

## Background

- Outpatient parenteral antibiotic therapy (OPAT) has:
  - reduced length of stay
  - decreased nosocomial infections
  - improved patient satisfaction/outcomes.
- Factors for choosing candidates and regimens for OPAT include:
  - type of infection
  - Organisms
  - antibiotic side effects
  - number of antibiotics
  - frequency of administration.

## Methods

- Retrospective chart review of Zablocki VA Medical Center patients, Milwaukee, WI
- Patients discharged from 2013-2017 on OPAT.
- Evaluated:
  - types of infection
  - antimicrobial regimens
  - number of antibiotics
  - duration and frequency of administration
  - adverse events and outcomes
- Primary outcomes analyzed was whether or not there was a complication.
- Complication defined:
  - as antibiotic change/dose adjustment
  - PICC line complication
  - additional clinic/hospital visit.

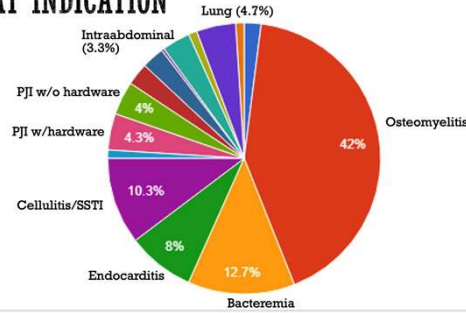
## Results

- 294 cases identified.
- 286 (95.7%) were male.
- Most common antibiotics were:
  - vancomycin (78; 26.53%),
  - daptomycin (42; 14.9%),
  - ertapenem (81; 27.55%), cefazolin (24; 8.16%)
  - ceftriaxone (50; 17%) .
- Staphylococcus* and *Streptococcus* were the most common organisms at 42.86% and 22.79%. Respectively.
- Cephalosporins were associated with no complication (OR 2.23, CI. 1.20-4.35),
- Vancomycin (OR 0.20, CI 0.11-0.36) and Gentamicin (OR 0.06, CI 0.06-0.58) were significantly associated with complication.
- Antibiotic frequency, duration, bacterial speciation, were associated with no complication when controlling for antibiotic type.

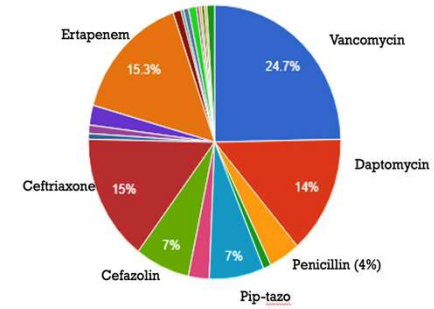
## Conclusion

- Antibiotics given for longer duration or require more frequent monitoring like vancomycin may have higher rates of complications. This study supports the hypothesis that vancomycin and aminoglycosides are associated with complications.
- When controlling for duration and frequency; cephalosporins are associated with no complication.
- Antibiotics like long acting lipoglycopeptides can be alternative to vancomycin
- Future studies to look at cost vancomycin related complications

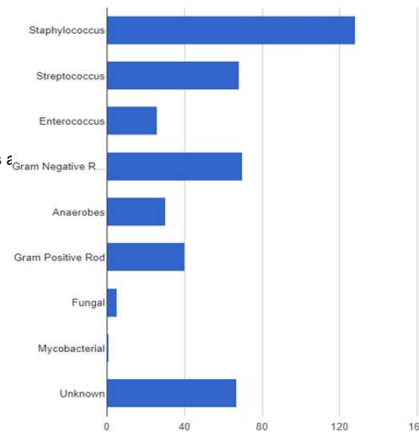
## OPAT INDICATION



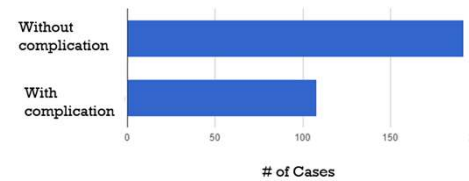
## ANTIBIOTICS



## ORGANISMS



## COMPLETED COURSE



## COMPLICATION TYPE

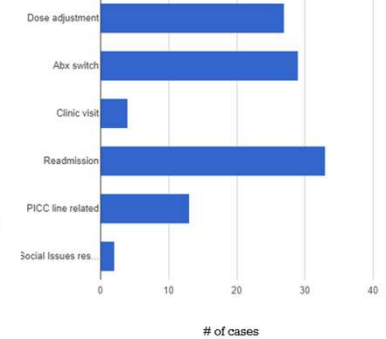


Table 1. Univariate analysis of variables associated with no complication in patients receiving OPAT at Zablocki VA Medical Center 2013-2017

Variable	No Complication N= 188; N(%)	Complication N= 106; N (%)	p-value
<b>Antibiotic</b>			
Vancomycin	27 (14.3)	51 (48.11)	<.0001
Daptomycin	28 (14.89)	14 (13.21)	0.129
Piperacillin/Tazobactam	16(8.51)	12(11.32)	0.1176
Nafcillin	4 (2.31)	4 (3.77)	0.1991
Cefazolin	17 (9.04)	7 (6.60)	0.1393
Ceftriaxone	45 (23.94)	5 (4.72)	<.0001
Cefepime	5 (2.66)	5 (4.72)	0.1650
Ertapenem	51 (27.13)	30 (28.30)	0.1052
Gentamicin	1 (0.53)	4 (3.77)	0.0528
Rifampin	9 (4.79)	9 (8.49)	0.0884
2 <sup>nd</sup> Antibiotic	44 (23.40)	51 (48.11)	<.0001
<b>Organism</b>			
<i>Staphylococcus</i>	77 (40.96)	49 (46.23)	0.0665
<i>Streptococcus</i>	47 (25.00)	20 (18.87)	0.0570
<i>Enterococcus</i>	17 (9.04)	8 (7.55)	0.1597
Gram Negative Rod	44 (23.40)	26 (24.53)	0.1102
<b>Staphylococcus type</b>			
MRSA <sup>a</sup>	4 (3.17)	13 (10.32)	0.0008
MSSA	39 (30.95)	15 (11.90)	0.0128
Coagulase Negative Staphylococcus	38 (30.16)	21 (16.67)	0.1133