

# Factors contributing to congestive cardiac failure, urinary tract infection and constipation hospital readmissions within 7 days of discharge

Chania Lobo\*<sup>1</sup>, David Rankin <sup>2</sup>

<sup>1</sup> School of Medicine, Monash University, Melbourne

<sup>2</sup> Health Informatics Research, Cabrini Health, Melbourne

Cabrini Medical Staff Research Scholarship

## Background

Readmissions to hospital shortly after discharge are commonly linked to problems during the initial admission and may be preventable with further interventions prior to discharge or with post discharge follow up (van Walraven et al., 2011). This study reviewed unplanned congestive cardiac failure (CCF), urinary tract infection (UTI) and constipation readmission cases within 7 days of discharge.

## Aim

The aim of this study was to identify preventable common causes of unplanned CCF, UTI and constipation readmissions within 7 days. This can help guide where efforts should be made to limit such readmissions in the future and improve patient outcomes.

## Method

A retrospective observational case series of 31 unplanned CCF (7), UTI (11) and constipation (13) readmission cases within 7 days of discharge from a single private hospital between September 2021 and September 2022 was conducted. Administrative data and hospital patient records from the index admission and representation to the emergency department (ED) were evaluated to determine whether the readmission was preventable and contributing factors.

## References

van Walraven C, Bennett C, Jennings A, Austin PC, Forster AJ. Proportion of hospital readmissions deemed avoidable: A systematic review. Canadian Medical Association Journal. 2011;183(7). doi:10.1503/cmaj.101860

## Results

71.4% (5) of CCF, 63.6% (7) of UTI and 53.8% (7) of constipation readmission cases were identified as potentially preventable. The most common cause of preventable CCF readmissions was cardiac medication changes at discharge (60% of preventable CCF readmissions). For preventable UTI readmissions, common contributors included early evidence of UTI or renal complications at discharge (42.9%) and incomplete assessment post-surgery or prior to discharge (42.9%). Lastly, postoperative opioid related constipation (42.9%) and unresolved constipation issues from index admission (42.9%) were primary factors observed amongst preventable constipation readmissions.

Table 1. Factors contributing to preventable or potentially preventable congestive cardiac failure (CCF), urinary tract infection (UTI) and constipation readmissions within 7 days.

Cause of Readmission	Number of readmissions	Percentage of preventable or potentially preventable readmissions	Primary causes of preventable readmissions		Mean Hospital days (combined length of stay)
Congestive cardiac failure (CCF)	7	71.4% (5/7)	Cardiac medication changes at discharge	60% (3/5)	23.7
			Evidence of CCF at discharge	20% (1/5)	
			Suboptimal discharge management	20% (1/5)	
Urinary tract infection (UTI)	11	63.6% (7/11)	Early evidence of UTI or renal complications at discharge	42.9% (3/7)	12.2
			Inadequate discharge location	14.3% (1/7)	
			Incomplete assessment postoperative or prior to discharge	42.9% (3/7)	
Constipation	13	53.8% (7/13)	Postoperative opioid related constipation	42.9% (3/7)	11.8
			Unresolved constipation issues from index admission	42.9% (3/7)	
			Incomplete postoperative assessment	14.3% (1/7)	

## Conclusion

A high proportion of unplanned CCF, UTI, and constipation readmission cases had identifiable possible causes that led to readmission within 7 days. These findings highlight quality improvement areas and can be used to help guide discharge decisions to reduce future rates of preventable CCF, UTI, and constipation readmissions.