INTRODUCTION

Clostridioides difficile (C. diff) is a common hospitalacquired infection with increasing rates of morbidity and mortality in elderly patients. Per CDC, there are about 500,000 cases yearly where 1 out of 11 patients die over the age of 65 due to complications from healthcareassociated C. diff infection (CDI). Oral Vancomycin has been shown to prevent recurrent CDI. Approximately 40% of patients admitted to Good Samaritan Hospital were colonized with C. diff developed active CDI while on antibiotic therapy during their hospitalization. In January 2017, the TriHealth Hospital system initiated a quality improvement intervention during which all patients admitted from long-term care who were positive for C. diff colonization were given prophylactic oral Vancomycin when antibiotics were prescribed.

HYPOTHESIS

- 1) Does low dose oral Vancomycin reduce C. diff infection among hospitalized long-term care patients colonized with C. diff while receiving broad-spectrum antibiotics?
- 2) What are the risk factors for developing CDI during

C. Diff colonization

Bethesda Butler Hospitals

- •From April 1, 2017, to June 30, 2018
- admitted from long term care
- Exclusion Criteria: Patients admitted from home, assisted living or independent living





LTAC long term acute care, ECF extended care facility, SNF skilled nursing facility, NH nursing home

Risk Factors and Outcomes of Clostridium Difficile Colonization in Hospitalized Patients from Long Term Care

Table 1. Patient Characteristics

	90 day CDI N=5 (4%)	90 Day No CDI	P-value
Demographic Characteristics			
Age. Years Med.(IQR)	58(34.80)	77(63.84)	0.076
Female. %(N)	40(2)	62(78)	0.288
Race, %(N)			0.483
African American/Black	0	13(17)	
Caucasian/White	80(4)	80(102)	
Other	20(1)	7(9)	
Prior CDI	20(1)	16(20)	0.592
Comorbidities			
History of Heart Failure, %(N)	20(1)	36(46)	0.403
History of COPD, %(N)	0	22(27)	0.306
History of Diabetes Mellitus, %(N)	20(1)	47(59)	0.234
History of Irritable Bowel Disease, %(N)	0	2(3)	0.888
History of Chronic Kidney Disease, %(N)	40(2)	21(26)	0.293
History of End Stage Renal Disease, %(N)	0	10(13)	0.585
Immune Suppressive Condition, %(N)	20(1)	8(10)	0.362
Serum albumin levels at admission, Med. (IQR)	3.45(3.1,3.75)	2.8(2.4,3.3)	0.027
Medication			
Antibiotics at the time of admission, %(N)	60(3)	15(19)	0.034
Antibiotics during hospital stay, %(N)	100(5)	74(92)	0.225
Proton Pump Inhibitors at admission, %(N)	20(1)	43(54)	0.294
Low Dose Vancomycin, %(N)	80(4)	55(69)	0.26

Table 2: Adherence to Intervention Protocol

Did not receive vancomycin while on No Vancomycin, no antibiotic treatme Only received 1 dose of vancomycin **Received vancomycin while on other Received vancomycin without antibio**

> A review of CDI via TriHealth statistics revealed an overall reduction of hospital-acquired CDI since the implementation of prophylactic oral Vancomycin therapy. A significant association was noted for 90-day C diff infection in long term acute care patients who were taking antibiotics during the time of admission. The future steps of this study will be to determine the duration of low dose vancomycin therapy for the prevention of future CDI as some patients did develop CDI within 90 days of discharge.

RESULTS

	Frequency %(N)	Adherence % (N)
other	19.2 (25)	0 (0)
ent	23.1 (30)	23.1 (30)
while on	0.8 (1)	0 (0)
antibiotics	55.4 (72)	55.4 (72)
otic treatment	1.5 (2)	0 (0)
	100 (130)	78.5(102)

CONCLUSION