

# Counting the Cost of Vancomycin Premix versus Compounded Formulations In the Home Infusion Setting: A Cost Minimization Analysis

Reem Moustafa, PharmD  
Medilink Homecare, Inc., DBA KabaFusion, NJ

## Background

- Vancomycin is a commonly used glycopeptide antibiotic, which is effective in treating gram positive infections in the home infusion setting.
- The most common indications for vancomycin therapy include sepsis, bacteremia, prosthetic related infections, abscesses, bone and joint, and soft skin and tissue infections.

## Study Objective

- This study aims to compare the overall costs of premixed vancomycin products versus compounded formulations through a cost minimization analysis in the home infusion setting.

## Methods

- A retrospective analysis was conducted using a 12-month sample of vancomycin patients from Hammonton NJ, Horsham PA, and Edison NJ, from October 31, 2023, to November 1, 2024.
- A real time component of the study assessed cost differences by factoring in drug pricing, labor, and nursing costs, including expenses related to extra visits and laboratory monitoring.
- Calculations were based on wages of pharmacy technicians and pharmacists, who earned \$27.97/hour (\$0.47/min) and \$71.56/hour (\$1.19/min), respectively. Data was sourced from pharmacy records, personnel logs, and market pricing trends.
- To calculate the costs associated with compounded vancomycin, an Excel sheet was used to track expenses for materials. Each order was documented with a detailed worksheet outlining material quantities, direct costs, and labor expenses.
- **Primary outcome:** Compare the overall cost of compounded versus premixed vancomycin formulations
- **Secondary outcome:** Dosage form associated with extra nursing visits

Figure 1: Most Common Infections in Hammonton, NJ

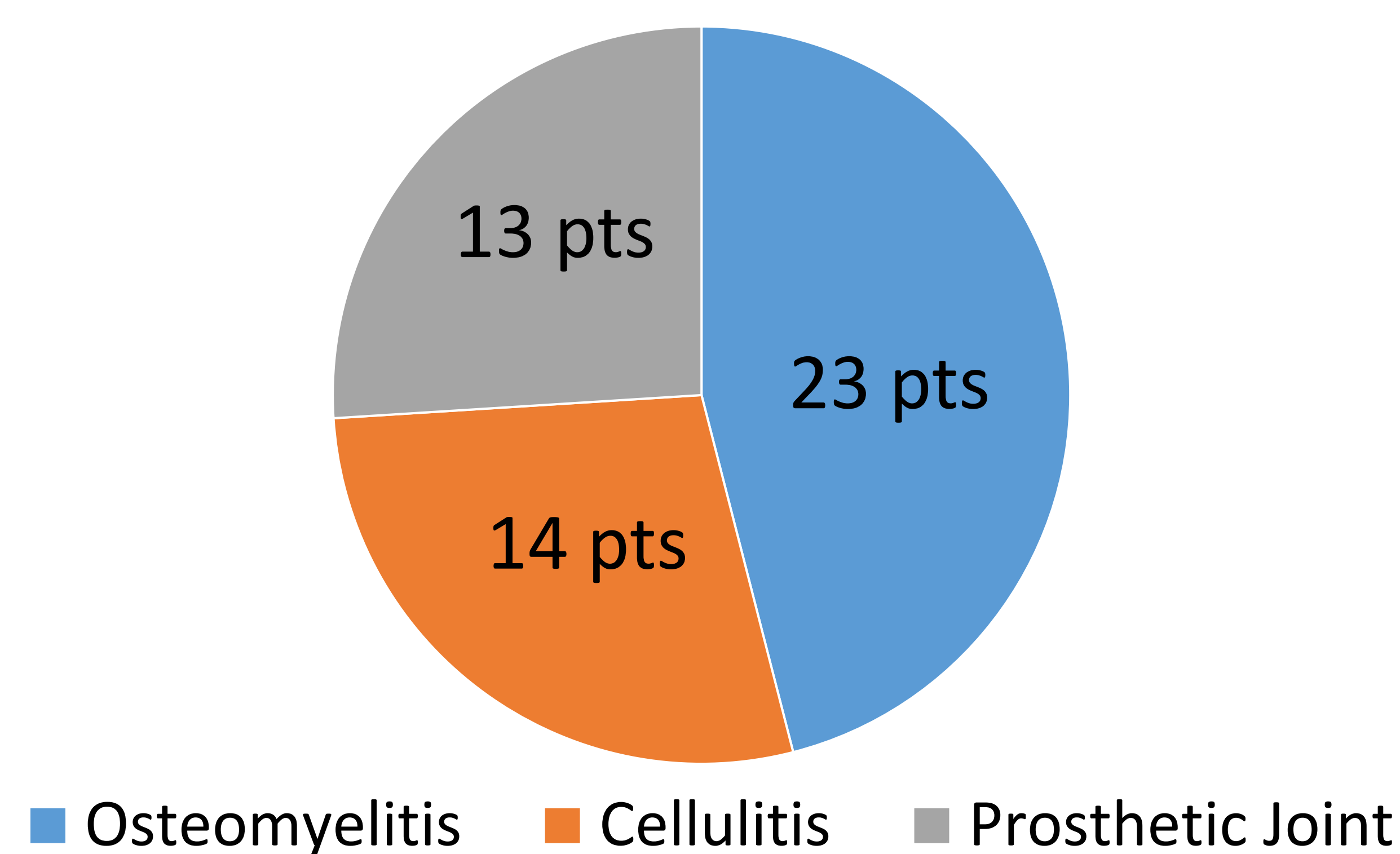


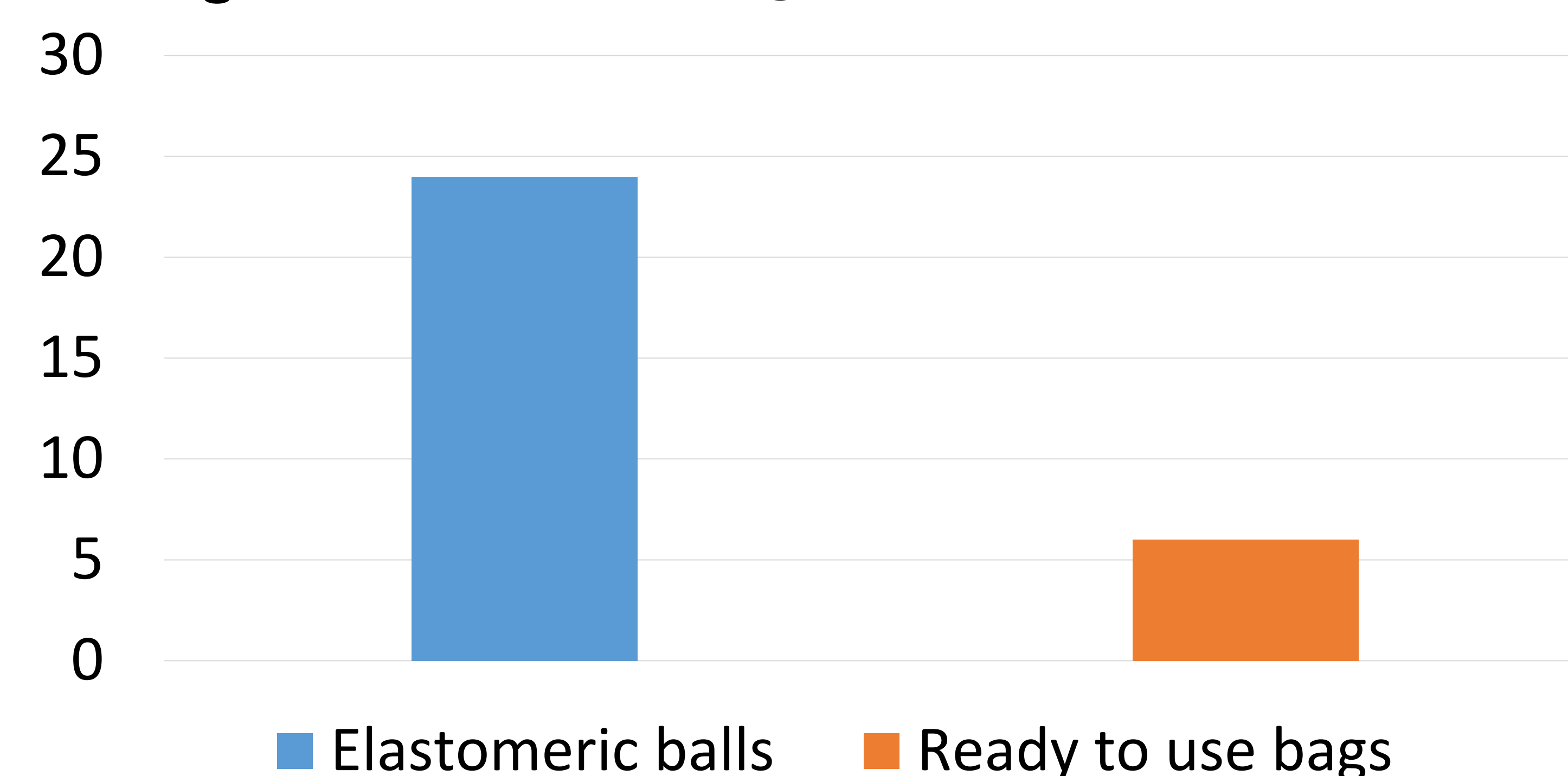
Figure 2: Patient Demographics

Category	Hammonton	Edison	Horsham
Number of patients	86	39	24
Male patients	48	24	13
Female patients	38	15	11
Average weight (kg)	90.12	90.39	86.37

Figure 3: Cost Analysis

Category	Cost (\$)
Average total cost per work order	151.12 (ranged from 54.26-263.60)
7-day supply of 1.25g premixed bags	166.58
7-day supply of 1g premixed bags	143.97
100 mL elastomeric ball + 1 gram vial	117.48
450 mL elastomeric ball + 10 gram vial	255.38

Figure 4: Extra Nursing Visits (All sites)



## Results

- The average total cost for a single compounded vancomycin work order was calculated to be \$151.12, ranging in cost from \$54.26-\$263.60. In Hammonton, technician compounding time averaged 25 minutes per order versus 33 minutes for pharmacists.
- For example, a 7-day supply of the 1.25g premixed bag, the total cost would be approximately \$166.58 (7 bags, 7 tubing, 10 red caps, and 1 pole) and for the 1g premixed bags, the total cost would be \$143.97.
- The cost average of compounded orders fluctuated depending vial size and elastomeric ball, with a 1g vial and 100 mL elastomeric priced at \$117.48, while a 10g vial with a 450mL elastomeric costing \$255.38 each.
- Amongst all sites, 30 extra nursing visits were needed, 24 in patients who were on elastomeric devices versus 6 on premix formulations.

## Conclusions

- This study shows that premixed vancomycin is both cost and time efficient compared to compounded formulations, especially in high-volume settings. Although premixed products have shown to be more efficient in terms of preparation and associated labor costs, the complexity of patients at different sites affected the overall results.
- While premixed vancomycin products are a cost-effective choice, it is essential to use a patient centered approach to fully optimize the benefits of HIT.

## References

1. Rybak MJ, Le J, Lodise TP, et al. Therapeutic monitoring of vancomycin for serious methicillin-resistant *Staphylococcus aureus* infections: a revised consensus guideline and review by the American Society of Health-System Pharmacists, the Infectious Diseases Society of America, the Pediatric Infectious Diseases Society, and the Society of Infectious Diseases Pharmacists. *Am J Health Syst Pharm.* 2020

## Disclosure

No financial disclosures



**KabaFusion**  
Patient-Focused Infusion Therapy