Dalbavancin Use and Associated Cost-Savings: An Update

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Background

- Dalbavancin provides a valuable option for outpatient treatment without need for central line, raising question of cost associated with use
- Clinical outcomes data for more complicated infections such as osteomyelitis and endocarditis continues to evolve

Methods

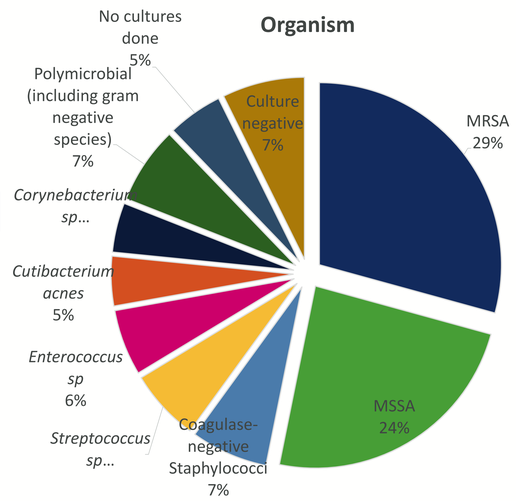
- Retrospective chart review
- Patients ≥ 18 years old
- Receiving at least one dose of dalbavancin between April of 2015 and December 2021
- Dalbavancin duration calculation
  - 1500 mg = 2 weeks
  - 1000 mg + 500 mg (or renally adjusted equivalent) = 1 week for each dose
  - 1000 mg x 1= 7 to 10 days (duration per infectious disease physician).
- Cost estimate for cost of hospital stay includes direct costs, such as pharmacy, nursing, imaging and laboratory expenses
- Cost savings calculated as avoided hospital days minus cost of inpatient dalbavancin infusions using wholesale acquisition cost (WAC)

Results

Patient Characteristics		
Age (years); mean; SD	47.6	14.4
	n	%
Gender (Female)	116	61.3
History of IVDU	92	48.7

Results n=189

Indication	n	%
Bone and Joint, non-vertebral	85	45
Vertebral Osteo	28	14.8
Endocarditis	15	7.9
Skin and soft tissue	27	14.3
Bacteremia alone	23	12.2
Other	11	5.8



Dosing Regimens		
1500 mg x 1	74	39
1500 mg x 2	87	46
1000 mg x 1	13	6.9
1000 mg x1, 500 mg weekly	9	4.8
Greater than 2x 1500 mg for longer duration	2	1
1000 mg weekly	1	0.5
1125 mg x 1	1	0.5
1500 mg x1, 1000 mg x1	1	0.5
760 mg x 1, 375 mg x1	1	0.5

Treatment Setting	
Inpatient	84
Infusion Center	70
Home Infusion	64
Correctional Facility	3
Emergency Department	3

Cost Analysis

Out of hospital treatment days (in dalbavancin window)	4273 days
Total cost savings (USD)	10,464,382
Mean cost savings per patient (USD)	55,367.10

Results

Reason for Dalbavancin Selection	n	%
History of intravenous drug use	67	35.4
Pt refused PICC or daily outpatient IV antibiotics	26	13.8
Lack of safe home environment in which to receive daily IV antibiotics	26	13.8
Prior non-adherence	18	9.5
Contraindications to alternative antibiotic options	17	9.5
No reason documented	17	9.5
Ease of use compared to alternate regimens	16	8.5
Inability of patient to physically manage PICC	9	4.8
Adverse event on alternate outpatient antibiotic	9	4.8
Substance use, not IV	8	4
Lack of outpatient options/funding	8	4.2
DC to a setting that cannot accommodate daily IV	7	4
Avoid placing PICC line	6	3
Patient preference	6	3
Prior history of contaminated/manipulated PICC	6	3
Prior treatment failure	1	0.5

More than one reason for selection may be documented for each patient

Conclusions

- As the use of dalbavancin for complicated infections continues to increase, the potential for health system cost-savings increases, which is driven by reduction in length of hospital stay.
- Prospective cost-analysis research is needed to further describe the cost benefits associated with dalbavancin use to patients and health systems in the United States.

References

1. Streifel AC, Sikka MK, Bowen CD, Lewis JS II. Dalbavancin use in an academic medical centre and associated cost savings. Int J Antimicrob Agents 2019; 54(5)::652-54
2. Dunne MW, Puttagunta S, Sprenger CR, et al. Extended-duration dosing and distribution of dalbavancin into bone and articular tissue. Antimicrobial Agents and Chemotherapy 2015; 59(4):1844-59
3. Rappo U, Puttagunta S, Shevchenko V, et al. Dalbavancin for the treatment of osteomyelitis in adult patients: a randomized clinical trial of efficacy and safety. Open Forum Infectious Diseases 2019; 6(1):ofy331