Comparing health outcomes for hospitalized toxic megacolon patients in urban and rural healthcare facility setting: a nationwide study.

BACKGROUND

- Management of Toxic Megacolon (TM) remains a challenge for physicians and surgeons due to the potential systemic toxicity and complexity associated with the condition.
- Limited data demonstrating incidence and inpatient health outcomes is available for TM.
- Our aim is to assess and compare the health outcomes in hospitalized TM patients in rural and urban health centers.

METHODS

- We queried the Premier Healthcare database for nationwide adult inpatient admissions between 2016-2018 with the following ICD10 diagnosis codes for TM: K59.3, K59.31 and K59.39.
- The study population was further classified into 2 groups based on healthcare facility setting: urban versus rural centers.
- We evaluated incidence of morbidity, readmissions, post-operative mortality (PM), Mean Length of stay (MLOS) and Cost per Case (C/C) in each of the two groups.
- Unpaired t-test was used to compare outcomes among groups.

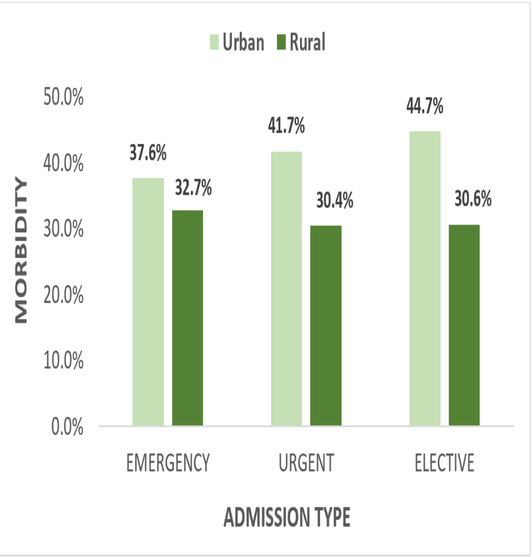
RESULTS

- Total 6609 inpatient admissions were identified, 5783 in the urban centers versus 826 in rural centers.
- Based on admission type, rural centers reported significantly lower morbidity compared to urban centers (Mean: 31.25% vs 41.36%; **p=0.004**).
- Similarly, MLOS was also significantly lower in rural than urban centers (6.42 vs 7.99 days; **p=0.006**).
- Readmissions and PM were higher in the rural centers versus urban centers, but the difference was not statistically significant.

Table 1. Health Outcomes in hospitalized Toxic Megacolon patients in urban and rural health centers based on admission type.

VARIABLES	EMERGENCY	URGENT	ELECTIVE	P-VALUE
Total Cases	4894	989	726	
Urban	4304	851	628	
Rural	590	138	98	
Readmissions	872 (17.8%)	148 (15.0%)	114 (15.8%)	
Urban	766 (17.8%)	130 (15.3%)	98 (15.6%)	0.44
Rural	106 (18.0%)	18 (13.0%)	17 (16.9%)	
Mortality	502 (10.2%)	122 (12.3%)	51 (7.0%)	
Urban	426 (9.9%)	107 (12.5%)	41 (6.5%)	0.19
Rural	76 (12.8%)	16 (11.5%)	10 (10.1%)	
LOS	7.02	7.09	7.49	
Urban	7.56	8.30	8.10	**0.006**
Rural	6.49	5.88	6.88	
Morbidity	1812 (37.0%)	397 (40.1%)	311 (42.8%)	
Urban	1619 (37.6%)	355 (41.7%)	281 (44.7%)	**0.004**
Rural	193 (32.7%)	42 (30.4%)	30 (30.6%)	

Figure 1. Morbidity in hospitalized Toxic Megacolon patients in urban and rural health centers based on admission type.



CONCLUSION

- TM is associated with high morbidity especially in urban centers.
- Further research is needed to assess various risk factors, interdisciplinary team coordination and management strategies to optimize health outcomes in TM patients.

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