, Mumbai, India

\*Author for correspondence:  
Email: hitavsomeshwar94@gmail.com

Received date: February 23, 2025  
Accepted date: March 26, 2025

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## Abstract

Disasters such as earthquakes and armed conflicts are threats for every child but especially concerning those children having pre-existing neurological impairments. This exacerbates their health challenges as care is further disrupted, resources are scarce, and support systems miss the mark. Targeted rehabilitation strategies are critical to safeguarding their safety, health, and well-being. The special problems associated with neurologically impaired children in emergencies are highlighted, and the basic principles of their rehabilitation care is reviewed. Key elements include inclusive emergency planning, access to information and medical care for specific needs, mental health support as well as community participation. This includes steps such as training of emergency first responders, building local capacities and adaptive infrastructure; working together with NGOs or international organizations. When we focus on the needs of these children, who are some of the most at risk in humanitarian contexts, we build their capacity to cope and receive critical care that promotes development and healing.

**Keywords:** Neurological disabilities, Emergency rehabilitation, Pediatric rehabilitation, Disaster response, Community-based rehabilitation (CBR)

## Introduction

Rehabilitation of children with prior neurological disabilities in emergency situations indeed is a special and urgent task. Children with disabilities, who already face many barriers in their everyday lives due to the impairments they are living with, experience even more difficulties when emergencies arise. Critical service disruptions, shortages of specialized care and the emotional toll wrought by disasters or conflicts call for an extensive approach to their rehabilitation. Current emergency response protocols often overlook the unique needs of children with pre-existing neurological disabilities, exacerbating disparities in care [1].

### Understanding the context

In emergencies, children with prior neurological problems such as cerebral palsy, epilepsy and muscular dystrophy are particularly at risk. These conditions can normally only improve via routine, specialized medical treatment and rehabilitation services that are severely disrupted in emergencies. Healthcare system collapse, forced displacement and the mental health conditions conjured up by disasters or conflict only add layers of complexity to their rehabilitation process [2].

### Challenges in Rehabilitation

1. Disruption in Specialized Services: Children with neurological disabilities usually receive specialized services including physical therapy, occupational therapy, and speech-language pathology. These services are often shut down or unavailable especially in emergency cases because of destruction

of health infrastructure and forced displacement from trained professionals.

2. Medication and Medical Supplies in Short Supply: Often, these zones lack access to the medications or the medical supplies they need. Children with illnesses such as epilepsy often need to take medication daily to prevent seizures. Disruption of medication can result in serious health deterioration and aggravate the degree of disability.

3. One of the major issues is dislocation and Continuity of care; Displacement due to disasters or conflict increase disrupts this continuity, an essential part for effective rehabilitation. This population often moves frequently with their children and may lose access to usual healthcare providers or interrupt ongoing treatment plans.

4. Psychological trauma: The psychological consequences of residing in an area experiencing war or natural disaster, including exposure to violence, losing family members and constant fear compound the complications associated with neurological disabilities.

This trauma can significantly impact their overall well-being and recovery.

5. Stigma and Discrimination: Children with disabilities often face stigma and discrimination, which can be intensified in the chaotic environment of an emergency. This social stigma can limit their access to care and support services.

6. Security Concerns: The ongoing emergency poses significant risks to healthcare providers and patients. Ensuring the safety of children and their families while accessing rehabilitation services is a major challenge.

### Strategic Solutions [3-5]

Addressing these challenges requires a multi-faceted approach that integrates medical, psychological, and social support. The following strategies offer a comprehensive framework for rehabilitating neurologically disabled children in emergency situations:

1. Mobile Rehabilitation Units: Deploying mobile clinics equipped with essential rehabilitation tools and staffed by trained professionals can provide much-needed care to displaced and isolated populations. These units can offer services such as physical therapy, medication management, and psychological support on-site, significantly enhancing access to care.

2. Training and Empowering Local Healthcare Workers: Building the capacity of local healthcare workers through targeted training programs can ensure the continuity of rehabilitation services. Training initiatives should focus on equipping local staff with the skills necessary to provide basic rehabilitation and manage neurological conditions.

3. Telehealth Services: Leveraging telehealth technology can bridge the gap in expertise and resources. Remote consultations with specialists, virtual therapy sessions, and telemedicine platforms can provide ongoing support and guidance to local healthcare providers and families.

4. Psychosocial Support: Integrating mental health services into rehabilitation programs is crucial for addressing the psychological

trauma experienced by children in emergency situations. This support should include counselling, therapeutic activities, and community-based mental health initiatives tailored to the needs of neurologically disabled children.

5. Collaboration with NGOs and International Organizations: Partnerships with non-governmental organizations (NGOs) and international bodies can enhance resource pooling and expertise sharing. These collaborations can facilitate the delivery of specialized care, provide funding for essential services, and support capacity-building initiatives.

6. Community-Based Rehabilitation (CBR): Implementing community-based rehabilitation (CBR) strategies can decentralize care and make it more accessible. CBR involves training community members to provide basic rehabilitation services and support, fostering a network of care that extends beyond formal healthcare facilities.

7. Family-based Rehabilitation (FBR): Family-Based Rehabilitation (FBR) is an approach that actively involves family members in the rehabilitation process, recognizing their critical role in supporting the individual's recovery and enhancing overall outcomes. Family-based rehabilitation in emergency situations involves empowering families to support their neurologically disabled children through training and resources. Providing caregivers with essential skills in handling medical needs, communication techniques, and therapeutic exercises ensures continuity of care. Establishing support networks among families fosters community resilience and mutual assistance. Ensuring access to necessary medical supplies and assistive devices within the family unit is crucial. This approach enhances the overall well-being of children by leveraging the stability and familiarity of their family environment during crises.

8. Distribution of Assistive Technologies: Providing low-cost, durable assistive technologies such as wheelchairs, orthotics, and communication devices can significantly improve the quality of life for neurologically disabled children. These technologies should be tailored to the specific needs and resource limitations of conflict settings.

9. Continuity of Medication Supply: Ensuring a consistent supply of essential medications is critical. Establishing secure supply chains and distribution networks, as well as stockpiling medications in safer regions, can help mitigate the disruption of treatment.

10. Education and Advocacy: Conducting awareness campaigns to educate communities about the needs and rights of children with neurological disabilities is vital. Advocacy efforts should aim to reduce stigma, promote inclusion, and highlight the importance of rehabilitation services.

11. Data Collection and Research: Investing in research and data collection to understand the specific needs and challenges of neurologically disabled children in emergency situations is essential. Evidence-based approaches can guide the development of more effective rehabilitation strategies and policies.

### Conclusion

Rehabilitating pre-existing neurologically disabled children in emergency situations requires a comprehensive and inclusive approach. By integrating their needs into emergency planning,

ensuring access to specialized medical care, providing psychological support, and involving the community, we can significantly enhance their resilience and quality of life. Training and empowering families, building adaptive infrastructure, and collaborating with NGOs and international organizations are essential steps in this process. Prioritizing these vulnerable children not only safeguards their health and development but also strengthens the overall emergency response, fostering more resilient and compassionate communities. Investing in preparedness and capacity building ensures that we are better equipped to protect and rehabilitate these children in times of crisis. Challenges in implementing these strategies include funding constraints, accessibility issues in conflict zones, and insufficient trained personnel. Future research should focus on scalable, sustainable interventions tailored to diverse emergency contexts. Immediate integration of these strategies into disaster policies is vital to prevent irreversible harm.

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