



Organization of emergency services in hospitals of New Delhi, India: A multicentric study

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INTRODUCTION

- Emergency services remain a social safety net in healthcare system
- Comprises of continuous stream of activities beginning from triage at contact till admission or discharge
- Health care provision in India is a tiered national health system
- Delhi, the capital city of India, is the second most populous city of the world
- Focus of political rapportage and largest economic hub in the northern part
- Negative attention in terms of crime, road accidents and terror attacks.
- City is also vulnerable to natural disasters like earthquake (seismic zone IV), floods (New Delhi lies on floodplains of Yamuna River) and is susceptible to manmade disasters by virtue of having the busiest airport as well as rail network of the country, terror attacks etc.
- Healthcare delivery system in state of Delhi is multifaceted as being provided not only by both public and private sector but has various stakeholders when it comes to public sector
- Calls for a robust emergency service system with rapid and appropriate care

AIM

This study was aimed towards observing the organizational set up of emergency services across hospitals in state of Delhi, which may aid government in planning healthcare services subsequently.

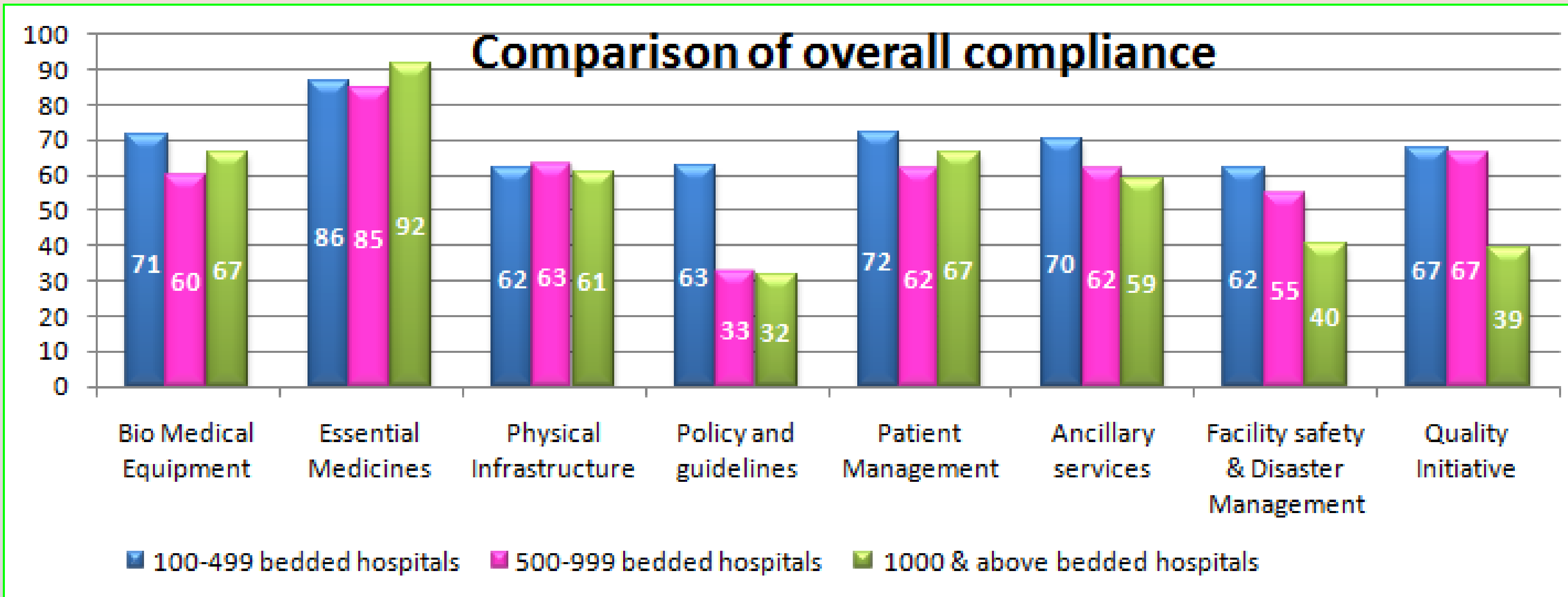
RESULTS

- Teaching hospitals constituted 73.7% of the total.
- Designated in charge and dedicated staff for emergency services.
- Doctors were trained in BLS, ACLS, PALS, ATLS and Nursing Officers were trained in BLS.
- Most hospitals had consultants physically present during the OPD hours in hospital and on-call during nights.
- The residents of respective speciality gave 24x7 cover physically.
- The % of ED beds to In-patient beds ranged from 4.3 to 5.4% of hospital beds
- Annual ED patient volume ranged from 5814 to 5,32,853 patients.
- Average number (Overall 12.7) of patients per ED bed per day is 6.08 for private hospitals and 13.36 for government hospitals.

METHODOLOGY

- Descriptive and observational study from May 2018 to October 2019
- Casualty/ emergency department/ emergency services of the hospitals situated in state of Delhi having inpatient bed complement of 100 and above
- Hospitals were stratified into three categories i) having bed complement of 100-499 hospital beds, ii) 500 – 999 hospital beds, iii) >=1000 hospital beds.
- 10% hospitals from each stratum or minimum one hospital from each stratum,
- Each hospital was visited in person by the researcher
- Data collection: Designed assessment tool for emergency services.
- Content and face validity of the study tool was established by subject experts
- Data was analyzed using Microsoft Excel and STATA software version 12.

Hospital category (as per ownership & management)	N	Sample (n)	Percentage
Private entity (for profit and not for profit)	48	5	10.4%
Government of Delhi	28	4	14.2%
Government of India	6	3	50%
Municipal Corporation of Delhi (MCD)	6	3	50%
New Delhi Municipal Corporation (NDMC)	1	1	100%
Employee’s State Insurance Corporation (ESIC) hospitals	4	2	50%
Indian Railways	1	1	100%
Ministry of Defence (did not consent)	2	2	100%
TOTAL	96	21	21.9%



Parameters		100-499 Beds	500-999 Beds	1000 & above beds
No of EDs studied		11 (57.9%)	5 (26.3%)	3(15.8%)
Ownership of the Hospital	Private (Profit)	1	1	0
	Private (Non-profit)	3	0	0
	Public	7	4	3
Academic aspect of Hospital	Teaching Hospital	6	5	3
	Non-Teaching Hospital	5	0	0
Accreditation Status	NABH Accredited	6	1	0
	Non- NABH Accredited	5	4	3
	Secondary hospital	3	0	0
Type of Healthcare Facility	Single-Speciality Tertiary care	0	0	1
	Multi-Speciality Tertiary care	2	3	0
	Super-speciality Tertiary care	6	2	2
Total No. of In-patient beds	Total Number	2965	3772	5219
	Mean(SD)	269.5(± 133.8)	754.4(±165.2)	1739.7(±554)
	Median (Min, Max)	242(100,470)	675(600,980)	2053(1100,2066)
Total No. of E.D beds	Total Number	149	205	222
	% of ED beds to In-patient beds	5	5.4	4.3
Total Number of Registrations/ Patient Volume in ED (In one year)	Total Number	504641	1340233	825487
	Patient Volume to ED beds per day	9.3	17.9	10.2
Total No of MLC (In one year)		7728 (n=8)	31163 (n=5)	11429 (n=1)
		50473 (n=8)	168542 (n=3)	48,387 (n=1)
Total No. of Admission through E.D			12	21
			(n=5)	(n=3)
Total No. of Ambulances		22 *(n= 10)		

n = number of hospitals from where the data was captured *Not all hospitals prepared MLCs and few did not share the MLC data, ¥few hospitals did not capture the data for “number of admissions through ED” and €1 hospital did not have fixed number of ambulances.

CONCLUSION

- There is variability in organization of emergency services, however most of the hospitals has triaging and categorization of ED areas.*
- In Public Sector hospitals load of emergency patients is more than that of the private sector hospitals*
- Private hospitals performed better in infrastructure & equipment compliance, while government hospitals were better in availability of essential medicines.*
- NABH accredited hospitals performed better than hospitals not accredited by NABH.*
- Hospitals with lesser bed strength performed better and gap increased as bed strength increased.*

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