



Understanding the Effects of Social Determinants of Health on Outcome When Discharging Veterans on Parenteral Antibiotic Therapy

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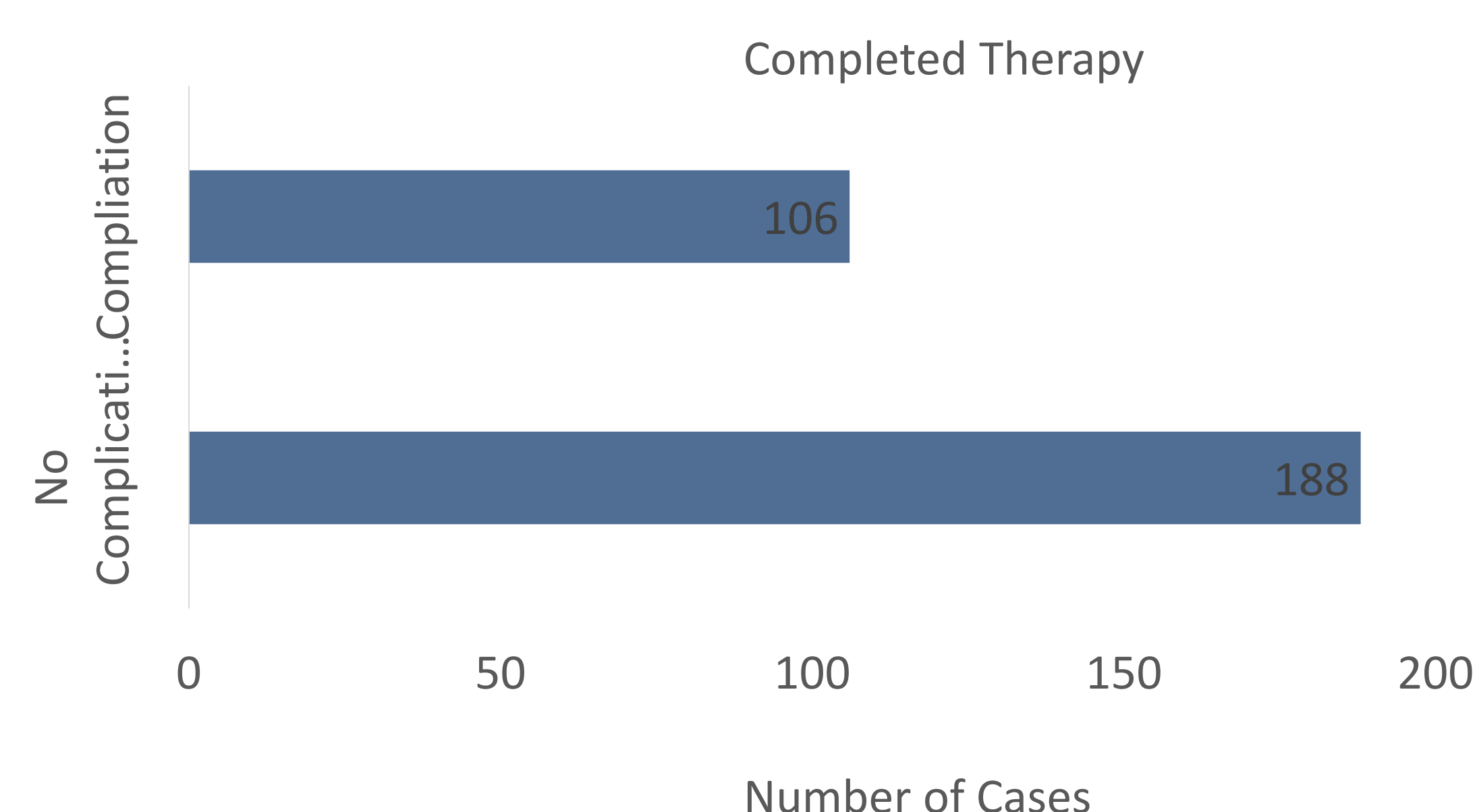
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Background

Social determinants of health are conditions in which people live, including aspects of both social environments and physical environments, and how these conditions affect their health. Examples of social determinants include access to health care, social support, culture, etc. These factors are often considered when discharging a patient on IV antibiotics. The purpose of this study was to determine if social determinants of health are related to outcomes for veterans discharged from the Zablocki VA on outpatient parenteral antibiotic therapy (OPAT).

Methods

This retrospective chart review evaluated veterans discharged home from the Zablocki VA on OPAT between the years of 2013 and 2017. Variables of social determinants of health included: race/ethnicity, co-habitants, mental health diagnosis, employment, use of illicit drugs, use of tobacco, and use of alcohol. The primary outcome analyzed was completion of therapy with or without complication. Complication is defined as antibiotic change/dose adjustment, PICC line complication, or additional clinic/hospital visit.



DATA

Table 1. Social determinants of patients receiving OPAT at Zablocki VA 2013-2017.

Determinant	No Complication N= 188; N(%)	Complication N= 106; N (%)	p-value
Sex			
Male	181 (96.28)	105 (99.06)	0.124
Female	7 (3.72)	1 (0.94)	
Race/ethnicity			
White	167 (88.83)	88 (83.02)	0.3671
Black	16 (8.51)	14 (13.21)	
Other	5 (2.66)	4 (3.77)	
Coinhabitants			
Alone	50 (26.60)	23 (21.70)	0.6338
Not Alone ^a	127 (67.55)	77 (72.64)	
Unavailable	11 (5.85)	6 (5.66)	
Mental Health Diagnosis			
No	99 (52.66)	56 (52.83)	0.2333
Yes ^b	89 (47.34)	50 (47.17)	
Employment			
Employed	37 (19.68)	18 (16.98)	0.8947
Retired	80 (42.55)	46 (43.40)	
Unemployed	22 (11.70)	15 (14.15)	
Unavailable	49 (26.06)	27 (25.47)	
Illicit Drug Use			
Current IV	0	0	0.698
Former IV	1 (0.53)	2 (1.89)	
Current Non-IV	5 (2.66)	4 (3.77)	
Former non-IV	13 (6.91)	5 (4.72)	
Denied	162 (86.17)	90 (84.91)	
Unavailable	7 (3.72)	5 (4.72)	
Tobacco Use			
Yes	38 (20.21)	39 (36.79)	0.0088
No	58 (30.85)	21 (19.81)	
Former	90 (47.87)	46 (43.40)	
Unavailale	2 (1.06)	0	
Alcohol Use			
Yes	73 (38.83)	39 (36.79)	0.585
No	80 (42.55)	48 (45.28)	
Former	26 (13.83)	17 (16.04)	
Unavailable	9 (4.79)	2 (1.89)	

Abbreviations: OPAT, Outpatient Parenteral Antimicrobial Therapy; VA, Veterans Affairs

^a Including spouse, family, or roommate

^b Depression, anxiety, bipolar, schizophrenia, and PTSD

Results

Overall, 294 veterans' charts were reviewed. Of these patients, 188 (63.95%) had no complication and 106 (36.05%) had a complication. Univariate analysis of social determinants are summarized in Table 1. Tobacco use was the only factor significantly associated with OPAT complication (p=0.008).

CONCLUSION

This analysis suggests that many social determinants thought to potentially impact OPAT outcomes, such as race, co-inhabitants, mental health diagnosis, employment status, and use of illicit drugs or alcohol were not significant contributors to OPAT complications in the Milwaukee VA population. However, it is important to consider that these results may reflect the careful selection of Milwaukee veterans discharged on OPAT, as high-risk individuals may be given IV antimicrobial treatment in the inpatient setting, such as in the rehabilitation unit, for the duration of therapy. Moreover, for those that are discharged on OPAT, these results may speak to the VA's integral social support provided to veterans upon discharge. Last, perhaps tobacco was associated with OPAT complication as it is an agent impacting overall health.

REFERENCES

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