

Leveling Up: Evaluation of IV vs. PO Linezolid Utilization and Cost after an Antimicrobial Stewardship Program Revision of IV to PO Conversion Criteria within a Healthcare System

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Methodist
Le Bonheur Healthcare



Background

- Intravenous (IV) to oral (PO) conversion is a pharmacy-based intervention in the CDC's Core Elements of an Antimicrobial Stewardship Program (ASP).
- Due to linezolid's high PO bioavailability and high IV cost, it is used as a marker for pharmacist-driven IV to PO conversion within the Methodist Le Bonheur Healthcare (MLH) system.
- The MLH system ASP reviewed and updated conversion criteria based on updated literature and aimed to improve rates of IV to PO conversion of antimicrobials.

Methods

Retrospective, observational cohort study, 5 adult acute care hospitals within MLH system

- Pre-intervention: 2/2021-10/2022
- Intervention: 11/2021
- Post-intervention: 12/2021-3/2022

Intervention:

- System ASP revised the criteria for IV to PO conversion
- Pharmacist education and compulsory computerized training

Primary Outcome:

- Difference in PO linezolid utilization reported as days of therapy per 1000 patient days (DOT/1000 PD)

Secondary Outcomes:

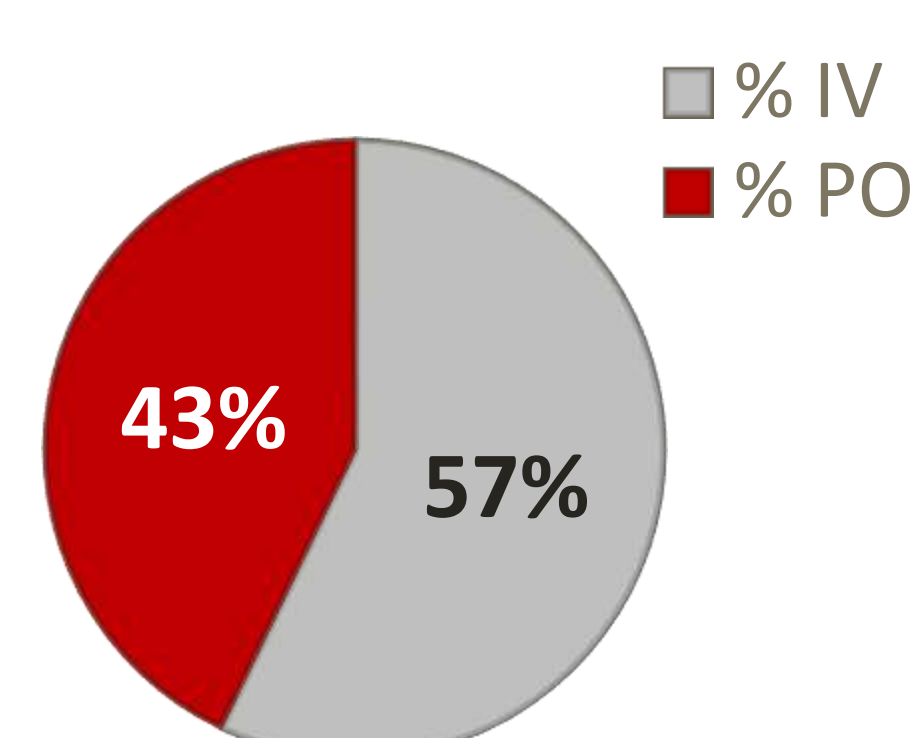
- Compare IV linezolid utilization and evaluate cost savings

IV to PO Conversion Criteria:

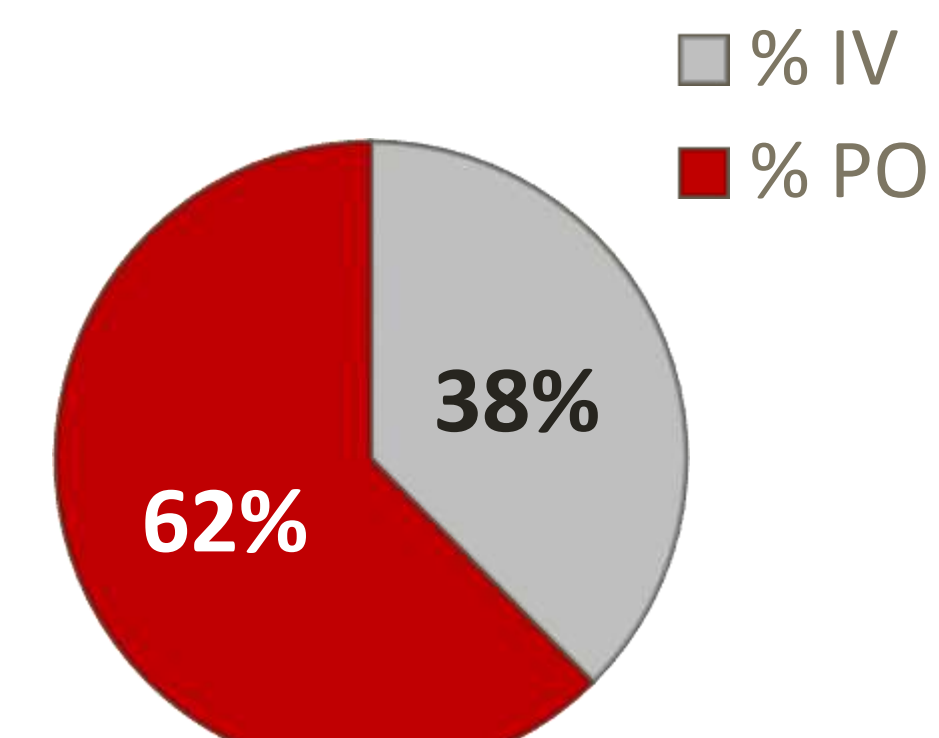
Pre-intervention	Post-intervention
Afebrile on 2 occasions, WBC <20,000 mm ³ , >1 day of IV therapy, functioning GI tract, antibiotic indication that is not MRSA/MSSA bacteremia, meningitis, osteomyelitis, or endocarditis	Afebrile for > 24 hours, functioning GI tract

Secondary Outcomes

PRE-INTERVENTION



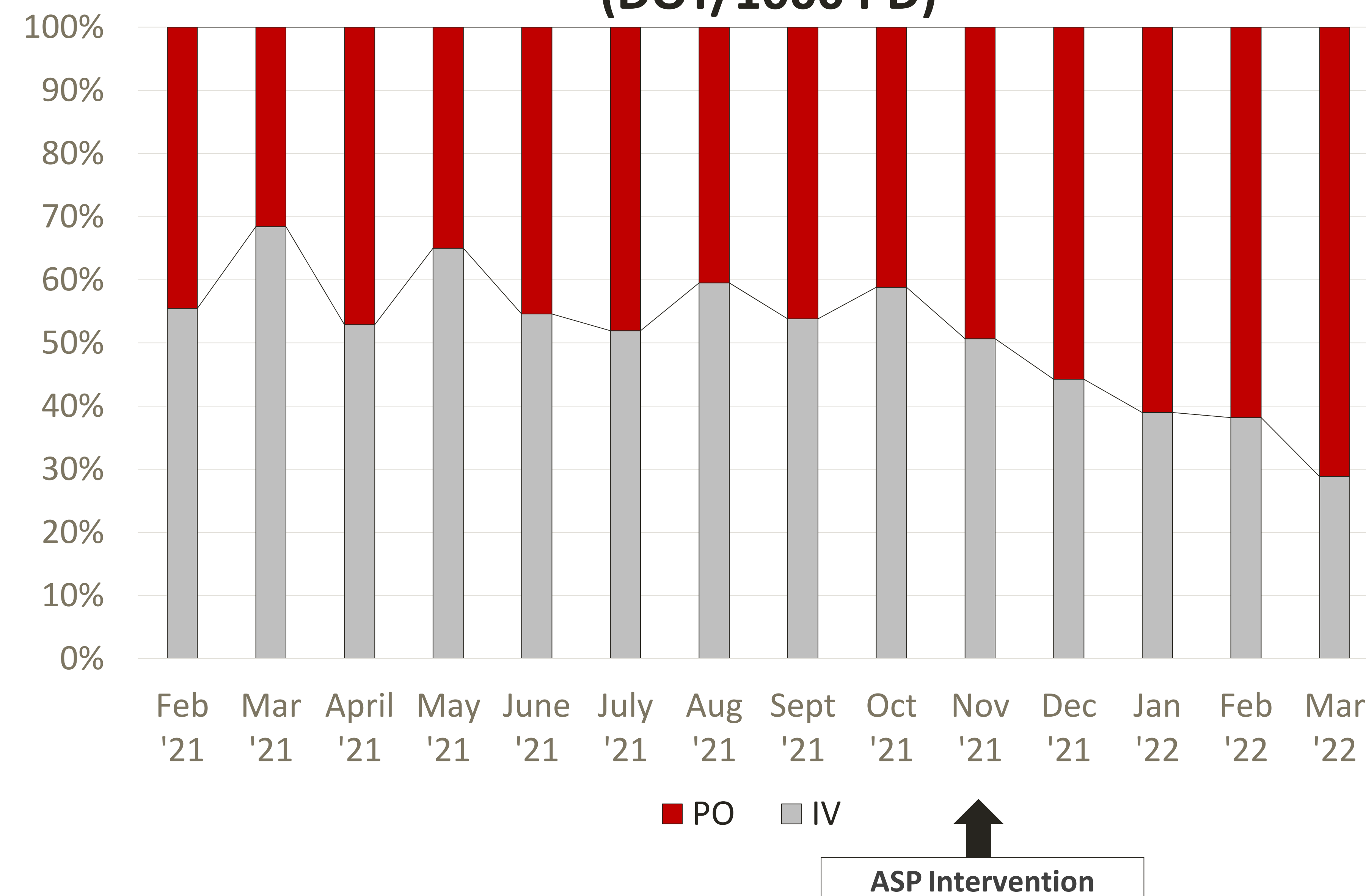
POST-INTERVENTION



P < 0.01

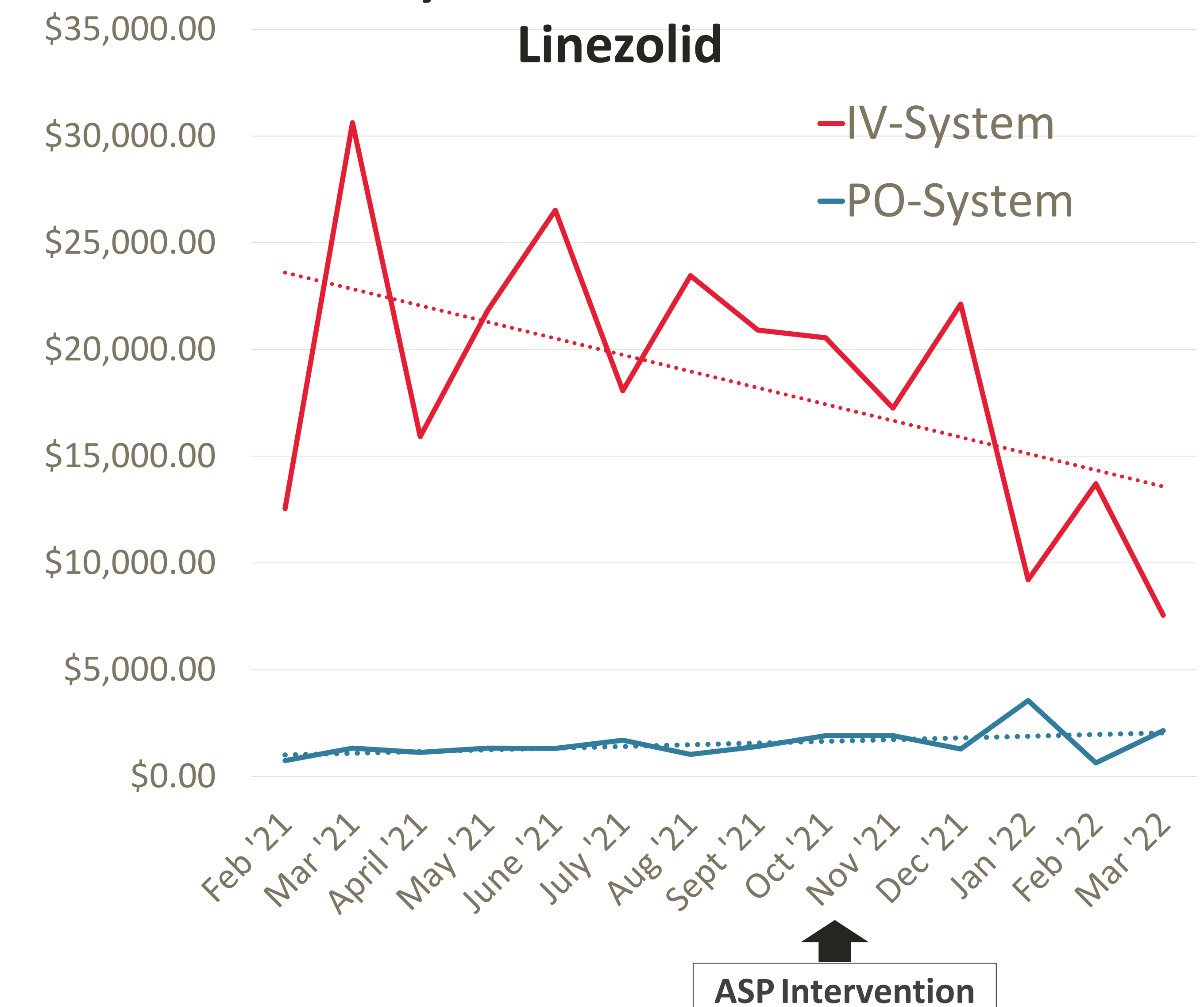
ASP-revised criteria for pharmacist-driven IV to PO conversion significantly decreased IV linezolid use and reduced overall cost

Primary Outcome: System Linezolid IV vs. PO (DOT/1000 PD)



Secondary Outcomes

Total System Cost of IV and PO Linezolid



- Average monthly post-intervention savings of \$7,091.34 with a projected total annual cost savings of \$85,096.09.

Conclusion

- There was a 44% increase in PO linezolid utilization (DOT/1000 PD, p<0.01), which led to an estimated annual cost savings of \$85,096 system-wide.
- Pharmacist-driven IV to PO conversion may be improved for other medications by updating and simplifying conversion criteria as well as providing education and reporting back to the field.

References

- CDC. Core Elements of Hospital Antibiotic Stewardship Programs. Atlanta, GA: US Department of Health and Human Services, CDC; 2019.

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.