

BACKGROUND

Due to poor systemic absorption, oral vancomycin is primarily used for the treatment of *Clostridioides difficile* infections (CDI).

With recent guideline updates, oral vancomycin is recommended first-line for treatment of CDI of all severity types in adult patients.

In pediatrics, both metronidazole and oral vancomycin are first-line treatments for non-severe CDI. Oral vancomycin remains preferred for history of CDI or severe/fulminant CDI only.

METHODS

A single-center, retrospective medication use evaluation was performed for oral vancomycin. Approval was obtained by the Children's Mercy Institutional Review Board.

Inclusion Criteria:

- Inpatients receiving at least one dose of oral vancomycin between June 1, 2017 and December 31, 2018

Data analysis was performed on total number of treatment courses. Patients with multiple vancomycin orders while on the same course of treatment were included as one course.

OBJECTIVE

Characterize the inpatient use of oral vancomycin at Children's Mercy Kansas City in patients diagnosed with a CDI

RESULTS

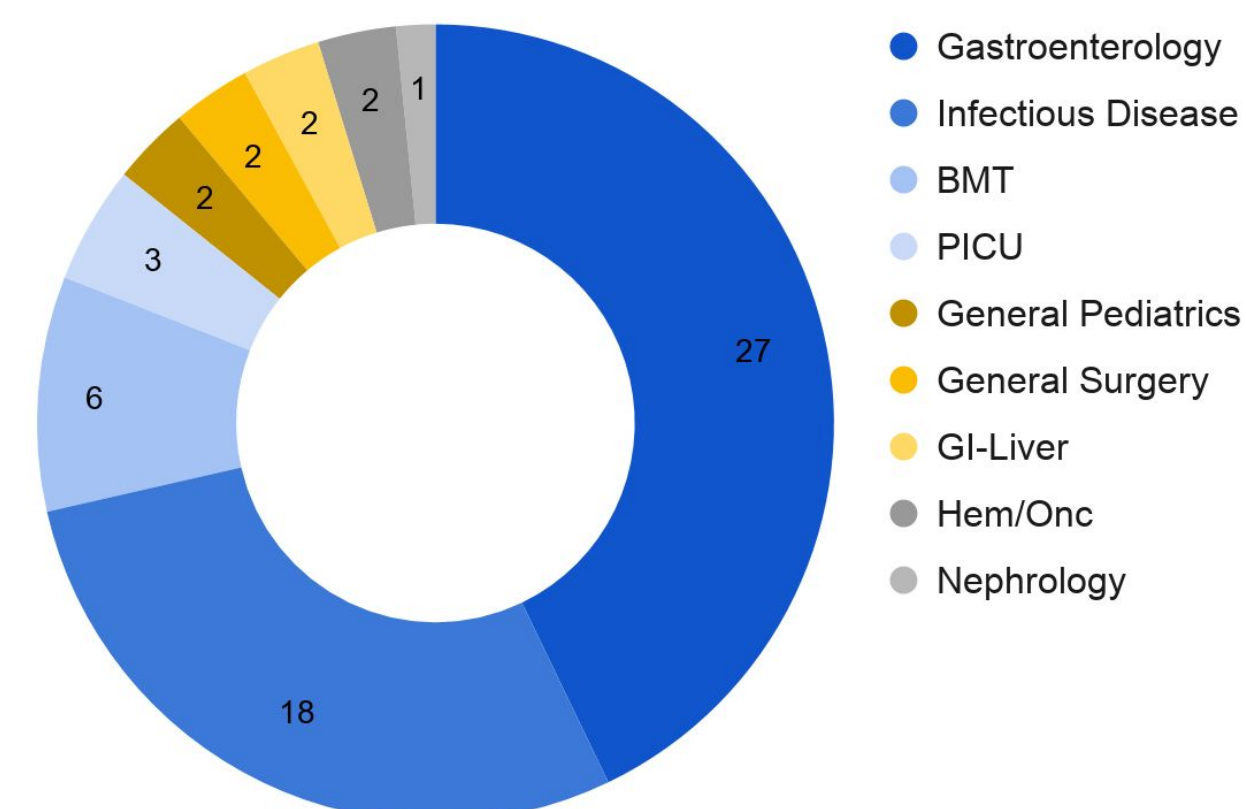
66 inpatient orders were identified in 47 patients. This accounted for 59 total treatment courses.

Table 1: Order Characteristics (n = 59 Courses)

Characteristic	Value
Age (years) - median (IQR)	7.5 (10)
Weight (kg) - median (IQR)	23.6 (28.9)
*Dose - median (IQR)	
mg	125 (25)
mg/kg/dose	6.5 (6.8)
Frequency - number (%)	
QID	40 (68)
Taper	9 (15)
Combination (not taper)	7 (12)
TID	3 (5)
Duration (days) - median (IQR)	14 (15.5)

*18 patients received >125 mg/dose, including 4 patients with severe/fulminant CDI

Figure 1: Prescribing Services (59 Courses)

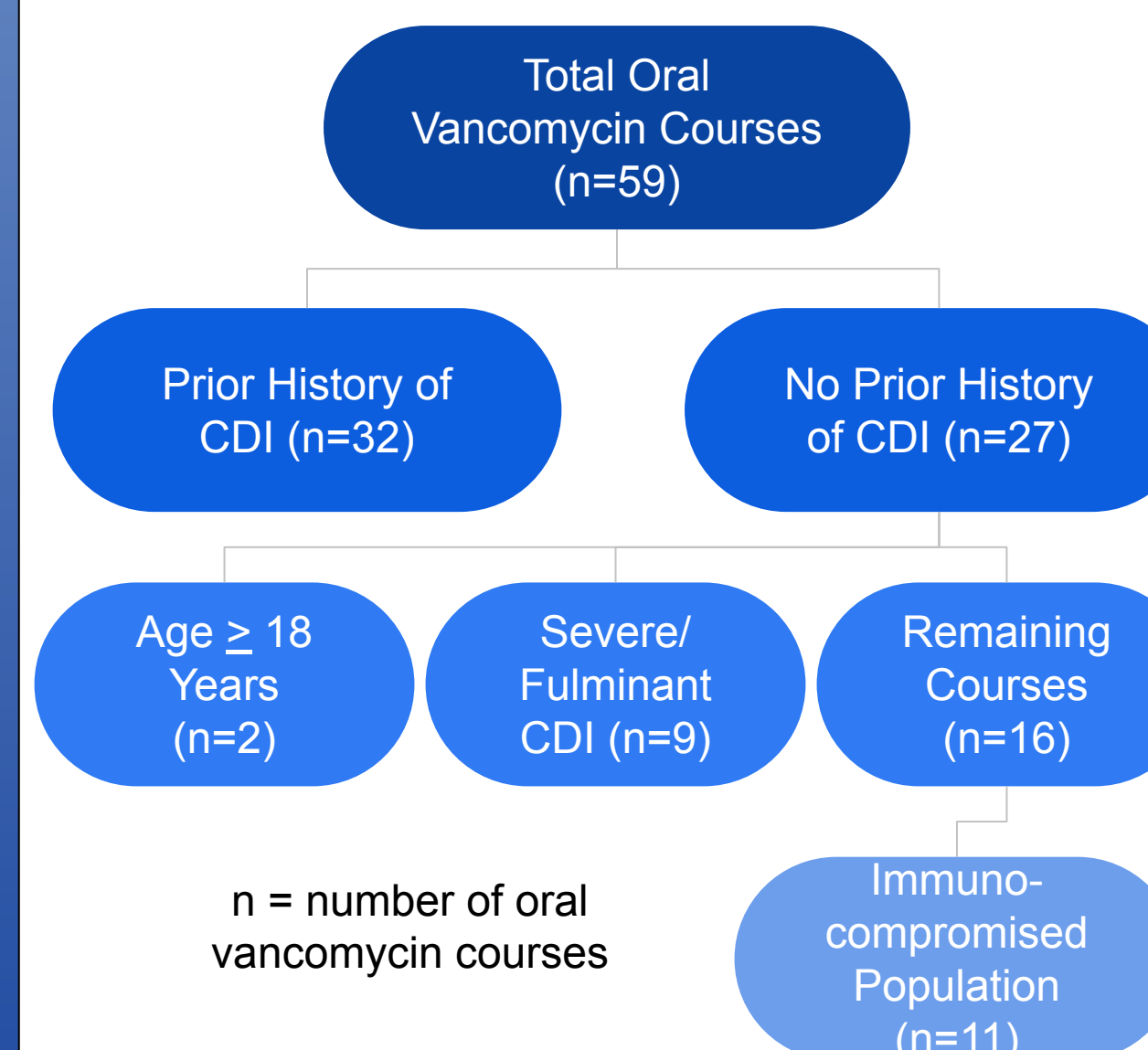


RESULTS

Table 2: Disease Presentation (59 Courses)

Disease Presentation	Courses - number (%)
Immunocompromised Patients	41 (69)
BMT	9 (22)
Hem/Onc	12 (29)
Immunomodulating Medication	16 (39)
Solid Organ Transplant	4 (10)
History of CDI	32 (54)
Number of Prior Episodes - median (IQR)	2 (2.3)
Concomitant Antibiotic Use	37 (63)
Diarrhea Present	57 (97)
Severe/Fulminant CDI	17 (29)
Positive CDI Test	55 (93)

Figure 2: History of CDI (59 Courses)



DISCUSSION

Majority of inpatient, oral vancomycin usage at our institution was in concordance with recent guideline recommendations.

- Remaining patients were immunocompromised.

A subset of patients received doses higher or treatment longer than recommended.

Over half of patients received concomitant antibiotics at any time during treatment of CDI.

Limitations include exclusion of outpatient oral vancomycin orders and lack of pre-post comparison following newer guideline adaptation.

CONCLUSION

Oral vancomycin is being used appropriately in our institution.

Opportunities for antimicrobial stewardship include education on dosing/duration and reduction in concomitant antibiotic use.

Future directions include assessment of oral vancomycin for non-CDI indications and in the outpatient setting.

REFERENCES

- Vancocin Capsules. Package Insert. Viro Pharma Inc; 2011.
- McDonald L, Gerding D, Johnson S, et al. Clinical Practice Guidelines for *Clostridium difficile* Infection in Adults and Children: 2017 Update by the Infectious Diseases Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA). *Clinical Infectious Diseases*, Volume 66, Issue 7, 1 April 2018, Pages e1–e48, <https://doi.org/10.1093/cid/cix1085>

DISCLOSURES

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.