



SURGE CAPACITY OF THE CURATIVE SECTOR HEALTHCARE INSTITUTIONS FOR THE MANAGEMENT OF DISEASE OUTBREAKS IN KURUNEGALA DISTRICT, SRI LANKA

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01. Introduction

Surge capacity is defined as the ability to obtain adequate 'staff', 'supplies', 'structures' and 'systems' to provide sufficient care to meet immediate needs of an influx of patients.

The aim of the study was to assess surge-capacity of the curative-healthcare institutions for the management of disease outbreak in a major district in Sri Lanka.

02. Methods

Study Design:

A descriptive cross-sectional study

Study Population:

All curative-healthcare institutions in the district with inward-care facilities (n=46)

Study Period:

May to September 2019

Data collection:

The data was taken from the medical administrator or a designated focal point of the relevant institution

Tool:

An Interviewer-administered tool, which was formulated using 'Science of Surge Theory' and 'CO-S-TR Model'

Analysis:

Levels of overall surge capacity assessment

1. Clear need for improvement (<25%)

2. Basic-level (26 - 50%),

3. Moderate-level (51 - 75%)

4. High-level capacity (>75%)

Ethical Clearance (ERC) was obtained from the ERC, Faculty of Medicine, The University of Colombo, Sri Lanka [EC-18-134]

03. Results

01. STAFF	Type of the institution			Total
	PGH	BH	DH	
Inadequate	0 (0.0%)	2 (8.3%)	22 (91.7%)	24 (55.8%)
Adequate	1 (5.3%)	2 (10.8%)	16 (84.2%)	19 (44.2%)
Total				43 (100.0%)

02. SUPPLIES	Availability	Adequacy
Adjustable beds	69.8% (n=30)	13.3% (n=4)
Infusion-pumps	72.1% (n=31)	38.7% (n=12),
Saturation monitors	51.2% (n=22)	40.9% (n=9)
Oxygen facilities	100% (n=43)	30.2% (n=13)
Pack-Cell-Volume (PCV) monitors	27.9% (n=12)	66.7% (n=8)

03. STRUCTURE	Availability
Designated emergency units [ED]	90.7% (n=39)
X-ray	11.6% (n=5)
Ultra-Sound Scan [USS]	9.3% (n=4)
Blood bank facilities	9.3% (n=4)

04. SYSTEM	Availability
Designated focal points	76.7% (n=33)
Written disaster plans	72.1% (n=31)
Team with adequate risk-communication capabilities	34.9% (n=15)

Institution	Levels of Overall Surge Capacity				Total
	Low	Basic	Moderate	High	
PGH	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	1 (100.0%)
BH	0 (0.0%)	0 (0.0%)	3 (75.0%)	1 (25.0%)	4 (100.0%)
DH	1 (2.6%)	29 (76.3%)	8 (21.1%)	0 (0.0%)	38 (100.0%)
Total	1 (2.3%)	29 (67.4%)	12 (27.9%)	1 (2.3%)	43 (100.0%)

Types of Healthcare Institution	Adequacy of the Overall Surge Capacity		Total
	Adequate	Inadequate	
PGH	1 (7.7%)	0 (0.0%)	1 (2.3%)
BH	4 (30.8%)	0 (0.0%)	4 (9.3%)
DH	8 (61.5%)	30 (78.9%)	38 (88.4%)
Total	13 (30.2%)	30 (69.8%)	43 (100.0%)

*PGH=Provincial General Hospitals; BH=Base Hospitals; DGH=District General Hospitals

04. Conclusion

There is a clear need for improvement of surge capacity of the curative-healthcare institutions in the district and capacity development programmes need to be initiated for the future outbreak management